(25,574)

# SUPREME COURT OF THE UNITED STATES.

**OCTOBER TERM, 1917.**

## No. 300.

LINCOLN GAS AND ELECTRIC LIGHT COMPANY, APPELLANT,

*vs.*

THE CITY OF LINCOLN ET AL.

EAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEBRASKA.

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| | Original. | Print |
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a *Transcript of the Record on Appeal to the Supreme Court of the United States.*

In the United States District Court, District of Nebraska, Lincoln Division.

No. 10, Docket A.

In the Matter of THE LINCOLN GAS AND ELECTRIC LIGHT COMPANY

versus

THE CITY OF LINCOLN; ELLIOTT LOWE and FRED L. KNIGHT, Interveners.

Pleas Before the Honorable Page Morris, Judge of the District Court of the United States for the District of Minnesota, Assigned at the May, 1916, Term of the United States District Court for the District of Nebraska, Lincoln Division.

Appearances:

E. C. Strode, Lincoln, Nebraska; Halleck F. Rose, Omaha, Nebraska, for Plaintiff.

C. Petrus Peterson, Lincoln, Nebraska; Wm. M. Morning, Lincoln, Nebraska, for Defendant.

John M. Stewart, Lincoln, Nebraska, for Interveners.

1 *Bill of Complaint.*

Filed in United States Circuit Court of the United States, for the District of Nebraska, Lincoln Division, December 27, 1906.

To the Honorable the Judges of the Circuit Court of the United States in and for the District of Nebraska:

The Lincoln Gas & Electric Light Company, a corporation organized under the laws of the State of Nebraska and a citizen of said state, brings this, its bill of complaint, against the City of Lincoln, Francis W. Brown, Mayor, and Edmund C. Strode, city attorney of said city, all of whom are citizens of the State of Nebraska.

And thereupon your orator complains and says the amount in controversy herein, exclusive of interest and costs, exceeds the sum and value of $2,000, and this case arises under the constitution and laws of the United States.

Your orator, the Lincoln Gas & Electric Light Company, is a corporation organized on or about the first day of December, 1901, under the laws of the State of Nebraska, having its principal place of business at the City of Lincoln in Lancaster County; and by its articles of incorporation it has, among others, the following powers:

The general nature of the business to be transacted by this corporation shall be to acquire, by purchase, grant or otherwise, and to own, hold maintain and operate suitable grounds, buildings, machinery, apparatus, appliances, pipes, mains services, wires, poles, and other structures for the manufacture and distribution of gas and electricity for the purposes of light, heat and power, and steam for the
2 purpose of heat and power; to erect, maintain and operate proper and suitable buildings, works, machinery, apparatus and appliances for the manufacture, purification and distribution of gas and electricity for light, heat and power and steam for the purpose of heat and power; to purchase, acquire, own, hold, lay, erect and maintain within the corporate limits of the City of Lincoln, Lancaster County, Nebraska, and in the territory adjacent thereto, in, upon, over and under the streets, highways, lanes, alleys, public grounds and sidewalks thereof or any future additions which may be made thereto, mains, pipes, services, wires, posts, poles, towers, and other structures and appliances necessary or desirable for the distribution of gas or electricity for light, heat or power, and of steam for the purpose of heat and power, and to purchase, hold, operate and acquire franchises from the City of Lincoln for any or all of the purposes aforesaid. This corporation shall have power to borrow money and issue its bonds, debentures and other evidences of debt therefor and to pledge the whole or any part of its properties, rights and franchises for payment thereof, and may sell, assign or convey all or any part of its properties, rights or franchises. And your orator has power to do all things so enumerated in its articles of incorporation and all things incident to the business and powers so enumerated and defined.

After your orator's organization and on or about the 19th day of December, 1901, and after it had fully complied with all the laws of Nebraska requisite to such organization to entitle it to enjoy all the privileges and immunities of a corporation, it acquired by purchase all of the rights, privileges immunities, franchises, properties, real and personal, good will in business and rights in action of the Lincoln Gas & Electric Company, also a corporation, theretofore duly organized under the laws of Nebraska, which rights and prop-
3 erties were, for a full and adequate consideration paid, duly conveyed by said last named corporation by a deed in writing, duly executed.

The said last named corporation, The Lincoln Gas & Electric Company, at the time of so conveying its said rights and properties to your orator, had power to own, hold, maintain, and operate and did so own, hold, maintain and operate suitable grounds, buildings, machinery, apparatus, appliances, pipes, mains, services, wires, poles and other structures for the manufacture and distribution of gas and electricity for light, heat and power in the said city of Lincoln, Nebraska, and the territory adjacent thereto, under privileges and franchises theretofore granted by the defendant the City of Lincoln, and had power and authority to sell, assign and convey all of its said properties, rights and franchises.

Your orator further shows unto your Honors that the privileges

d franchises so enjoyed by the said last named corporation, The ncoln Gas & Electric Company, and acquired by your orator by purchase and conveyance aforesaid, were originally granted by defendant city of Lincoln on or about the 12th day of March, 72, unto the Lincoln Gas Company, a corporation duly organized der the laws of Nebraska, by an ordinance that day duly passed the city council of said defendant, and approved by its mayor, d published in accordance with the law, which was and is in the rds and figures following:

"An ordinance granting the use of the streets, lanes, alleys, public unds and sidewalks, in the City of Lincoln, to the Lincoln Gas mpany.

"Be it ordained by the mayor and councilmen of the City of Lin-n:

"Section 1. That license and permission be and the same are hereby given and granted to the Lincoln Gas Company of Lincoln, Nebraska, to erect, construct, and complete gas works within the corporate limits of the city of Lincoln, aforesaid; and at said company is hereby authorized and permitted to use and cupy the streets, lanes, alleys, public grounds and sidewalks of d city, for the purpose of laying down and repairing all pipes and ier fixtures for conducting gas for light in and under the streets, es, alleys, public grounds and sidewalks of said city, or any future dition which may be made thereto.

"Section 2. The said Lincoln Gas Company shall have the exclusive ght and privilege of furnishing illuminating gas in said city for a riod of twenty-one years from the 9th day of March 1872, and of ng and occupying the streets, lanes, alleys, public grounds and side-lks for the purposes specified in the first section of this ordinance.

"Section 3. The said Lincoln Gas Company shall manufacture d constantly supply (unavoidable delays and accidents excepted) e city and inhabitants of Lincoln, on streets where gas main-es are laid, with good quality of illuminating gas, at a price not to ceed five dollars per one thousand feet.

"Section 4. This ordinance is to take effect and be in force from d after its publication according to law."

It was the purpose and intent of the said defendant, the city of ncoln, by the passage of said ordinance, to grant unto the said The ncoln Gas Company, the perpetual enjoyment and use of all the anchises, rights and privileges to use and occupy the streets, lanes, eys, public grounds, and sidewalks of said city for the purpose of ying down and repairing all pipes and other fixtures for conducting s for light in and under the streets, lanes, alleys, public grounds d sidewalks of said city or any future additions which may be ade thereto, and in addition thereto, and as an inducement to said rporation to accept the said privileges, to grant unto it in the exclusive right and monopoly of said business within the said city for a term of twenty-one years from the 9th day of March 1872.

And your orator further shows unto Your honors that afterwards, an ordinance duly passed by the city council of the defendant the

city of Lincoln, June 16, 1890, and approved by the mayor and published as required by law, section 1 of the ordinance aforesaid was by defendant city amended so as to greatly enlarge and extend the privileges originally granted, and in its amended form was reenacted so as to vest all of the original franchises, rights and privileges, as so extended and enlarged, in the said corporation perpetually and without limitation, and by such amendment, section 1 of said original ordinance was made to read as follows:

"Section 1. That license and permission be and the same are hereby given and granted to the Lincoln Gas Company of Lincoln, Nebraska, to erect, construct, and complete gas works within the corporate limits of the City of Lincoln aforesaid; and the said company is hereby authorized and permitted to use and occupy the streets, lanes, alleys, public grounds and sidewalks of the said city, for the purpose of laying down and repairing all pipes and other fixtures for conducting gas for light, fuel and heat, in and under the streets, lanes, alleys, public grounds, and sidewalks of said city, or any future addition which may be made thereto, and to establish, construct, acquire, maintain, own and operate within the corporate limits aforesaid of said city of Lincoln, the necessary buildings, works, machinery, appliances, and structures, for the purpose of furnishing and supplying electricity for the purpose of illuminating and power for moving machinery and vehicles and erect, acquire, own and maintain within the corporate limits aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalk space of said city, or any future addition which may be made thereto, wires
6 or other conductors of electricity for conducting electricity for illuminating or power purposes, and to erect, acquire, own, establish, and maintain within the corporate limits aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalk space of said city or any future addition thereto, posts, poles, towers, and other structures and appliances for the support of such wires or other conductors of electricity. Provided, That such posts, poles, towers and other structures and appliances, including wires and conductors of electricity, shall be so erected and placed as not to obstruct the use of said streets, lanes, alleys, public grounds, and sidewalk space for the purpose of travel."

Your orator further shows unto Your Honors that the defendant, the City of Lincoln, subsequently and on or about the 30th day of April, 1900, after the term of the monopoly of said Lincoln Gas Company had expired, by an ordinance then duly passed by its council and on May 2, 1900 approved by its mayor and published in accordance with law, again amended section 1 of said original franchise ordinance so as to extend and enlarge the privileges, rights and franchises granted thereunder by making the same negotiable, vendable and assignable, and as so enlarged again reenacted the said grant of franchises, rights and privileges unto said Lincoln Gas Company perpetually and without limitation as to time, and said section 1, as so last amended, was made to read as follows:

"Section 1. That license and permission be and the same are hereby given and granted to the Lincoln Gas Company, of Lincoln,

Nebraska, its successors and assigns, to erect, construct, and complete gas works within the corporate limits of the city of Lincoln aforesaid; and the said company is hereby authorized and permitted
7 to use and occupy the streets, lanes, alleys, public grounds and sidewalks of the said city, for the purpose of laying down and repairing all pipes and other fixtures for conducting gas for light, fuel and heat, in and under the streets, lanes, alleys, public grounds, and sidewalks of the said city, or any future addition which may be made thereto and to establish, construct, acquire, maintain, own, and operate within the corporate limits aforesaid of said city of Lincoln, the necessary buildings, works, machinery, appliances, and structures for the purpose of illumination and power for moving machinery and vehicles, and erect, acquire, own and maintain within the corporate limits aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalks space of said city, or any future addition which may be made thereto, wires, or other conductors of electricity, for conducting electricity for illuminating or power purposes, and to erect, acquire, own, establish and maintain within the corporate limits aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalk space of the said city, or any future addition thereto, posts, poles, towers, and other structures and appliances for the support of such wires or other conductors of electricity: Provided, That such posts, poles, towers, and other structures and appliances, including wires and conductors of electricity, shall be so erected and placed as not to obstruct the use of said streets, lanes, public grounds, and sidewalk space for the purpose of travel."

Your orator further shows unto Your Honors that after the passage of the last aforesaid ordinance, and on or about July 1, 1900, the said Lincoln Gas Company, for full value to it paid, sold, assigned, transferred and set over unto the Lincoln Gas & Electric Company all its franchises, rights and privileges so as aforesaid granted to it by the proceedings and ordinances aforesaid, together with all its properties and all its goodwill in trade and business, all its rights in action, and all its rights, privileges, immunities and franchises what-
8 soever, and duly conveyed the same by deed in writing, duly executed, to the said Lincoln Gas & Electric Company, from whom, as aforesaid, your orator has since acquired them by purchase; so that your orator is now possessed of all of the franchises, rights, privileges and immunities so as aforesaid granted unto the said corporation, the Lincoln Gas Company, and good and lawful title to all thereof perpetually and without limitation as to time is now well vested in your orator as successor by and through the aforesaid mesne conveyances.

Said original ordinance, as so extended and enlarged by the aforesaid amendments, with all the rights, privileges, and franchises thereby conferred by the defendant city, is and since passage thereof has been operative and in full force and effect in law, and your orator, on its part, and its predecessors, from whom your orator derived title thereto, on their part, have fully performed all of the duties and obligations thereby imposed upon it and them, and thereby the said city of Lincoln has agreed to and with your orator that for performance of the duties thereby imposed it shall have full right to enjoy all

of said privileges, and to receive and collect for the services so required to be rendered by your orator reasonable prices and rates of compensation within the limitation prescribed by said grant of $5.00 per thousand feet for gas, and particularly that your orator shall be entitled to collect and receive such reasonable prices and rates as will yield it a fair compensation for the service rendered, taking into consideration the cost and value of its properties employed therein, and the customary, ordinary and necessary wear and tear and depreciation of its appliances, machinery, plant, and equipment from its use in said business, and the capital employed therein, and the reasonable and necessary cost of operation and maintenance.

9 Your orator further shows unto Your honors that the duties by the aforesaid ordinance imposed upon it and the acceptance, use and enjoyment by your orator of the rights, privileges, and franchises thereby granted, required of your orator's predecessors and of your orator the permanent use, investment and employment of large sums of money for purchase of lands and the erection, construction and equipment of a manufacturing and distributing plant for supplying the said city and its inhabitants with gas for fuel and light, heat and power, and for increasing its capacity and extending its facilities for distribution from time to time to meet the demands of the public in a developing and growing city. The properties owned by your orator and necessarily employed in equipment for manufacture, storage and distribution of gas and for performance of its duties imposed by the terms of such grants of rights, privileges and franchises, consist, among others, of a block of ground, described as Block Seventy-nine (79) in the City of Lincoln, and other real estate contiguous thereto, on which was erected at great cost permanent buildings equipped as a manufactory, and gas tanks or holders for storage of gas, many miles of gas mains and service lines extending from mains to the curb lines laid under the streets, many of which are improved by permanent pavements, and stop boxes, and meters, horses, wagons, workshops, tools and appliances and supplies and offices and office furniture and the like. To operate said plant and to maintain and keep the same in repair, requires employment of a large force of workmen and clerks, many of whom are required to be skilled, and to all of whom it is necessary that your orator pay exceedingly high wages. The depreciation by wear and tear and other unavoidable causes in machinery, equipments, appliances and properties amounts usu-

10 ally ordinarily and necessarily, for the uses to which they are put, to ten per cent each year of the entire value of your orator's properties employed in said enterprise, which is eventually to be accounted for and restored in order to maintain the efficiency of your orator's equipment. It is necessary in laying mains to make a joint on an average of every twelve feet, and in the many miles of mains necessary for the distribution of gas, the great number of joints is an unavoidable loss of gas equalling in the aggregate twelve per cent of the gross amount manufactured. The consumption of gas in said city is necessarily small in comparison to the number of miles of mains, due in part to the great width of the

public streets and in part to the fact that no considerable district or portion of the City of Lincoln is compactly built and the services actually in use are scattered over a large territory. The defendant, the City of Lincoln, has for a long time past, by ordinance, required your orator to lay mains through all the streets that are paved or to be paved within any paving districts created or that may hereafter be created in said city, and to carry gas services from such mains to and inside the curb line on each lot frontage on said streets without regard to consumption or probable consumption of gas on such lines, and such mains and services have, at great cost and expense, been laid by your orator in all paved streets, under compulsion of said ordinance.

Your orator further shows unto your Honors that it and its predecessors in ownership of the said rights, privileges and franchises have, pursuant to the invitation of the defendant city contained in the ordinance aforesaid and in faith of the rights, privileges
11 and franchises so granted, and in order to discharge the public duties thereby imposed upon it and them, have expended necessarily in building and equipping said plant more than $1,000,000, and that your orator has valid outstanding obligations secured by conveyance by trust deed, of all its properties, rights and franchises, executed by your orator and your orator's predecessor, the Lincoln Gas Company, and sold for value to and now held by good faith purchasers in form of negotiable bonds, aggregating $1,200,000, of which a prior issue, executed by the said Lincoln Gas Company amounting to $333,000, by their terms bear semi-annual interest at the rate of six per cent, and the residue thereof bear interest payable semi-annually at the rate of five per cent per annum, and that the proceeds of all of said bonds and large amounts of additional capital were and are actually applied and employed in the acquisition and equipment of your orator's plants and properties necessary to carry on its said business, and largely and principally in its plant and equipment for the manufacture and distribution of gas.

Your orator further shows unto your Honors that the defendant, the city of Lincoln, disregarding the contract rights, privileges and immunities of your orator under the aforesaid franchises, to receive, collect and enjoy such reasonable rates and charges as will justly compensate your orator for services rendered, and yield a fair profit and return upon the capital necessarily employed in said enterprise, and in violation of the rights of contract and the rights of property guaranteed to your orator by the constitution of the United States, and under the pretence that it has arbitrary power to determine the price of gas, without regard to the adequacy of the price determined upon to compensate your orator for the service rendered,
12 or to yield a fair revenue upon its capital, by its pretended ordinance No. 432, passed by its city council November 12, 1906, and approved by its mayor, the defendant Francis W. Brown, November 19, 1906, and thereafter published ordained as follows:

"Ordinance No. 432.

An ordinance regulating the price of manufactured gas, establishing penalties for the violation of the provisions of this ordinance and repealing all ordinances in conflict herewith.

Be it ordained by the Mayor and Council of the City of Lincoln:

Section 1. No gas company shall charge exact, demand or collect from any consumer for gas manufactured or sold in the city of Lincoln for illuminating or heating purposes more than the sum of one dollar net per one thousand cubic feet, provided that any gas company may add a penalty of not more than ten cents per one thousand cubic feet for non-payment after six days from the date said gas company has furnished a bill or statement to any consumer; and provided further that a minimum monthly charge of twenty-five cents a month for a single service may be collected.

Section 2. The provisions of this ordinance shall apply to all companies which manufacture or distribute gas for sale for illuminating or heating purposes, and the term "gas company" shall include all persons, firms, corporations or individuals who manufacture or sell gas for illuminating or heating purposes.

Section 3. Any gas company, and any executive officer, president or manager of any gas company who shall violate any provision of this ordinance shall be deemed guilty of a misdemeanor and on conviction thereof shall be fined in any sum not less than
13 ten dollars, nor more than One Hundred Dollars, and a violation hereof for each calendar day or part thereof shall constitute a separate offense.

Section 4. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 5. This ordinance shall take effect and be in force from and after December 1, 1906, after its passage, approval and publication, according to law."

Your orator further shows unto your Honors that the maximum rate of $1.00 per thousand cubic feet of gas prescribed and limited by said ordinance, under the conditions subsisting in the said city of Lincoln and the other public burdens imposed upon your orator, necessarily entering into the cost of manufacture and distribution of gas, is wholly arbitrary. No right is in or by said ordinance given or saved to your orator to procure a judicial ascertainment and inquiry of the reasonableness of said rate, and your orator has never had its day in court on said question as to the reasonableness of said rate. By the said ordinance, your orator is deprived of its day in court and of all opportunity of a judicial inquiry and ascertainment of the reasonableness of said rate, contrary to the law of the land and in violation of your orator's vested rights under the aforesaid franchises and privileges, acceptance and use whereof necessitated investment and permanent appropriation to said enterprise of the large sums of money aforesaid.

Your orator further shows unto your Honors that the councilmen of the said City of Lincoln, who comprise its legislative body, did not,

prior to or upon passage of said ordinance, make any accounting or inquiry into the business and methods of your orator to ascertain whether the maximum rate so prescribed and limited was adequate or reasonable, although invited by your orator so to do, and
14 in fixing and determining said rate, the said councilmen did not, as required by their several oaths of office, and by law, act impartially nor endeavor to fix a rate just and reasonable alike for your orator and the public; on the contrary thereof, the said councilmen, moved by unrighteous and unlawful considerations and motives, took the said action and passed the said ordinance out of a desire to serve only their electors and constituents who placed them in office, solely at the cost and to the utter financial ruin of your orator, and wholly from partisan and partial motives. Prior to and at the time of the passage of the aforesaid ordinance pretending to prescribe said maximum rate of $1.00 per thousand cubic feet of gas, the publishers of the State Journal and The Evening News both daily newspapers published at said city of Lincoln of wide circulation and great influence among the electors of said city, had published persistently and continuously certain malicious, false and defamatory charges against your orator for the purpose of influencing and intimidating the action of the defendant's city council in establishing a maximum gas rate, in and by which the said newspapers falsely published and asserted to the members of the defendant's city council and the electors of said city that the rates charged by your orator were excessive and exorbitant, and that the people of the city demanded of its city council that it arbitrarily and at once pass an ordinance limiting the price of gas to the sum of $1.00 per thousand cubic feet; and theretofore the said newspapers, by the means aforesaid, and by virtue of their wide circulation and great influence with the electors and with the council of said city, for the purpose of coercing such action on the part of the defendant, caused to be organized a pretended one dollar gas league, and thus fomented discontent and hostility to your orator and invited all electors of the city to send their names to an agency of the said newspapers to be enrolled
15 as members of the Dollar Gas League, and caused inflammatory suggestions, thus invited, fomented and incited by its own publications only, to be published daily, and by such means threatened and caused the councilmen to fear public condemnation and political defeat unless they yielded to the unrighteous demands of said newspapers and the sentiments so fomented among the electors, moved by the aforesaid sensational utterances so published. By such means, the said councilmen were, in fact, intimidated, and coerced into the passage of said ordinance, and deprived of their free agency and of their ability to act debilerately and impartially upon the said issue, and certain of the councilmen, particularly one John S. Bishop, were led to give utterance to the sensational sentiments of said newspapers in the deliberations of the council respecting the passage of said ordinance, and the said Bishop, during the deliberations of the council upon said issue, stated publicly, on the floor of the council and to his fellow councilmen, that it would be a good thing for the community if the action of the council resulted in the finan-

cial ruin of your orator and the placing of its affairs in the hands of a receiver. By all such means, the majority of the said council, whose honest judgments condemned the rate established by the ordinance were induced to forego their several convictions and judgments and, notwithstanding, to pass the ordinance. Your orator charges that the proceedings so taken under coercion are fraudulent and null and void and of no effect in law.

Your orator further shows unto Your Honors that, in addition to the facts hereinbefore stated in this bill of complaint, the following facts and circumstances add materially to the necessary cost of manufacture and distribution of gas in the City of Lincoln; (1) Under existing tax levies and ordinances of the City of Lincoln, the annual impositions of taxes upon your orator's properties and busi-
16 ness, for municipal, school, district state and county purposes, aggregates the sum of about $20,000 of which $10,000 is an occupation tax imposed by the City of Lincoln by ordinance, the validity of which your orator questions and the legality of which has not yet been determined. (2) The defendant, the City of Lincoln, by its ordinance No. 363, passed by its city council April 9, 1906, and approved by the mayor April 16, 1906, has adopted and imposed upon your orator certain rules fixing unusually high and onerous standards for measurements, for quality as to purity, and for illuminating and heating power of gas, by which your orator is required under the penalties of heavy fines and forfeitures to continuously maintain each of the three standards prescribed, one of which is an illuminating power of not less than 18 English Sperm Candles when burned from a Suggs London Argand Burner No. 1 at the rate of 5 cubic feet per hour; one requiring a heat standard of not less than 625 British Thermal Units per cubic feet, at a pressure of 14.7 pounds per square inch, at a temperature of 60 degrees Fahrenheit scale; and one fixing the requisites as to purity, requiring sufficient odor to be detected by the sense of smell that it contains not to exceed 20 grains of sulphur per 100 cubic feet, and not exceed 10 grains of ammonia per 100 cubic feet, and that it shall contain no sulphurated hydrogen, and that it shall have a pressure of not less than 1½ inches nor more than 5 inches measured in a water gauge at the place where tested. The said ordinance subjects your orator's business in m-ny particulars to the direction and control of the public gas inspector, prescribes a standard of accuracy for meters, and subjects your orator to the cost of disconnecting and delivering all or any of its gas meters to the city inspector within twenty-four hours after notice by said officer, and in addition to burdensome and oppressive fines imposed for vio-
17 lation of each and every of such regulations, the said ordinance subjects your orator to a reduction of five cents from the price allowed to be charged to consumers for each 1,000 feet of gas, under ordinance of said city, for every time the standard of heat falls ten units below that prescribed. (3) It is not practical to maintain all of said standards otherwise than by use of both coal and oil in the manufacture of gas, and for a number of years last past the market value thereof, particularly that of coal, has largely and greatly increased in price, and the said city is far removed from any

source of supply thereof, and freights for its carriage for long distances must be added to the usual and ordinary cost thereof. (4) For a number of years last past the prices of all materials used by your orator in construction and equipment of its plant and appliances have steadily advanced in market values, as has also the cost of labor, both skilled and unskilled. Your orator shows that all of the facts aforesaid tended constantly and necessarily to increase, during the period of some years last past, the cost of manufacture and distribution of gas, and that during all of the period aforesaid, it has been the policy of the city, notwithstanding, to pursue a course of persistently and steadily diminishing the maximum rates of gas in said city and of increasing the public burdens and tax impositions to be borne by your orator, and by such means to decrease your orator's revenues ratably upon the business done and impair its pecuniary credit and ability to pay interest charges upon its bona fide debts and maintain the efficiency of its properties and service, and greatly to depreciate the market value of all its mortgage bonds and properties so that at the date of the passage of the said ordinance fixing a maximum rate of $1.00 per 1,000 cubic feet of gas, the market value of your
18 orator's securities was depreciated to a sum not exceeding much, if any, one-half of its invested capital.

Your orator further shows unto Your Honors that the rate of $1.00 per 1,000 cubic feet of gas prescribed and limited by said ordinance is wholly inadequate to yield your orator a reasonable compensation for the service by the terms of its franchise required to be rendered, and will not yield sufficient revenue to pay the cost of manufacture, distribution, operation and maintenance of its manufacturing plant and properties necessarily employed therein, and yield reasonable or adequate or fair earnings on the large amount of capital so as aforesaid permanently employed and invested in said enterprise, and which the defendant city, by granting of said franchises and inviting and inducing said investment, agreed your orator should employ at fair and adequate profits and earnings. Said rate of $1.00 per 1,000 cubic feet of gas will, if enforced against your orator, together with the additional burden of the occupation tax heretofore mentioned, the validity of which your orator contests, without lessening the necessary cost of manufacture, distribution, operation and maintenance, decrease your orator's earnings in the sum of $40,000 per annum and upwards below the revenues accruing from the gross rate of $1.50 heretofore fixed by the ordinance of said city and charged by your orator, with an allowance of 30¢ per 1,000 cubic feet on monthly payments made at your orator's office on or before the 6th day of each month, and will decrease your orator's revenues $40,000 and upwards below that which is necessary to maintain the service and yield a fair or adequate or reasonable compensation upon its invested capital. The said rate, if enforced against your orator, will deprive it of the power to pay interest upon the money which it has borrowed and actually used and in-
19 vested in its aforesaid properties, and will deprive your orator and the owners and holders of its negotiable mortgage bonds and the owners and holders of its shares of capital stock of adequate

earnings, interest and dividends on their large sums of money invested therein and employed in said enterprise; and will operate as a condemnation and confiscation of the properties of your orator, its bond holders and share holders to public uses without any compensation paid therefor; and will deprive your orator and its mortgage bond holders and share holders of their property without due process of law; and will impair the obligation of the contract of said city of Lincoln made with your orator and its predecessors in ownership of said franchises under and by virtue of the aforesaid grants of rights, privileges and franchises and the duties thereby imposed upon your orator and its said predecessors and by it and them assumed thereunder.

Your orator further shows unto Your Honors that the pretended regulations contained in said ordinance so pretending to fix said maximum rate of $1.00 are likewise violative of your orator's rights guaranteed by the Constitution of the United States in this: The system of charges so adopted is a level or flat meter rate, applicable alike to profitable and to unprofitable consumers and is a system not in general or common use, wholly unjust and arbitrary, and prohibiting your orator from procuring much profitable patronage from large consumers.

(1) Your orator has upwards of 5,000 gas consumers and certain elements of the necessary cost of service are incurred ratably on account of each consumer, among which are the office expenses, the accounting and auditing department, the expense of meter reading and making out bills, the expense of connecting meters and disconnecting them, the expense of mains to which each individual service pipe is joined, the expense of the plant and equipment to meet the possible demand of each consumer, and interest on bonded debt, and, in fact, approximately all the expenses of operation and distribution, aside from the station cost of manufacture. Because thereof, your orator incurs an actual loss on account of the service furnished each individual consumer from whom it is not permitted to collect an average monthly charge equalling $2.00. Your orator has upwards of 2,700 consumers of gas, whose bills at the rate of $1.20 per thousand feet, yield a smaller average revenue than $2.00 per month, and the number of such consumers will be increased if the rate of $1.00 be enforced, to all of whom it gives service and, under the said ordinance will be obliged to give service at a rate actually less than cost thereof. Such consumers, who by force of the said rate ordinance and the said system of charges, the company is obliged to serve at an actual loss, consume one-fifth of all the gas sold by it and distributed to its consumers. The large losses incurred in maintaining the service to said small and unprofitable consumers, your orator, by reason of the said system and plan of charging adopted by said ordinance, is obliged to collect from the large and profitable consumers, and is obliged to apply sufficient of the profits so derived from the large consumers to defray the service and administration charges actually incurred in serving the small consumers at a rate below cost. In respect to the large proportion of its total service which it is required to render at less than

cost, the said ordinance is partial and discriminatory, operates to deprive your orator of its property without due process of law, and requires the profitable consumer to pay excessive rates in order that the service to unprofitable consumers may be maintained. Your orator further shows that the said level or flat meter rate
21 system of charges, in the respects aforesaid, operates to deprive it of profitable business, which it could obtain from large consumers, if permitted to reduce its rates to them, after imposing a reasonable and equitable service charge, so that it would still maintain a fair profit above the station cost of manufacture. The said rate, while unreasonably low for small consumers, is prohibitive upon the large consumer, who has the alternative of using coal or other less expensive fuel; and so, without fault on your orator's part, it is by the said ordinance hindered from working or enjoying a profitable and desirable patronage, which it can only obtain through reasonable classification of its consumers or by permitting it to impose an equitable service charge upon all consumers adequate in the aggregate to maintain its fixed charges other than the station cost of manufacture of gas, and then establishing a lesser rate for gas to be added in all cases to the service charge.

2. The maximum monthly charge of 25c per month for a single service permitted by said ordinance is arbitrary and unreasonably low, and is inadequate and insufficient to defray the actual cost to your orator of maintaining its meter and service and connection with its plant on account of each individual service established and maintained.

3. By the terms of said ordinance, your orator is required to extend credit to all consumers of gas for a period of six days from and after preparing and furnishing to the consumer a bill or statement, and is required, as a condition precedent to receiving or collecting any funds whatever, to be at the expense of preparing and delivering to each customer a bill or statement six days in advance of receiving any compensation; and your orator is thereby denied the
22 usual necessary and customary privileges of offering a reward, by discount or otherwise, to customers presenting themselves at its office and making payment in such manner as to save your orator the cost of employing messenger service to deliver statements of account to its patrons; said ordinance denies to your orator all right of collection for services rendered to such of its customers who change their places of residence without notice to it, and whose whereabouts are thereafter unknown to your orator; and said ordinance denies to your orator right and power to demand and receive a security or deposit in advance from its individual consumers of sums reasonably adequate to indemnify your orator for the actual cost incurred in setting a meter and disconnecting it and to cover reasonable charges for meter rent and service and for the probable value of gas to be consumed during the reasonable or enforced term of credit; and by said ordinance your orator is denied the right to refuse to supply gas to delinquents refusing payment for prior service. In all the aforesaid respects, the said ordinance, in fact, requires your orator to give said service without any compensation and

all of the said regulations are unreasonable and unlawful and operat as a confiscation and condemnation of your orator's properties t public uses without compensation.

4. In the said city of Lincoln at the present time, at the time o the passage of said ordinance, and for a long time prior thereto, Th Lincoln Traction Company has operated and maintained and no operates and maintains a rival enterprise of offering and furnishin to the public electric light, heat and power, under a grant of franchis made to it by the City of Lincoln entitling it to the use of th streets, alleys, and public grounds of the said city wherein to con
struct, lay and maintain conduits for distribution of elec
23 tricity for said purposes. The said agency of electricity i thus actually employed by said Lincoln Traction Company for the same identical uses and purposes that gas is employed by you orator; and electricity so employed by said Traction Company unde said public franchises performs the same public uses and offices a does the gas manufactured and distributed by your orator in sai city. In the uses of electricity, the defendant, the city of Lincoln has at all times left the said Traction Company free to adopt such system of charges by classifying the customers in respect to the amount of current consumed, and to their being profitable or un profitable patrons, as the actual business experience of said Traction Company warrants, and as is requisite to enable it to obtain al profitable patronage available under such system and classification of charges as the said Traction Company sees fit to adopt; and to the knowledge and with the acquiescence of said city of Lincoln, the said Traction Company, in its said business so conducted in direct competition with your orator's gas business, actually employs an ade quate service charge sufficient to drive practically all of the un profitable consumers to the use of gas, to the pecuniary detriment of your orator, and actually offers to profitable consumers such favor able and reduced rates for current actually consumed as to induce large consumers to forego the use of gas, under the system of uniform charges operative alike to profitable and unprofitable consumers, prescribed by the defendant for the government of your orator's gas business, greatly to the pecuniary detriment and necessary loss of patronage of your orator. In this behalf, the said ordinance is dis criminatory and partial and is intended to operate and does operate to the disadvantage of your orator and to the great advantage of your orator's said competitor in business, and so denies to your orator the
equal protection of the laws.

24 And so your orator charges and shows unto Your Honors that the said ordinance so pretending to prescribe said regulations and to fix the maximum rate of $1.00 per 1,000 feet of gas to be charged by your orator to its consumers and patrons in said city is in each and every of the particulars aforesaid violative of Section 10 of Article 1 of the Constitution of the United States, providing that no state shall pass any law impairing the obligations of contracts, and of the fourteenth amendment to the constitution of the United States, providing that no state shall deprive any person of property without due process of law, nor deny to any person within

its jurisdiction the equal protection of the laws; each of which constitutional requirements are a part of the law of the land, and each of which limits, restrains and prohibits the granting by the State of Nebraska or the exercise of arbitrary power by defendant city of Lincoln for establishing gas rates inadequate to fairly compensate your orator and its bond holders and share holders for the public services rendered and required to be rendered and imposed upon it by the franchises, rights and privileges heretofore by said city granted to your orator; and from making partial and discriminatory regulations applicable alone to your orator, while at the same time leaving your orator's competitor in business free to exploit your orator's field of patronage without being bound, hindered or restrained by the same regulations which the defendant has applied to your orator; and from denying to your orator the like and equal protection of the law which the said city of Lincoln freely affords to your orator's competition in business. Wherefore, your orator, as advised by counsel, avers that the said ordinance and each and every part and provision thereof is, on the grounds aforesaid, inoperative and null and void.

25 Your orator further shows unto Your Honors that the certain ordinance heretofore referred to pretending to impose an onerous and burdensome occupation tax upon your orator, in addition to your orator's ad valorem property tax, the validity whereof is questioned by your orator, was passed by the city council of the defendant city on or about the 10th day of December 1906, and approved by the mayor, the defendant Francis W. Brown, and afterwards published, and is in the words and figures following:

"An Ordinance providing for and assessing an occupation tax upon all gas companies manufacturing and furnishing gas to the inhabitants of the City of Lincoln, fixing the amount thereof, providing for the enforcement and collection thereof and providing interest and penalty for non-payment when due and payable, and designating the funds to be credited with the amount so paid.

Be it ordained by the Mayor and Council of the city of Lincoln:

Section 1. That all gas companies manufacturing and furnishing gas to the inhabitants of the City of Lincoln are hereby required to pay an occupation tax, and the amount thereof as hereinafter specified is hereby assessed against said company or companies.

Section 2. That all gas companies manufacturing and furnishing gas to the inhabitants of the City of Lincoln are hereby required to pay the City of Lincoln as an occupation tax the sum and amount of Two and a half per cent (2½%) of the gross receipts of said company, derived from its business of manufacturing and furnishing gas to the inhabitants of the City of Lincoln, payment thereof is to be made as follows: Beginning with January 1, 1907 said gas company or companies shall on the 15th day of each and

26 every month thereafter pay the City of Lincoln Two and a half per cent (2½%) of the gross receipts of said gas company for the preceding month, as hereinabove provided, as an occupation tax, and all deferred payments shall draw interest at the rate of one per cent (1%) per month, and after payment has been in

default for six months, a penalty of five per cent (5%) shall be added thereto in addition to the interest charge, and shall be paid by said gas company or companies.

Section 3. All such gas companies on the 10th day of each month, as hereinabove provided, shall file with the City clerk a full, complete and detailed statement of the income and operating expenses and other charges of said gas company for the preceding month, and said statement shall be duly verified and sworn to by the managing officer of any such gas company or companies, and the City of Lincoln shall have the right at any and all times during business hours to inspect, thru its officers, agents, or representatives, the books and records of any such gas company or companies for the purpose of verifying such report or reports. Provided, however, that in case any such gas company or companies shall refuse, fail or neglect to furnish or file such report at the time or times specified, or shall refuse to permit the City of Lincoln, thru its officers, agents or representatives, to inspect the books and records of any such company for the purpose of verifying such report or reports, then and in that event the occupation tax for the preceding month shall be and is hereby fixed and determined to be the sum and amount of One Thousand Dollars and said amount shall draw interest at the rate of one per cent (1%) per month after due and payable, and in addition thereto a penalty of five (5%) per cent for failure to pay within six months.

27 Section 4. In case any such gas company or companies shall fail to make payment of the occupation tax as hereinabove provided, and at the time or times hereinabove specified, the City of Lincoln shall have the right and may sue any such gas Company or companies in any court of competent jurisdiction for the amount of occupation tax due and payable under the terms and provisions of this ordinance, and may recover therein a judgment against any such gas company or companies for the amount so due, together with interest and penalties, and may have execution thereon.

Section 4½. Said occupation tax shall be paid to the City Treasurer of the city of Lincoln, at the time specified in this ordinance and he shall issue and deliver a receipt therefor, upon the payment thereof, and the amount so paid shall be credited by the City Treasurer to the general fund of the city, unless otherwise directed by the Mayor and Council.

Section 5. All ordinances and parts of ordinances in conflict herewith are hereby repealed.

Section 6. This ordinance shall take effect on January 1, 1907, after its passage, approval and publication according to law."

The aforesaid ordinance pretending to levy said occupation tax is partial, discriminatory, unreasonable and oppressive in this: It imposes upon your orator an onerous tax burden to which the business and occupations of other persons within said city are not subjected. Otherwise than as the general methods of raising revenue by said city are varied by the said ordinance, the said defendant raises all its revenues by an ad valorem property tax levied upon all

the property in said city, including the properties of your orator, which are valued for the purposes of assessment at a sum exceeding
\$663,000. The said occupation tax so pretended to be im-
28 posed upon your orator is so burdensome and oppressive that
your orator cannot comply therewith nor pay the sums therein and thereby imposed out of the revenues permitted by the ordinances of said city to be collected for the public services rendered by your orator; and said ordinance, if enforced, will be prohibitive upon your orator's continuance in business, and will operate to utterly and wholly destroy all of your orator's privileges, rights and franchises heretofore, by the franchise ordinances herein mentioned, granted by the defendant city to your orator, and will deprive your orator of its said contract rights and privileges and of its properties without due process of law. The Lincoln Traction Company, a corporation heretofore organized under the laws of Nebraska, having its principal place of business at the said city of Lincoln, is at present and was at and prior to the date of the passage of said ordinance in full use and enjoyment of franchise rights granted by ordinance of said city, to construct, operate and maintain a plant and carry on the business of furnishing electricity to the public in said city for the uses of light, heat and power; and said traction company, at passage of said ordinance, had and now has a fully equipped plant for said purposes in operation, and is offering to and in fact supplying the public with light, heat and power, in direct and open competition with the gas business of your orator. The said ordinance was intended by the said city of Lincoln to discriminate against your orator in said lighting business and in favor of the said Lincoln Traction Company and to deprive your orator of the right and power to compete in its gas department with the said electric light, heat and power business of the said Traction Company, and, if permitted to be enforced, will operate as such discrimination, to the pecuniary embarrassment and ruin
of your orator's gas business. The said City of Lincoln has
29 not, by said ordinance or otherwise, subjected the light, heat
and power business of the Lincoln Traction Company to any occupation tax or to any tax other than the general ad valorem property tax imposed by said city, as aforesaid, upon all the taxable property therein.

Wherefore, your orator avers, as advised by counsel, that the aforesaid ordinance pretending to impose said occupation tax upon your orator, operates to deprive your orator of the equal protection of the laws, imposes a discriminatory burden upon your orator, not imposed thereby or by any other law upon your orator's competitor in business, and deprives your orator of its franchise rights and privileges and of its properties without due process of law, and, in all the respects aforesaid, is violative of the fourteenth amendment to the Constitution of the United States, providing that no state shall deprive any person of property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws, and also of Section 10 of Article 1 of the Constitution of the United

States, providing that no state shall pass any law impairing the obligation of contracts.

Your orator further shows unto your Honors that, notwithstanding the invalidity of the aforesaid ordinance pretending to prescribe said regulations and to fix said maximum gas rate of $1.00 per 1,000 feet, the defendants, the City of Lincoln, pretending to act in faith of its validity, the said Francis W. Brown, Mayor, in pretended exercise of his official duty to enforce the ordinances of said city and to call to his aid a posse comitatus to assist him in enforcement thereof, and the said Edmund C. Strode, city attorney, in pretended exercise of his official duty to commence and prosecute actions in behalf of said city in all courts and to appear, by order of the mayor and council, to prosecute complaints for offenses against the ordinances
30 of said city, threaten to and will, unless restrained by Your Honor's from so doing, direct, order, commence and prosecute sundry suits, civil and criminal, before the police judge of said city of Lincoln and in courts of general and limited jurisdiction in Lancaster County, Nebraska, against your orator and your orator's executive offices and manager to enforce the burdensome, excessive and ruinous penalties prescribed by said ordinances for a refusal and failure to comply with their terms; and to institute proceedings in the district and supreme courts of Nebraska to compel your orator and your orator's executive officers and manager, by mandamus, to carry into effect the provisions thereof; and by asserting and pretending that the said rate ordinance is valid as a proper exercise of the alleged power of said city to fix the price of gas, to instigate and incite its inhabitants and citizens and the consumers of gas therein claiming the rights thereunder to institute and prosecute suits of like kind and character against your orator, its executive officers and manager. All of which actings, doings and pretenses of said defendants are contrary to equity and good conscience, and tend to the manifest wrong, injury and oppression of your orator, who is remediless in the premises at and by the strict rules of the common law, which would subject your orator and its executive officers and manager to a multiplicity of suits by said defendants and by each and every one of the gas consumers of said city, and persons who may hereafter become consumers or desire so to do, many of whose names are to your orator unknown, and who are too numerous to be named or impleaded as defendants or brought before the court, all of whom will claim through and under the defendant the City of Lincoln and by virtue of the aforesaid pretended ordinance; and your orator can only have relief in a court of equity, where matters of this nature are properly cognizable.

31 Wherefore, your orator brings the foregoing bill against the City of Lincoln, Francis W. Brown, Mayor, and Edmund C. Strode City Attorney, and prays that the defendants and each of them may be compelled full, true and perfect answers to make unto all and singular the matters aforesaid as fully and particularly as if the same were hereinafter repeated and they distinctly interrogated; but not under oath, answer under oath being hereby expressly waived.

And may it please Your Honors to grant unto your orator a writ

of injunction pendente lite, issuing out of and in accordance with the rules and practice of this honorable court, to be directed to the said defendant, the City of Lincoln, Francis W. Brown, Mayor, and Edmund C. Strode, City Attorney, restraining and enjoining them and each of them, their agents, servants and employees, from in any wise obeying, observing or conforming to the provisions, commands, injunctions and prohibitions of said certain alleged ordinance of the City of Lincoln No. 432, entitled, "An Ordinance regulating the price of manufactured gas, establishing penalties for the violation of the provisions of this ordinance, and repealing all ordinances in conflict therewith;" and restraining them and each of them from instituting or prosecuting or causing to be instituted or prosecuted any action or proceding, civil or criminal, against your orator, its executive officers or manager, for any act or thing done, suffered or omitted, which may be forbidden or commanded by said ordinance, and particularly from reducing its present rate of charges for gas to those prescribed in said ordinance, until the further order and decree of this court, in the premises.

32 That on the final hearing thereof, the aforesaid ordinances and each of them, the one pretending to prescribe said maximum rate, and the other pretending to impose said occupation tax, be adjudged void, because repugnant to the said several provisions of the Constitution of the United States, and that said injunction be made perpetual.

And that your orator may have such further or other relief in the premises as the nature of the circumstances of this case may require, and to your honors shall seem meet and proper.

And so may it please Your Honors to grant unto your orator the most gracious writ of subpœna to be directed to the said the City of Lincoln, Francis W. Brown, Mayor of the City of Lincoln, and Edmund C. Strode, City Attorney of the City of Lincoln, thereby commanding them and each of them, at a certain date and under a certain penalty therein to be specified, personally to be and appear before your Honors in this honorable court, and then and there to answer all and singular the premises and to abide and perform such order and decree herein as to Your Honors shall seem meet.

HALLECK F. ROSE,
*Solicitor for Complainant.*

HALLECK F. ROSE,
*Of Counsel for Complainant.*

UNITED STATES OF AMERICA,
*District and State of Nebraska, Lancaster County, ss:*

Homer Honeywell, being first duly sworn, on oath says that the Lincoln Gas & Electric Light Company, complainant in the above entitled cause, is a corporation; that affiant is and for two

33 years last past has been its acting general manager in direct and immediate charge of its administration and affairs at the City of Lincoln, and that the presentation and prosecution of this bill has been expressly authorized by said company and its president;

that affiant is the officer of said company highest in authority at this time within the City of Lincoln and within the District of Nebraska; that affiant has read the foregoing bill of complaint and knows the contents thereof, and that the matters and things in said bill of complaint alleged are within affiant's personal knowledge, and that the same are true of affiant's own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, that he believes them to be true.

HOMER HONEYWELL.

Subscribed in my presence and sworn to before me this 26th day of December, 1906.

[NOTARIAL SEAL.] MARY E. MORTIMER,
*Notary Public.*

34 *Restraining Order.*

Filed in United States Circuit Court, District of Nebraska, Lincoln Division, December 27, 1906.

Whereas in the above cause it has been made to appear upon the bill of complaint filed herein and the affidavit of Homer Honeywell that a writ of injunction preliminary to the final hearing is proper and prima facie the complainant is entitled thereto, enjoining defendants herein from the acts complained of and threatened to be committed; and it further appearing to the court that due notice of the filing of the motion for an injunction has been served upon all of the defendants, requiring them to appear before the Circuit Court of the United States for the District of Nebraska in the Eighth Circuit at the court room of said court in Lincoln on the 21st day of January, 1907, at 9 o'clock and 30 minutes A. M. then and there to show cause, if any they have, why the preliminary injunction therein prayed for should not issue; and it appearing to the undersigned district judge for the district of Nebraska of said circuit court that there is danger of irreparable injur*ing* caused to the complainant before the hearing of said application for the preliminary writ of injunction, unless the said defendants are, pending such hearing, restrained as hereafter set forth:

Therefore, complainant's application for such restraining order is granted upon its giving a bond with two good and sufficient sureties, to be approved by the clerk of this court in the penal sum of $3,000 securing the said defendants against all loss or damage which may result from the issue of said order if it shall be finally determined that the sa.ne was improperly issued or that may be awarded
35 to them by reason of the granting of said order:

Now Therefore, it is ordered that you, the said City of Lincoln, Francis W. Brown, Mayor, and Edmund C. Strode, City Attorney of said city, defendants herein, your agents, servants, attorneys, and all persons acting by or under your authority or direction, be and you hereby are specially restrained and enjoined from in any wise obeying, observing or conforming to the provisions,

commands, injunctions and prohibitions of a certain ordinance of the City of Lincoln, Number 432, entitled: "An ordinance regulating the price of manufactured gas, establishing penalties for the violation of the provisions of this ordinance and repealing all ordinances in conflict therewith," passed November 12, 1906 by the council of said city, and approved November 19, 1906 by the mayor, defendant Francis W. Brown; and from ordering, instituting or causing to be instituted or prosecuted any action or proceeding, civil or criminal, against the complainant, its executive officers or manager for any act or thing done, suffered or omitted which may be forbidden or commanded by the said ordinance, and particularly from reducing its present rate of charges for gas to those prescribed in said ordinance, until the further order of this court.

It is further ordered that a copy of this order, certified under the hand of the clerk and the seal of this court, be served on each of the defendants to be restrained thereby.

Dated at Omaha in the District of Nebraska this 27th day of December, 1906.

W. H. MUNGER,
*District Judge, District of Nebraska.*

36 *Answer.*

Filed in United States Circuit Court, District of Nebraska, Lincoln Division, May 13, 1907.

The defendants, the City of Lincoln, and its officers now and at all times hereafter, saving to itself all manner of benefits and advantages of exception or otherwise, that can or may be had or taken for the many errors, uncertainties and imperfections in the bill of the Lincoln Gas & Electric Light Company herein contained, for answer thereto, or to as much thereof as this defendant is advised and is material and necessary to make answer to, says:

1. Defendants admit that the complainant is a corporation organized under the laws of the State of Nebraska, for the purpose of owning and operating a light plant; and that the complainant succeeded to such property rights of the Lincoln Gas & Electric Company as it had power to alienate and that the latter company had previously succeeded to such property rights of the Lincoln Gas Company as it had power to alienate which last two corporations had previously to complainant's organization and existence, owned and operated lighting plants in this city. Admit that the ordinance, parts of which are set out in the bill of complaint, were passed by the mayor and council — the city of Lincoln, but defendants deny that such ordinances were legal and valid or conferred upon complainant's predecessors or either of them a perpetual franchise to use the streets and alleys of the City of Lincoln for the purpose of maintaining and operating a system of lighting by gas and electricity, as claimed in the bill of complaint, but on the contrary, defendants

aver the fact to be that such right was strictly limited to a
37 period of twenty-one years commencing March 9, 1872, and ending March 9, 1893, and the right of operating such lighting system and the use of the streets and alleys of the city therefor, since said last named date, has been by the sufferance only of the defendant city, and subject to termination at any time by it. Defendant says that this court in this proceeding is without jurisdiction to determine or adjudicate the franchise rights and privileges of the complainant and defendant saves to itself all manner of benefits and advantage of exception and objection to the jurisdiction of this court with respect thereto.

2. Defendants admit the passage of the ordinance by the City Council November 16, 1906, set out in the bill of complaint, whereby the price of gas to consumers in the defendant city, was limited to one dollar per thousand cubic feet, and alleges that the same ever since said date and now is a legal and valid ordinance and in full force and effect, except as the enforcement of the same is and has been restrained by the injunction granted by this Honorable Court.

Defendants aver that the statutes of the State of Nebraska, grant to the City of Lincoln the power to regulate and fix the price of gas to consumers, and the Mayor and Council are authorized, and it was made their duty to enact ordinances for that purpose, and defendants aver that the aforesaid ordinance was duly and legally enacted in pursuance to such grant of power and authority.

Defendants deny that the enforcement of the foregoing ordinance will so reduce complainant's earnings as to prevent it from paying a dividend upon its capital actually and necessarily required for the construction and equipment of its lighting system, and defendant alleges that the enactment of said ordinance with its provisions fixing the price of gas to consumers, as aforesaid, was and is a
38 reasonable exercise of the power vested in the defendant City, as aforesaid, by the legislature of Nebraska, and its enforcement will result in no wrong to complainant, and the limitation therein contained on the price of gas, is reasonable and just, and such price will cover the cost thereof, and in addition will pay the necessary expense of the operation of such lighting plant together with a reasonable dividend upon the reasonable and necessary cost of such plant; and defendants deny that such ordinance will deprive complainant of its property without due process of law, and deny that its provisions violated any of the provisions of the constitution of the United States.

3. Defendants admit that complainant's outstanding stock and bonds amount to more than two million dollars, but allege that the same are largely fictitious and watered and the same does not represent the amount of capital reasonably necessary to construct, equip and operate complainant's lighting system: that the replacement and present value thereof does not exceed five hundred thousand dollars, and said last named sum more than represents the capital necessarily invested in the construction, maintenance and operation of such a lighting system.

4. For further answer, defendants admit the enactment of the

ordinance on or about December 10, 1906, levying an occupation tax of two and one-half per cent annually upon the gross receipts of all gas companies operating in the City of Lincoln, but deny that such ordinance in its provisions is partial, discriminating, oppressive or unjust, and alleges that the same was duly and legally enacted and is a reasonable exercise of the power vested in the defendant by the constitution and statutes of the State of Nebraska; that the same is a legal and valid ordinance and is and has been in full force and effect except as its operation has been restrained by the injunction herein granted by this honorable court.

39 Defendants deny that such ordinance was passed by reason of any improper motive or influence, and den*ies* that defendants councilmen and mayor were moved to enact such ordinance by any unrighteous or unlawful motive or influence, and defendants except to *s*ll such allegations of complainant as scandalous, impertinent and immaterial matter, and an uncalled for reflection upon the officers of the City of Lincoln, and upon the dignity and standing of this court, in assuming that this honorable court would be influenced by such immaterial and scandalous matter. And defendants ask this honorable court to cause the same to be expunged from said bill of complaint.

Defendants further answering deny each and every allegation in the bill of complaint contained not herein specifically admitted or denied.

Wherefore the defendants having fully answered, confessed, traversed and avoided or denied all the matters in the said bill of complaint material to be answered, according to its best knowledge and belief, humbly prays this honorable court to enter its judgment, that this defendant be hence dismissed, with its reasonable costs and charges in this behalf most wrongfully sustained, and for such other and further relief in the premises as to this honorable court may seem meet and in accordance with equity.

CITY OF LINCOLN,
By EDMUND C. STRODE,
*Solicitor and of Counsel for Defendant.*

40 *Replication to Answer.*

Filed in the United States Circuit Court, District of Nebraska, Lincoln Division, June 22, 1907.

This repliant, The Lincoln Gas & Electric Light Company, saving and reserving to itself all and all manner of advantages of exceptions which may be had and taken to the manifold errors, uncertainties and insufficiencies of the *the* answer of the defendants, the city of Lincoln, and its said officers, for replication thereunto, saith that it does and will aver, maintain and prove its said bill to be true, certain and sufficient in the law to be answered unto by the said defendants, and that the answer of the said defendants is very uncertain, evasive, and insufficient in law to be replied unto by this repli-

ant; without that, that any other matter or thing in the said answer contained, material or effectual in law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed, or avoided, traversed or denied, is true; all which matters and things this repliant is ready to aver, maintain and prove as this honorable court shall direct, and humbly prays as in and by its said bill it hath already prayed.

HALLECK F. ROSE,
*Solicitor and Counsel for Complainant.*

41 *Memorandum Opinion.*

Filed in the Circuit Court of the United States for the District of Nebraska, Lincoln Division, March 20, 1909.

W. H. MUNGER, *D. J.:*

Complainant is a corporation organized under the laws of the state of Nebraska, owns and operates a gas plant in the City of Lincoln, Nebraska, and furnishes to its patrons gas for lighting, heating and power purposes. The City of Lincoln, in March 1872 granted unto the Lincoln Gas Company, a corporation, organized under the laws of the State of Nebraska, a franchise granting the use of the streets, lanes and alleys in the city, for the purpose of constructing and maintaining a gas plant, and said Lincoln Gas Company constructed a gas plant, of which the complainant about the year 1901, became the owner.

In November 1906, the City Council of the City of Lincoln passed an ordinance, providing that no gas company should charge, exact, demand or collect, from any consumer, for gas manufactured or sold in said city, more than the sum of one dollar net per one thousand cubic feet, which ordinance provided certain penalties for its violation, said ordinance to take effect and be in force from and after December 1st, 1906.

In December 1906, said City Council also passed an ordinance imposing an occupation tax upon all gas companies manufacturing and furnishing gas to the inhabitants of the city of Lincoln of two and one-half per cent upon the gross receipts of said company, said ordinance to take effect January 1st, 1907.

42 This action is brought to enjoin the enforcement of said ordinance, the jurisdiction of this court being invoked upon the ground of a federal question, in that the rate of one dollar for each one thousand cubic feet of gas will deprive complainant of its property without just compensation, in violation of the provisions of the Constitution of the United States.

The ordinance imposing an occupation tax is alleged to be unconstitutional in that it violates the provisions of section 6, Article IX of the Constitution of the State of Nebraska, which requires that such a tax shall be uniform upon persons and property, it being alleged that the Lincoln Traction Company operates and maintains

an electric lighting plant and furnishes to the city and its inhabitants electricity for light, heat and power purposes.

A large amount of testimony has been taken for the purpose of determining the value of complainant's gas plant, and the reasonable expense for operating the same. In determining for what amount the plant could be reconstructed I have accepted in the main the testimony of complainant's witnesses as being the most satisfactory, and I find that the plant could be reconstructed for the following sums:

| | | |
|---|---|---|
| Coal gas apparatus | $80,605.00 | |
| Water gas apparatus | 29,278.00 | |
| Mains in dirt streets | 90,578.00 | |
| Mains in paved streets | 130,027.00 | |
| Gas services, etc | 107,106.82 | |
| Gas meters in use | 36,282.90 | |
| Meter connections | 6,304.00 | |
| Piping for gas ranges | 16,500.00 | |
| | | $496,681.72 |
| Engineering expenses (2½ per cent) | | 12,417.04 |
| Real estate | | 4,000.00 |
| Present value of buildings | | 24,643.00 |
| Contingent expenses in construction | | 25,000.00 |
| Cost of organizing company | | 3,000.00 |
| | | $565,741.76 |

43 While the evidence as to the depreciation is somewhat vague and indefinite, I think, upon the items aggregating said $496,681.72, there should be deducted for depreciation ten per cent, amounting to the sum of $49,688.17, making the total present valuation of the plant $516,073.59; but it is apparent that, for the successful and economical operation of the plant, a certain amount of working capital is required. This amount I find to be $50,000.00 making the total value of complainant's investment, upon which it is entitled to a reasonable return, $566,073.59.

While it is true the testimony shows that the complainant has not such working capital but has purchased upon credit the supplies necessary to operate, yet I think that, in determining what is a reasonable compensation, a working capital should be considered.

I do not allow anything as a value of complainant's franchise. It does not appear from the allegations of the bill or proofs that anything was paid to the city for the franchise; the city simply granted to complainant, without compensation, the right to use the public streets and alleys for the purpose of constructing and operating its plant. This was a mere right and privilege to complainant and did not involve the expenditure of money. While it is true a franchise is a property right, which will protect complainant in its use of the streets and alleys for the purposes expressed, yet it involves no investment of money, complainant's investment being in its tangible

property under authority of the franchise, and the public ought not to be taxed for a privilege which it has voluntarily granted.

I do not think there is anything in the case of Wilcox vs. Consolidated Gas Co., 129 Sup. Ct. Rep., 192, which conflicts with this view. In that case the legislative enactment providing for
44 consolidation of various companies expressly required that a value should be given to the franchise of the respective companies. For that reason the court sustained the value of the franchise thus fixed, but refused to recognize any increased value accruing during subsequent years by reason of the large increase in the tangible property from extension etc.

Whether a rate of one dollar per thousand for gas would furnish an adequate return upon the investment of $566,073.59 would depend, of course, upon the net receipts which could be applied in dividends. The net receipts of the company for the year 1907 were $73,851.83—this on the basis of the company's charge of $1.20 per thousand. A reduction of twenty cents per thousand, as required by the ordinance, would have reduced the receipt, upon the amount of gas sold in 1907, in the sum of $35,873.26, thus reducing the profit to $37,978.57.

While the plant has been kept in a good state of preservation, needed repairs etc. having been fully made, and chiefly charged to expense account, something should be allowed as a fund to be set apart for what is denominated a "Depreciation Fund." This I find to be $8,000.00 per year, leaving the net sum applicable as dividends to stockholders the sum of $29,978.57, or fifty-two and a fraction mills on the dollar. This is on the assumption that the occupation tax of two and one-half per cent is invalid. The occupation tax of two and one-half per cent for the year 1907 would have amounted to $4,484.15.

This occupation tax I think invalid, as violating the Constitution of the State of Nebraska, requiring it to be uniform upon persons and property. In my judgment, an electric plant, which furnishes to the public light, heat and power should be classed the same as a gas plant, which furnishes to the public light, heat and power. The fact that one furnishes the light, heat and power by means of an electric current—the other by a current of gas—does not, in
45 my judgment, justify a difference in classification. So far as the patrons are concerned, it is results that are sought for, and it is results which the respective parties furnish the public—results being light, heat and power. (See as to classification, State vs. Farmers & Merchants Irrigation Co., 59 Neb., 1; Rosenbloom vs. State, 64 Neb., 342.

The ordinance imposing the occupation tax being, in my judgment invalid, no deduction should be made from the net revenues for that purpose.

It is claimed that the ordinance reducing the price of gas to one dollar per thousand fixes a flat rate to all consumers alike; that as to the smaller consumers, gas would be furnished at a loss; that for this reason, the ordinance is invalid.

If the total income derived from the rates prescribed by the ordi-

nance will yield a reasonable return to complainant, upon its investment, I do not think it can complain. (See Wilcox vs. Consolidated Gas Co., supra.)

It appears from the evidence in this case that complainant's outstanding bonded indebtedness is $1,129,000.00, and that its stock is $2,500,000.00. The stock and bonds are each grossly in excess of the value of complainant's plant and grossly in excess of the cost of construction. Complainant's construction account shows that the entire cost of the plant to June 30th, 1907, was $603,278.14. The evidence shows that complainant and its predecessor, to obtain money with which to construct the plant, sold its bonds and stock at an enormous discount, and I do not think that, in determining the reasonableness of rates the amount thereof should be considered. While complainant, I think, is entitled to at least six per cent upon the money invested, it does not appear that
46 the reduced rate would not yield that sum. It is quite probable that the reduced rate would considerably increase the consumption of gas and thus increase complainant's net profits.

The record shows that in June, 1904, complainant voluntarily reduced its rates from approximately $1.50 per thousand to $1.20, and the amount of gas consumed, and net profits resulting, considerably increased. The inquiry in cases of this character is not alone what has complainant theretofore earned but it is what will be the effect of the ordinance reducing the rate upon the future net earnings of the company, and it devolves upon complainant to show not that the past rates have not produced a reasonable return but that the rate prescribed by the ordinance will not in the future produce a reasonable return.

The questions involved in this case, I think, have been recently disposed of by the Supreme Court, in the case of Knoxville vs. Knoxville Water Co., 29 Sup. Ct. Rep., 148; Wilcox vs. Consolidated Gas Co., id., 192; Railroad Commission of La. vs. Cumberland Telegraph & Telephone Co., decided February 23rd, 1909.

The question as to whether or not complainant's franchise is a perpetual one or has already terminated has been argued but that question is not properly involved in the case. The ordinance prescribing the rates to be charged, in effect, admits that complainant is properly occupying the streets and alleys, and whether such occupancy is by reason of a perpetual franchise or by sufferance, is not involved in the proper determination of this case.

For the reasons given, an injunction will be awarded against the enforcement of the ordinance imposing an occupation tax. The bill in all other respects will be dismissed without prejudice to the bringing of a new action when it is shown, after compliance with the ordinance fixing rates that such rates will not yield a reasonable return to complainant.

47 Counsel for defendant will prepare the proper decree and submit it to counsel for complainant before presenting to the court for signature.

*Decree.*

Filed in the Circuit Court of the United States for the District of Nebraska, Lincoln Division, April 6, 1909.

This cause came on for hearing upon the pleadings and the evidence and the argument of counsel having heretofore been submitted to the court, and upon due consideration whereof the Court finds for the defendants and finds no equity in the bill of complainant, so far as the same relates to the ordinance of the City of Lincoln establishing a rate of charge for gas in such city, and the same is hereby dismissed and the restraining order heretofore granted against the enforcement of such ordinance is hereby dissolved, without prejudice to the commencement of a new action.

The Court further finds that the ordinance of the City of Lincoln levying an occupation tax against the complainant violates the constitution of the State of Nebraska and is for that reason illegal and void, and that the enforcement of the same as to complainant should be perpetually enjoined.

It is therefore adjudged and decreed that a permanent injunction be and the same is hereby granted perpetually enjoining the City of Lincoln from enforcing said occupation tax ordinance.

It is further adjudged that the complainant pay the costs of this action.

WM. H. MUNGER, *Judge.*

Clerk:

Enter this decree.

WM. H. MUNGER, *Judge.*

48 *Petition for Allowance of Appeal.*

Filed in the United States Circuit Court, District of Nebraska, Lincoln Division, April 10, 1909.

The above named complainant conceiving itself aggrieved by the order and decree made and entered in the above entitled cause on the — day of April 1909, wherein and whereby it was ordered, adjudged and decreed that so far as the complainant's bill related to the ordinance of the city of Lincoln establishing a rate of charge for gas in such city was dismissed and the restraining order theretofore granted against the enforcement of such order was dissolved, and the costs of said action were adjudged against the complainant herein, amounting to $—, does hereby appeal from said order and decree from the — day of April, 1909, to the Supreme Court of United States of America, for the reasons specified in the assignment of errors filed herein, and it prays that this appeal may be allowed, and that a transcript of the record, papers and proceedings upon which said order

and decree was made duly authenticated, may be sent to the Supreme Court of the United States of America.

HALLECK F. ROSE AND
E. C. STRODE,
*Solicitor- for Complainant.*

49 *Assignment of Error.*

Filed in the United States Circuit Court, District of Nebraska, Lincoln Division, April 10, 1909.

Comes now the complainant and files the following assignment of error upon which it will rely upon its appeal from the decree made by this honorable court on the — day of April, 1909, in the above entitled cause.

1. That the United States Circuit Court in and for the district of Nebraska erred in dismissing complainant's bill, in so far as it relates to the ordinance of the City of Lincoln establishing a rate of charges for gas in such city.

2. In dissolving the restraining order theretofore granted by said court against enforcement of the ordinance of the City of Lincoln establishing a rate of charges for gas in such City.

3. In finding and determining that the plant of the complainant could be reconstructed for the sum of $565,741.76.

4. In finding and determining that there should be deducted from the said $565,741.76 the sum of $49,688.17 for depreciation.

5. In finding and determining the present value of complainant's plant to be $516,073.59.

6. In finding and determining the present value of complainant's buildings to be $24,643.00, the proof showing affirmatively that the cost of said buildings and the present value thereof to be $37,-286.00.

50 7. In finding and determining the value of the meter connections to be $6,304.00, the proof showing affirmatively the cost and value thereof to be $13,184.00.

8. In finding and determining the item of contingent expense to be $25,000.00, the proof showing affirmatively the item to be $67,-884.09.

9. In finding and determining the cost of organiz-ng the Company to be $3,000.00 the proof showing affirmatively the cost to be $24,-950.00.

10. In finding and determining that nothing should be allowed as interest on the money employed in constructing the plant during the course of its construction, the proof showing affirmatively the item to be $31,550.00.

11. In finding and determining that nothing should be allowed covering the expense of obtaining the money for the original cost of complainant's plant, the proof showing affirmatively the item to be $149,512.10; and in finding and determining that should be nothing allowed in the way of interest on the above item, the proof showing affirmatively the amount to be $7,500.00.

12. In finding and determining that nothing be allowed for the franchise in fixing and determining the value of complainant's property or plant, the proof showing affirmatively the value of such franchise was in excess of $100,000.00, and that the complainant was taxed thereon by the City of Lincoln on a valuation of $60,000.00.

13. In finding and determining that the complainant should be allowed for depreciation on its plant or property the sum of $8,000.00 per year only, the proof showing affirmatively that a reasonable annual sum for such depreciation would be five per cent of the value of complainant's property.

51 14. In finding and determining that the ordinance in question was valid, notwithstanding the proof showing affirmatively that under the ordinance the complainant would be required to serve more than seventy-five per cent of its patrons at less than cost.

15. In finding and determining, based on the earnings for the year 1907, that fifty-two and a fraction mills net profits on the valuation found and determined by the court would not deprive complainant of its property without just compensation, in violation of the provisions of the constitution of United States.

16. In not finding and determining the validity of complainant's franchise, and the life of said franchise.

17. In not finding and determining the validity of the ordinance, based on the value of complainant's property and the net earnings thereof as of the date said ordinance was passed and took effect according to its terms, to wit: December 1, 1906.

In order that the foregoing assignment of errors may be and appear of record the complainant presents the same to the court, and prays that such disposition be made thereof as in accordance with law and the statutes of the United States in such cases made and provided and complainant prays a reversal of the decretal order and decree of dismissal made and entered by said court, as hereinbefore set forth and referred to.

HALLECK F. ROSE AND
E. C. STRODE,
*Solicitor- for Complainant.*

52 *Order Allowing Appeal.*

Filed in the United States Circuit Court, District of Nebraska, Lincoln Division, May 27, 1909.

This cause came on for hearing this 5th day of May 1909, upon the application of the complainant for an allowance of an appeal to the Supreme Court of the United States, and for the fixing of a supersedeas bond, and upon consideration whereof it is ordered that said appeal be and the same hereby is, allowed, upon fixing a cost bond in the sum of Two Hundred and Fifty Dollars ($250.00); it is further ordered that the injunction heretofore granted be restored and continued in force until the appeal is heard and determined in the Su-

preme Court of the United States, provided, the Complainant, the Lincoln Gas and Electric Light Company, shall, within twenty days from this date make and file in this court a good and sufficient bond with approved sureties in the penal sum of One hundred and fifty thousand Dollars ($150,000.00), payable to the Clerk of this court and his successors in office, for the benefit of all whom it may concern, conditioned that, in the event that the decree heretofore entered herein dismissing complainant's bill is affirmed by the Supreme Court of the United States, it will, on demand, pay to the party or parties entitled thereto all overcharges for gas which it may have exacted in violation of Ordinance No. 432 of the City of Lincoln, regulating the price of manufactured gas and fixing the price thereof at One Dollar per thousand cubic feet, passed November 12th, 1906, by the Council of said City and approved November 19th, 1906, by the Mayor, and taking effect January 1st, 1907, since injunction was first awarded herein, to-wit, December 27th, 1906 and that it will in like manner pay to the parties entitled thereto all such over-
53 charges, if any it may continue to exact in violation of said ordinance during the pendency of the appeal, said obligation to become void if the ordinance be pronounced void by the Supreme Court of the United States.

Dated this 5th day of May, 1909.

WM. H. MUNGER, *Judge.*

54 *Motion to Change Counsel.*

Filed in the Circuit Court of the United States, District of Nebraska, at Lincoln, June 19, 1909.

Comes now the complainant and moves the court for an order substituting the name of John M. Stewart for the name of Edmund C. Strode, as one of the defendants in the above entitled proceedings.

The complainant also presents herewith a certified copy of the council proceedings of the City of Lincoln with respect thereto.

The complainant asks that the order be made substituting the name of John M. Stewart, City Attorney as defendant, and that the Clerk of the Court be authorized and directed to substitute said name of John M. Stewart as defendant in the transcript and record in the proceedings of this case.

LINCOLN GAS & ELECTRIC LIGHT CO.,
By E. C. STRODE, *Its Atty.*

Request to change counsel in gas rate suit, H. F. Rose, Clerk, read the following communication:

"To the Hon. Mayor & Council of the City of Lincoln:

Owing to my removal from Lincoln, and my special employment as attorney for the Burlington Railroad, I find it burdensome to me personally to continue full responsibility for the prosecution of the Gas Rate Suit. Former City Attorney E. C. Strode, Esq., who suc-

ceeds me as attorney for the Gas Co. was in office when this suit was commenced, but has taken no active part in the conduct of the case, the answer having been drawn and proofs taken by the present city Attorney. If deemed consistent I respectfully request that
55 the City consent that Mr. Strode's appearance in this suit for the City be withdrawn and that he may appear as counsel for the Gas Company in the further proceedings to be had therein, provided, that such course is agreeable to the present City Attorney.

Respectfully, HALLECK F. ROSE."

Hoppe: Moved that the communication be referred to the Legal Dept. Seconded by Hauschildt.

City Attorney Stewart, being called for, stated that it did not make any difference to him whatever, and that it would not prejudice the interest of the City whoever appeared against him in the case.

George: Moved as a substitute that the request be granted. Seconded by Castle and carried by the following vote; Ayes; Bauer, Bishop, Castle, George, Hauschildt, Leonhardt, Quiggle, Sawyer, Woodward. Nays: Hoppe, Hutton.

STATE OF NEBRASKA,
*Lancaster County, ss:*

I do hereby certify that the foregoing is a true and correct copy of the minutes, in part, of the Council proceedings, under date of May 4, 1908, as shown by the records and files in the office of the City Clerk.

Witness my hand and official seal this 19th day of June, 1909.

[OFFICIAL SEAL.] R. C. OZMAN,
*City Clerk.*

56 United States Circuit and District Court, District of Nebraska.

OMAHA, June 28th, 1909.

J. H. McClay, Esq., Deputy Clerk, U. S. Court, Lincoln, Nebraska.

DEAR SIR: Yours of the 19th enclosing motion in case of Lincoln Gas & Electric Light Co. vs. City of Lincoln, to substitute the name of John M. Stewart for the name of Edmund C. Strode, came while I was at North Platte. You may enter an order upon stipulation by Mr. Stewart and by Mr. Strode, substituting Mr. Stewart in the place of Mr. Strode.

Yours truly,

WM. H. MUNGER.

Papers returned herewith.

57 *Mandate from the Supreme Court of the United States.*

Filed in the District Court of the United States, District of Nebraska, Lincoln Division, April 10, 1912.

UNITED STATES OF AMERICA, *ss:*

[OFFICIAL SEAL.]

The President of the United States of America to the Honorable the Judge of the District Court of the United States for the District of Nebraska, Greeting:

Whereas lately in the Circuit Court of the United States for the District of Nebraska, in a cause between Lincoln Gas & Electric Light Company, complainant, and The City of Lincoln, Francis W. Brown, Mayor, and Edmund C. Strode, City Attorney of said City of Lincoln, Defendants, wherein the decree of the said Circuit Court, entered in said cause on the 6th day of April, A. D. 1909, is in the following words, viz:

"This cause came on for hearing upon the pleadings and the evidence and the argument of counsel having heretofore been submitted to the court, and upon due consideration whereof the Court finds for the defendants and finds no equity in the bill of complainant, so far as the same relates to the ordinance of the City of
58 Lincoln establishing a rate of charges for gas in such city and the same is hereby dismissed and the restraining order heretofore granted against the enforcement of such ordinance is hereby dissolved, without prejudice to the commencement of a new action.

The Court further finds that the ordinance of the City of Lincoln levying an occupation tax against the complainant violates the constitution of the State of Nebraska and is for that reason illegal and void, and that the enforcement of the same as to complainant should be perpetually enjoined.

It is therefore adjudged and decreed that a permanent injunction be and the same is hereby granted perpetually enjoining the City of Lincoln from enforcing said occupation tax ordinance.

It is further adjudged that the complainant pay the costs of this action.

(Signed) WM. H. MUNGER, *Judge.*"

as by the inspection of the transcript of the record of the said circuit court, which was brought into the Supreme Court of the United States by virtue of an appeal taken by said complainant agreeably to the act of Congress in such case made and provided, fully and at large appears.

And whereas in the present term of October, in the year of our Lord one thousand nine hundred and eleven, the said cause came on

to be heard before the said Supreme Court, on the said transcript of record, and was argued by counsel:

On consideration whereof It is now here ordered, adjudged, and decreed by this Court that the decree of said Circuit Court in this cause be, and the same is hereby reversed with costs; and that the said complainant, The Lincoln Gas & Electric Light Company, re-
cover against the said defendants One thousand six hundred
59 and fifty-one dollars and twenty-five cents for its costs herein expended and have execution therefor.

And it is further ordered that this cause, be and the same is hereby, remanded to the District Court of the United States for the District of Nebraska, with directions to refer the case to a competent and skilled Master, to report fully his findings upon all of the questions raised by either party, separately, and with leave to both parties to take any additional evidence they may wish within a time to be fixed by that court, and that that court, upon such report, proceed as equity shall require.

It is further ordered, adjudged and decreed for the protection of all parties that the injunction granted in the court below continue in force until final decree there, upon condition that the appellant enter into a new bond, with surety satisfactory to the court below, to account for all overcharges to consumers since the original restraining order in the event the ordinance shall be sustained, and that if such bond be not made within twenty days after the filing of the mandate of this Court that the injunction stand dissolved.

FEBRUARY 19, 1912.

You therefore, are hereby commanded that such execution and further proceedings be had in said cause, in conformity with the opinion and decree of this Court as according to right and justice, and the laws of the United States, ought to be had, the said appeal notwithstanding.

Witness the Honorable Edward D. White, Chief Justice of the United States, the 23d day of March in the year of our Lord one thousand nine hundred and twelve.

JAMES H. McKENNEY,
*Clerk of the Supreme Court of the United States.*

*Costs of Complainant.*

| | |
|---|---|
| Clerk | $552.75 |
| Printing record | 1,078.50 |
| Attorney | 20.00 |
| | $1,651.25 |

60 Supreme Court of the United States, October Term, 1911.

*Costs of The Lincoln Gas & Electric Light Company in No.* 83.

| | |
|---|---|
| 190–, October Term, Docketing cause and filing record, $5.00; appearance, .25; filing precipe, .25; filing papers, $1.25; continuance, .25 | 7.00 |
| 1910, October term, transfer, $1.00; filing papers, .25; continuance, .25 | 1.50 |
| 1911, October Term, Transfer, $1.00; filing receipts, .75; filing papers, $5.25; filing briefs, $5.00; argument, .20; judgment, $1.00; filing same, .25; recording, .40; mandate, $5.00; preparing record for printer, etc., $525.00; cost of printing record, $1,078.50; attorney's docket fee, $20.00; costs and copy, .40 | 1,642.75 |
| | 1,651.25 |

Fee Book, page 21, 744.
Test:

JAMES H. McKENNEY,
*Clerk of the Supreme Court of the United States.*

61 *Order of Court Appointing J. J. Sullivan, Master.*

Filed in United States District Court, District of Nebraska, Lincoln Division, July 15, 1912.

It is hereby ordered that the above case be referred to Honorable John J. Sullivan as master, to take the proofs, report the same to the court with his findings of fact and law, with all convenient dispatch.

WM. H. MUNGER, *Judge.*

62 *Report of Special Master.*

Filed in United States District Court, District of Nebraska, Lincoln Division, September 8, 1914.

The ultimate and determinative question in this case is the validity of an ordinance of the City of Lincoln reducing the rate of gas to consumers from $1.20 to $1.00 per M cubic feet. The ordinance was, by its terms, effective December 1st, 1906, but prior to that date, the gas company secured an order enjoining the city authorities from putting the reduced rate into effect. This order is still in force. There is also, incidentally involved in the case the constitutional validity of an occupation tax ordinance which, by its

terms, took effect January 1, 1907. This latter ordinance is assailed upon the ground that plaintiff's competitors in the busness of furnishing light by electricity is not subject to a like burden, and that the tax imposition is, therefore, discriminatory and denies plaintiff an equal protection of the law contrary to the Fourteenth Amendment. After the case was remanded by the Supreme Court (Lincoln Gas & Electric Light Co. vs. City of Lincoln, 223 U. S. 351) the undersigned, acting under the authority of an order of this court appointing him Special Master, heard and considered the
63 evidence and arguments of counsel, and now submits for the consideration of the Court the following report dealing with the valuation of the company's property employed in the production and distribution of gas in the City of Lincoln, together with the cost and expense of conducting the business, and the gross and net earnings derived therefrom.

## Preliminary Observations.

An enormous mass of evidence, much of it bearing rather remotely upon the questions in dispute was collected and submitted during a trial of extraordinary length. A summarization of this evidence is quite impossible and would, so far as I can see, aid neither court nor counsel in testing the correctness of the conclusions which I have reached. To give the names of witnesses together with what I might conceive to be fair condensation of their testimony upon any controverted point would, as I view it, be altogether valueless. Instead of pursuing this course, it has seemed to me better, generally, in dealing with valuation, to make findings with respect to small subdivisions of the company's property, reciting evidence and giving reasons only when it is thought that court or counsel may be thereby substantially assisted in determining whether any such finding should be approved, revised or rejected. The evidence, which is for the most part opinion evidence, and generally unreconcilable, makes my conclusions in regard to values, at best, nothing more than fair approximations. The fact that those conclusions may, perhaps, be made the basis of a decree
64 annulling legislative action upon constitutional grounds has duly impressed me with the necessity of being cautious and conservative in fixing values which, while entirely just to the company, do not go beyond the figures fairly indicated by the proof. In other words, I have, in considering the case, kept constantly in mind the fundamental doctrine that a rate ordinance cannot be rightfully condemned by judicial sentence unless it is shown that there is no just or fair doubt about its confiscatory character. Whoever accuses rate legislation, must make his accusation good by producing the requisite quantum of proof. We must make a frank and full disclosure of all the relevant facts in his possession or under his control. The conduct of the company at the trial of this case has hardly measured up to this somewhat exacting, but just standard. It appears that Mr. Stone of the firm of Stone, Huddle & Company of Madison, Wisconsin, a firm engaged generally in the busi-

ness of valuing public utilities, was employed by plaintiff during the pendency of this litigation, to make an investigation into its property, business or affairs. The exact scope of the employment is not disclosed, but it does appear that Mr. Stone rendered services and made a report for which he was paid a fee of $2,600.00. Plaintiff refused at the trial to produce the report or give any information with respect to it. Whether this conduct constitutes technically a suppression of evidence, I do not determine for I have not grounded any presumption or inference upon it. It has, however, emphasized the need of exercising more than ordinary care to see, where the validity of a law or ordinance depends upon disputed questions of fact, that the dispute be not resolved against the legislation where there is any reasonable doubt about what the truth is.

65 The contention has been made on behalf of the City that there are a number of plant items which ought not to be valued on the basis of reproduction cost, but on the basis of the cost new or more modern and equally efficient substitutes of a different type. I have not adopted this view, but have instead valued all such items as they actually exist. The property whose valuation is here involved is, of course, the aggregation of things owned by the company and used by it in serving the public. Rates should, therefore, it seems to me, be based upon the value of those things rather than upon the value of other things performing like functions with equal or greater efficiency.

My valuation of the physical property is based on the Broadnax inventory. Specific reference to whatever items are excluded from it is hereinafter made and my reason given for the exclusion.

Generally, in making computations, I have, for convenience, whenever the consequence would be plainly negligible, used round numbers instead of exact figures.

## Overhead Charges.

In ascertaining the value of the property of a public service corporation it is, the recognized and approved practice to add to the fundamental cost of the physical equipment, excepting real estate and working capital, a proper percentage to cover overhead expenses. This percentage represents the difference between the net construction cost and the cost of reproduction new. Just what it should be

66 is the question about which there is much difference of opinion among engineers, courts and commissions. In this case, Mr. Lea puts it at sixteen per cent, and Mr. A. D. Adams at seven per cent. The matter is not governed by any inflexible rule, but is to be determined in every case by the exercise of good sense and sound discretion. The amount should be sufficient rather than liberal, especially where liberality might result in blotting out legislation which, in the regulation of rates, is only required to stop just short of confiscation. The property was inventoried by Mr. Broadnax, an employee of the company and a gas engineer of long experience. The work seems to have been done with unusual thoroughness. The only error discovered during the course of the long trial was one of inclu-

sion; there was none of exclusion. My judgment upon the matter is that an allowance of twelve and a half per cent on the total net construction cost of the physical property, excepting real estate and working capital, is sufficient to cover all overhead expenses including engineering, superintendence, legal expenses, taxes, interest during construction, omissions and contingencies, casualty liability and whatever else is usually classified under this caption. This is necessarily an estimate based almost entirely upon expert testimony. No accounts were kept and no books, vouchers or other evidence produced showing with even approximate accuracy what expenditures were actually made and properly chargeable to this account. The value of the property has substantially increased by addition made to it in recent years, but the only means of ascertaining what the overhead charges on account of such additions were, is by the use of a more or less reliable hypothesis. Courts and commissions differ widely
67 upon this question; and while it may be that the percentage here allowed is not enough, the evidence does not convince me that it ought to be more. I come now to the question of physical valuation. The physical property was, for the purpose of being inventoried and appraised, divided into four groups, namely:

(1) Real Estate,
(2) Buildings,
(3) Works Equipment, and
(4) Distribution System.

These groups inclu-e the whole of the physical property excepting only what goes into Working Capital. The valuation is of January 1, 1913.

## Real Estate.

Taking up first the real estate, which is, in making the valuation, considered as denuded of all improvements used in, or connected with, the manufacture or distribution of gas, I find that it consists of eight different tracts. Upon this property, Henry I. Lea, the gas engineer, who made the general appraisement, for the company, placed a valuation of $19,320.00. This figure was fixed upon by Mr. Lea after inquiry among real estate dealers and others having knowledge of land values in and about Lincoln. Its substantial correctness is vouched for in detail by other witnesses testifying on behalf of the company. On the other hand, Mr. A. D. Adams, consulting gas engineer, testifying for the City, fixed the value of Lots 1 to 12 inclusive Block 79, which the City claims is the only real estate devoted to the gas business, at $2,625.00. This estimate though obviously too low for the lots embraced in it, is supported to a con-
68 siderable extent by witnesses for the City. The local witnesses were all men of fair intelligence, evident candor, and qualified by observation and experience to give evidence entitled to serious consideration. In circumstances of this kind there is, of course, no means by which a court can with precision lay its finger on the truth. The most it can do, in the light of the opinions given by others, is to express an opinion of its own. In my judgment $16,250.00 is a fair allowance to plaintiff for all the real estate which it

claims is devoted to, or properly chargeable against the gas business. It is contended by counsel for the City that the only real estate used or useful in the manufacture or distribution of gas in the City of Lincoln are Lots 1 to 12 in Block 79, and that the other lots embraced in the inventory ought not for the purposes of this case, to be counted as part of the utility. I do not accept this view. It is true, as counsel assert, that the property in question is not all actually used at this time in the gas business, but there is considerable probability that it, or at least the greater part of it may be in the not far distant future. It stands waiting, and may, perhaps, be regarded as constructively in service. But assuming that the acquisition of some of the lots was due to an error of judgment, I do not think they ought for that reason to be excluded from the valuation. The judgment of the court upon the action of the company ought not to be too harsh; it ought to be tempered by the consideration that the company put in its own money in good faith, and that infallibility is not a human attribute.

69 Some of the lots were bought to avoid threatened litigation, and I am not prepared of the evidence in the record to say that the purchase was not dictated by sound business judgment.

### Buildings.

The property embraced in this caption is subdivided into nine parts upon each of which is fixed a valuation which, under the evidence, I consider fair and just.

### Purifying House.

The reproduction cost of this building, according to Lea, is $19,279.00; according to A. D. Adams $13,457.00. The net construction cost, according to Assenmacher, a witness for the City, is $12,482.00. I find the reproduction cost to be $16,700.00 and the present value $13,200.00.

### Generator House.

Mr. Lea's estimate of the reproduction cost of this building is $4,337.00; Mr. A. D. Adam's $3,489.00, and Mr. Assenmacher'- estimate of the net construction cost is $3,308.00. I find the cost of reproduction to be $4,000.00 and the present worth $3,800.00.

### Retort House.

The reproduction cost of this building is put by Mr. Lea at $8,919.00, by Mr. Adams at $6,515.00, while Mr. Assenmacher's estimate of net construction cost is $6,080.00. I fix the reproduction cost at $7,500.00, and the present worth at $6,375.00.

### Meter Shop and Booster House.

The reproduction cost of this structure is, according to Lea, $3,035.00; according to Adams $2,192.00; and its net construction cost,

according to Assenmacher, is $2,559.00. I fix the reproduc-
70 tion cost at $2,850.00 and present worth at $2,660.00.

### Coal Shed.

The reproduction cost of the coal shed is, according to Lea, $2,-080.00; according to Adams $1,773.00; and the net construction cost is, according to Assenmacher, $1,892.00. I fix the reproduction cost at $2,080.00, and the present value at $520.00.

### Oil Tank House.

Lea's figure on reproduction cost of this structure is $1,807.00; Adams' $1,185.00; and Assenmahcer's for net construction cost $1,-276.00. I fix the reproduction cost at $1,807.00, and the present value at $1,500.00.

### Stable and Blacksmith Shop.

Lea's estimate of reproduction cost of this item is $549.00; Adams' $875.00; and Assenmacher's for net construction cost $907.00. I fix the reproduction cost at $949.00 and the present value at $193.00.

### District Holder and Booster House.

I find the reproduction cost of this item to be $811.00 and the present worth at $770.00.

### Oxide Shed.

The oxide shed would cost $70.00 to reproduce new, and its present worth at $63.00.

Total present value of buildings, $29,381.00.

### Works Equipment.

The property here included consists of seventy-three items.
71 The evidence of values comes principally from the experts. Lea and Adams, and clashes irreconcilably at almost every point. In considering the evidence of these experts, I have been aided, of course, by the testimony of other witnesses and by reports, letters, bills, contracts, vouchers and other documentary proofs. Upon every disputed item all the evidence, oral and written which I have been able to find in the record has been examined, considered and given in the decision reached its proper weight of influence. After ascertaining the reproduction cost which is in the aggregate $198,868.00, and making proper deductions for depreciation I present here without discussion of the evidence my conclusion that the present value of the seventy-three units which compose this division of the company's property is $179,310.00. I give also the depreciated value of each unit.

Value as of January 1, 1913.

| | | |
|---|---|---|
| No. 1. | 7′ 6″ water gas set | $8,030.00 |
| No. 2. | 7′ 6″ water gas set | 7,710.00 |
| No. 3. | Water gas condenser and scrubber | 1,215.00 |
| No. 4. | Operating floor | 1,810.00 |
| No. 5. | 6′ 6″ water gas set | 5,850.00 |
| No. 6. | 6′ 6″ water gas set, Springer | 1,625.00 |
| No. 7. | Operating floor | 1,380.00 |
| No. 8. | No. 7 Sturtevant blower | 260.00 |
| No. 9. | No. 7 Sturtevant blower | 275.00 |
| No. 10. | No. 1 Roots blower | 150.00 |
| No. 11. | No. 8 Sturtevant turbo blower | 1,330.00 |
| No. 12. | No. 8 Sturtevant blower | 467.00 |
| No. 13. | No. 6 Roots exhauster | 376.00 |

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| No. 14. | No. 6 Sturtevant exhauster | $361.00 |
| No. 15. | 10″ McKenzie exhauster | 227.00 |
| No. 16. | 4″ x 5″ Greenfield engine | 97.00 |
| No. 17. | 5″ x 5″ Sturtevant engine | 257.00 |
| No. 18. | 7″ x 6″ Sturtevant engine | 353.00 |
| No. 19. | 40 H. P. Motor | 430.00 |
| No. 20. | 35 H. P. motor | 401.00 |
| No. 21. | Countershafting, etc. | 22.00 |
| No. 22. | 6 benches 6's | 14,950.00 |
| No. 23. | Charging floor | 1,730.00 |
| No. 24. | 4′ 6″ x 25′ 0″ condenser | 327.00 |
| No. 25. | 5′ 6″ x 31′ scrubber | 160.00 |
| No. 26. | 4′ 6″ x 5′ 0″ rotary scrubber | 858.00 |
| No. 27. | 4 20′ x 24′ x 4′ purifying baxes | 9,950.00 |
| No. 28. | 10′ station meter | 3,440.00 |
| No. 29. | 6′ station meter | 400.00 |
| No. 30. | 500,000 cu. ft. gas holder | 45,925.00 |
| No. 31. | 200,000 cu. ft. gas holder | 14,920.00 |
| No. 32. | 50,000 cu. ft. gas holder | 4,400.00 |
| No. 33. | 20″ Connelly governor | 404.00 |
| No. 34. | 12″ Reynolds governor | 415.00 |
| No. 35. | 6″ x 10″ x 5″ x 10″ Knowles pump | 255.00 |
| No. 36. | 3″ x 4″ vertical pump | 40.00 |
| No. 37. | 3½″ x 4″ x 6″ Gardner pump | 81.00 |
| No. 38. | 4½″ x 3¾″ Worthington pump | 108.00 |
| No. 39. | 4½″ x 2¾″ x 4″ Gardner pump | 95.00 |
| No. 40. | 4½″ x 2¾″ x 4″ Worthington pump | 95.00 |

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|---|---|---|
| No. 41. | 3″ x 2″ x 3″ Worthington pump | $86.00 |
| No. 42. | 6″ x 4″ x 6″ Warren pump | 47.00 |
| No. 43. | 2½″ x 3″ x 4″ Marsh pump | 80.00 |
| No. 44. | Otis platform elevator | 960.00 |
| No. 45. | Fairbanks scale | 50.00 |

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|---|---|---|
| No. 46. | Photometer | 160.00 |
| No. 47. | Calorimeter | 78.00 |
| No. 48. | No. 90 drill press | 32.00 |
| No. 49. | Shop tools and miscellaneous | 300.00 |
| No. 50. | 4 steel tar tanks | 410.00 |
| No. 51. | Tar separator | 158.00 |
| No. 52. | 383″ x 3′ 3″ x 10′ 10″ tar well | 74.00 |
| No. 53. | 6′ x 20′ x 12′ tar well | 390.00 |
| No. 54. | 2 steel tar tanks | 1,575.00 |
| No. 55. | 2 steel oil tanks | 1,620.00 |
| No. 56. | 2 steel oil tanks | 790.00 |
| No. 57. | Brick oil tank | 193.00 |
| No. 58. | Drain piping | 1,395.00 |
| No. 59. | Water piping | 549.00 |
| No. 60. | Oil piping | 368.00 |
| No. 61. | Gas yard mains | 5,110.00 |
| No. 62. | Steam piping | 2,075.00 |
| No. 63. | Tar piping | 347.00 |
| No. 64. | Work tools | 395.00 |
| No. 65. | Main office furniture and fixtures | 7,400.00 |
| No. 66. | 100,000 cu. ft. gas holder | 20,225.00 |
| No. 67. | Water piping district station | 175.00 |
| No. 68. | Gas yard mains district station | 475.00 |

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| No. 69. | Manholes district station | $1,650.00 |
| No. 70. | 25 H. P. motor district station | 420.00 |
| No. 71. | 5 H. P. motor district station | 155.00 |
| No. 72. | No. 5 Sturtevant blower district station | 183.00 |
| No. 73. | No. 5 Sturtevant blower district station | 206.00 |
| | Total | $179,310.00 |

The City claims that the East Lincoln gas holder should be excluded from the list of property employed in supplying gas to the people of Lincoln. This claim is grounded upon evidence tending to show that the company had, as a primary motive for its erection, the extension of the gas business into territory outside of the corporate limits of Lincoln, and to enable the Company to render better service to its patrons in such territory. This motive was, I think, a factor and perhaps an influential one in bringing about the erection of the holder; but it is indisputably an item of equipment of substantial value to the people of Lincoln; it is used and useful in supplying them with gas, and it does not seem just to the company to exclude it from the valuation, because one of the reasons in which it had its origin did not regard their interests. Viewed broadly and equitably, its acquisition cannot, for the purpose of this case, be considered as unnecessary or improvident.

Distribution System.

Mr. Lea's estimate of the net construction cost of mains laid in unpaved streets is $179,814.00; Mr. Adams' $130,913.00. I
75 have allowed $173,700.00. Lea's estimate of the net construction cost of total services is $111,689.00; Mr. Adams' $69,939.00. I have allowed $76,116.00. For service and boxes and cocks, I have allowed $9,000.00; for total service governors, $18,950.00; for total meters $60,500.00; for distribution tools $6,210.00; for street main drips $1,113.00; for street main valves $328.00; for district governors $225.00; for railway crossings $2,800.00; and for gas appliances loaned $3,250.00, making a total of $352,192.00 as the net construction cost of the Distribution system. The difference between the total cost as fixed by me and the total cost according to Mr. Lea ($529,736.00) consists for the most part in the elimination from Lea's figures of three items, namely:

(1) 3½ per cent excess overhead;
(2) The cost of paving over mains and services; and
(3) The cost of service pipes paid for by patrons of the company.

Adding the 12½ per cent overhead charge to the net construction cost of $352,192.00 given $396,216.00 as the total reproduction cost of the distribution system; and its depreciated value or present worth I find to be $351,624.00.

That no allowance can be made in a rate case for the reproduction cost of paving over mains and service pipes seems now to be established by the clear weight of judical and administrative authority.

Cedar Rapids Gas Light Co. vs. Cedar Rapids, 134 Iowa, 426.
Des Moines Gas Co. vs. City of Des Moines, 199 Fed. 204.
People vs. Wilcox, 104 N. E. (N. Y.), 911.
76 Whitten on Valuation of Public Service Corporation, Chapter VII.

The better reason too seems to be against such allowance. To permit a public service corporation to justify a rate claimed to be excessive by pointing to a costly street improvement made by the public at its own expense hardly accords with good sense. The public would be reluctant to make such improvements if they result not only in increasing taxation, but in an increase of gas and water rates as well.

Whether the reason for excluding the cost of pavement over mains from the valuation requires also the exclusion of the cost of service pipes paid for by the gas consumers has not, to my knowledge, been adjudicated; but the governing principle is, it seems to me, as applicable in one case as in the other. As was said in Smyth vs. Ames, 169 U. S. 466:

"What the company is entitled to ask is a fair return upon the value of that which it employes for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it than the services rendered are reasonably worth."

Of course, in valuing a utility, no distinction can be made between property acquired by purchase and property acquired by gift or otherwise. The value of whatever the company owns and devotes to the public service regardless of the means or method of acquisition is a just and proper standard by which to measure reasonable rates. But it cannot, I think, be said looking at the matter broadly that the company is the owner either technically or equitably of the service pipes. It bought and put them in, it is true, but when it was reimbursed by its patrons for the cost, can it be supposed that it
77 still intended to retain title and the right to remove them at pleasure? A more reasonable inference is that in every case both parties to the transaction regarded the pipes when paid for as belonging to the owner of the tenement with the right on his part to use them if so inclined in connection with a service furnished by a rival company or for any other purpose, even though entirely unrelated to the gas business. They cannot, it seems to me, consistently with the principle above stated by Justice Harlan, constitute in part the basis for a rate that can be regarded as entirely fair to the public. The gas consumers have paid $30,484.00 of the amount claimed by the company for putting in service pipes, and this item I have eliminated from the valuation.

## Depreciation.

In computing depreciation, I have, so far as reliance has been placed upon arbitrary hypothesis, used what is known as the straight line method, as being most appropriate to the actual situation and condition with which we have to deal, and the one best calculated to bring about a right result. It has been said in Hayes on Public Utilities (Section 139):

"When the property of a public utility consists of plant alone, the loss in value must be determined by the str-ight line method, and when the property consists of plant and depreciation reserves, the loss in value must be ascertained by means of what has been called the sinking fund method."

And in Section 162, the author further says:

"If there is plant alone as representative of the property of the undertaking, the straight line method when age and life have been determined with accuracy, will show the absolute loss in value and consequently this loss in value gives the true depreciation of the property. If the property of the undertaking consists of plant and reserves, the sinking fund method will likewise show the loss in value if properly applied. But the equity of this method has been the subject of much doubt."

78 Foster, in his work entitled "Engineering Valuation of Public Utilities and Factories," says:

"By far the most commonly used method of depreciating machinery and plant is that known as the straight line. By this method a length of life of the particular apparatus under consideration is estimated and determined by the best experience and good judgment available, then this length of life divided into 100 will give the rate

at which the depreciation is to be computed. If the life of an engine is assumed to be twenty years, then its cost new will be depreciated one twentieth of such cost each year, or at the rate of five per cent per annum on the original cost new.

"While this method is in itself an assumption, yet it does away with all side assumptions or guesses as to how much the machine is depreciating each individual year. It is the method used by many public utility commissions, by the courts, most generally by public accountants, and by far the greater majority of engineers."

Here the property does consist of plant alone. There are no depreciation reserves invested in interest-bearing securities; there never have been. The company has, from year to year, put into the property so much of its earnings as seemed necessary to keep it in good order and operating efficiently. It has not adopted the practice to which the sinking fund method is thought to be peculiarly applicable. Indeed, it does not seem, upon the facts of this case, that any method of theoretical depreciation ought to be given controlling weight. Upon this question as well as all others relating to valuation, it should be remembered that arbitrary rules do not lead unerringly to the truth; they are only finger posts that indicate the general way. "It is not," as said in the Minnesota rate case (Simpson vs. Shepherd, 230 U. S. 352) "a matter of formulas, but there must be a reasonable judgment having its basis in a proper consideration of all the relevant facts." The life, age, present condition, fitness and scrap
79 value of the various protions of the plant as shown by the evidence should be taken into account, and given due consideration; and as far as practicable that is what has been done in this case. In the celebrated English case—The National Telephone Company, Limited, vs. His Majesty's Post Master General—decided last year, the court approved the straight line method, and with respect to the sinking fund method said:

"It may no doubt be right as applied to the case of an annuity or the valuation of a leasehold interest, but to apply a sinking fund to depreciate plant in a commercial undertaking involves too great an element of speculation and would operate, if a miscalculation were made as to the length of life, very unjustly in practice."

## Working Capital.

It is conceded by counsel for the City that items rightly included in this caption should be taken into account as part of the property upon which the company is entitled to a fair annual return. Mr. Adams' estimate of the total amount of such items is $20,000.00; Mr. Lea's is, in round numbers, $72,000.00, and the amount allowed by the court at the former trial was $50,000.00. Mr. Adams excludes from his estimate gas appliances kept for sale by the company with the view of thereby creating and stimulating a demand for gas. He also, while including supplies used in the manufacture of gas, excludes certain supplies used in its distribution on the ground that the latter are covered by the percentage already added to the net construction cost of the physical plant. Upon both these points, I think

Mr. Adams is wrong. The company was, in keeping and selling gas appliances, employing what seems to be a well recognized
80 and perfectly proper means of getting business. Increase of business is, or ought to be, beneficial to the public as well as to the company. It should, of course, result in reducing the cost of manufacture and distribution and eventually bring about a condition justifying a voluntary or compulsory reduction of rates. The fact that those appliances were perhaps handled at a loss is not at all decisive. In all lines of business, it is commonly regarded as sound policy to incur a present inconsiderable loss with the view of securing thereby a larger future gain.

With respect to the exclusion of distribution supplies, it is enough to say that such supplies cannot possibly be embraced in the percentage added to the physical plant until they have become actually incorporated therein. While they may be properly described as supplies, the money invested in them is unquestionably working capital. The evidence upon this branch of the case is far more complete than at the former trial, and relates to a different date, but it does not seem to require a very much larger allowance than was then made by the court. I fix the amount of such allowance at $60,000.00.

## Going Value.

The term "going value", as here used, is intended, while excluding franchise and good will, to include another intangible element which should, I think, be taken into account in the valuation of the property used by the company in the public service, and upon which it is entitled to claim a fair return. It is argued by counsel for
81 the City that whatever the rule may be in condemnation cases and other cases where utilities are taken over by public authorities under legislation providing therefor, there can, in the nature of things, be no allowance for going value in rate cases where value depends upon rates and rates upon value. This argument suggests a difficulty that is serious, but not insuperable. In Smyth vs. Ames, supra, and all the cases that have followed it, including Simpson vs Shepherd, supra, it is said that the public is entitled to be served at reasonable rates, and that the company rendering the service is entitled to a fair return on the value of the property used by it in the service. This statement has become, by judicial iteration, an axiom in the law of rate making, and the demand of the company to have applied in this case is not answered by pointing out difficulties besetting its application. Constitutional guarantees for the protection of private property are not to be set aside because precision and exactitude in making valuation are not practically attainable. The physical property, with all its parts articulated and ready to engage in the business for which it was created, is, of course, a valuable structure, but is obviously far more valuable when commercially quickened by the outflow of gas and the inflow of revenue. This added value, though hard to estimate, is obvious enough, and cannot, in justice and equity be disregarded for whatever purpose the valuation is made. It cost the company through the year a good deal of

money to get the consumers that it has; and even now, with the wide knowledge possessed by the public, of the convenience and economy of gas for light and fuel, it would require much time and expense for a new plant in exclusive possession of the field to build up
82 a like business. The expert witnesses who testified in this case are not in agreement as to the method by which going value should be ascertained. The essence of the process suggested by one of the witnesses is to consider the length of time it would take a person who wanted the business to acquire its equivalent, and then determine the price such person would be willing to pay. Another witness proposed, as a fair method, the assumed existence of two plants of equal efficiency, and like environment, one the actual plant of the company with its established business, the other a hypothetical plant without any business. He then, projecting both plants into the future, made an elaborate calculation as to the length of time and expense necessary to bring the business and earnings of the ideal plant up to those of the real plant. This method seems to me highly artificial, and is, at best, only moderately persuasive. Another suggestion was that the losses incurred by the company in the early years of its existence should be capitalized; and still another than an arbitrary amount should be allowed for each meter. The evidence does not, as I understand it, give any adequate basis for the ascertainment of going value by capitalization of losses, if that method were permissible under the doctrine of Knoxville Water Co. vs. Knoxville. 212 U. S. 1, where it is said:

"The company is not bound to see its property gradually waste without making provision out of earnings for its replacement. It is entitled to see that from earnings, the value of the property invested is kept unimpaired so that at the end of any given term of years, the original investment remains as it was at the beginning. It is not only the right of the company to make such provision, but it is its duty to its bond and stock holders, and in the case of a public service corporation at least its plain duty to the public * * * If, however, a company fails to perform this plain duty, and to exact sufficient returns to keep the investment unimpaired, whether this is the result of unwarranted dividends upon overissues of securities
83 or of omission to exact proper prices for the output, the fault is its own. When, therefore, the public regulation of its prices comes under question, the true value of the property then employed for the purpose of earning a return cannot be enhanced by a consideration of the errors in management which have been committed in the past."

Whether this element of plant value was purchased entirely by earnings below or above a fair return on capital invested is not, as to a portion of the time at least, disclosed by the company's records. In other words, it does not satisfactorily appear to just what extent the company's business was acquired at its own expense, and to what extent it was acquired at the expense of the public. The company was, at all times, entitled to a fair return upon its investment, and whatever was received by it in excess of a fair return should go, in some form, to the credit of the public. If employed in the promo-

tion of new business, the value of such business has manifestly no place in the valuation made as a basis for fixing reasonable rates. The record shows that between 1906 and 1913, the company paid out of its earnings and charged to operating expenses about One Hundred Thousand Dollars ($100,000.00) for the promotion of new business. In view of this fact, I conclude that an allowance of $40,000.00 for going value is sufficient.

Operating Expenses, 1912.

The total quantity of gas sold in Lincoln in 1912 is not in dispute. Neither is the amount of gross receipts. As shown by the company's records, there was sold in Lincoln alone 227,297, M. Cubic feet; and the revenue derived therefrom was $273,175.93. The total operating expenses on account of gas sold in Lincoln alone is shown by the company's records to be $173,689.87,
84 but according to the Company's records corrected by Mr. Lea—as to excessive residual credits, $2,722.23 and depreciation reserve $20,865.03—the total expenses not including occupation tax amounted $197,277.13. There is no question about the propriety of the correction made on account of residuals; and it is conceded that the records do not show that any amount was set apart to cover plant depreciation. Mr. Adams' estimate of the total operating expenses for Lincoln alone is $136,145.00. This makes a difference in net earnings between the amount fixed by Lea and the amount fixed by Adams of $61,132.12. The evidence shows quite clearly that the money claimed to have been paid out by the company for operating expenses was, in fact, so paid. The controversy then upon this branch of the case is reduced to two principal questions, namely:

(1.) To what extent, if at all, were the disbursements made by the company for operating expenses so recklessly or improvidently made that they ought not, in justice and fairness to the public be allowed and considered as legitimate factors in determining what constitutes a reasonable rate for gas in the City of Lincoln; and

(2.) What amount, in addition to the disbursements for the renewals and repairs shown in the record should be allowed as a depreciation reserve.

That there should be an additional allowance is admitted by Mr. Adams. The company's disbursements for salaries, office and general expenses are, according to the testimony of Adams,— based partly upon the records of gas plants in Massachusetts—$44,818.00 in excess of what they ought to be; but with one exception—
85 the cost of promoting new business, $19,692.00—he does not criticise any specific item. He proposes a reduction of the mass—a horizontal cut—rather than a reduction or elimination of particular items. There was, as above stated, sold in Lincoln in 1912, 227,297 M. cubic feet of gas, producing a gross revenue of $273,175.00. The operating expenses including $19,692.00 for promoting new business were, according to Lea, $197,277.00, and the net income $75,898.00. In 1911, the sales were 222,228 M.

cubic feet, the gross revenue $268,021.00, the operating expenses $180,232.00 and the net income $87,789.00. In 1910, the sales were 208,023 M. cubic feet, the gross revenue $248,957.00, the operating expenses $162,214.00, and the net income $88,742.00. In 1909, the sales were 203,243 M. cubic feet, the gross revenue $243,875.00, the operating expenses $152,167.00, and the net income $91,708.00. In 1908, the sales were 194,096 M. cubic feet, the gross revenue $232,792.00, the operating expenses $152,114.00, and the net income $80,678.00.

These figures without much scrutiny show the extent to which the validity of a rate ordinance depends upon individual will, if the right to determine what amount shall be expended in a campaign for new business or for any other purpose in a particular year is committed to the unrestrained discretion of the owner of the utility affected by the ordinance. That full discretionary power to transfer earnings into operating expenses cannot exist consistently with the right to regular rates seems self-evident. Reasonable expenditures to stimulate business are usual and proper, but an expenditure of between $19,000 and $20,000 in one year, which brings in, as increased revenue, less than $5,000.00 would seem to
86 be, under normal conditions, excessive, and when it may perhaps become a decisive factor in determining the constitutionality of rate legislation is, so extraordinary as to arrest attention and excite inquiry at once. The present litigation was pending; the demand for rate reduction was insistent; the controversy between the public and the company had become acute; the company was about to have its property inventoried and appraised for the purpose of showing that there was an unjust disproportion between its value and its net earnings. In this state of affairs unusual caution and conservative action was, it seems to me, the company's obvious and paramount duty; and yet I cannot discover, either in this particular expenditure or in any other evidence of a disposition on its part, by judicious retrenchment of expenses or wise economy of any kind to adjust itself to the conditions created by the ordinance reducing rates. It may be the company thought such adjustment was not possible, but whatever reason controlled its conduct, I cannot regard the expenditure for new business as having been reasonably or prudently made or one that ought, in its entirety, to be allowed or taken into account in testing the enforcibility of the ordinance for 1912. In the exercise of ordinary business prudence and giving due consideration to the rights and interests of the gas consuming public, I think the company should not have expended in its campaign for new business more than $12,000.00, and that is what I have, for the purposes of this litigation, decided to allow. Reasonable limitations upon expenditures must, in cases of this kind, be imposed by the courts or else the power to invalidate legislation regulating rates
87 will pass inevitably from the public authorities into the hands of the owners of public utilities. What is reasonable in a particular case is a judicial question upon which a court, however

lacking in business experience or technical knowledge, may not surrender its own judgment; it must, upon a full and fair consideration of all the relevant facts and circumstances, decided as best it can. My conclusion upon the point here considered is one in which I do not feel any high degree of confidence, but it is the one that seems, so far as it may exert an influence on the final decision, best calculated to bring about a just result.

Depreciation is, of course, an operating expense, and should be considered and dealt with as such. The annual deterioration of a plant by wear and tear represents always some fractional part of the money which it cost the owner to serve the public for a year. And this cost must be provided for out of earnings as well as the cost of current repairs. In order to keep a utility in good order and operating efficiently, the work of making repairs or renewals must be going on almost constantly. There is not always a clear division line between what constitutes renewals and what constitutes repairs. The distinction is largely theoretical; the line of division more or less arbitrary. Sometimes the question is determined by the size of the plant unit, sometimes by its cost, sometimes by the frequency with which it has to be replaced, and sometimes by other considerations. And it happens, too, where accounts are not accurately kept that the labor cost of making a renewal—an item often of considerable magnitude—is charged up to labor account. There seems to be in these matters no
88 uniformity of practice, and there is consequently in many cases no means of determining whether a particular plant item of doubtful classification—and even where there is no doubt—has been charged up in operating expenses wholly or in part as an item of repair or labor. Mr. Adams is of opinion that 9 cents per M. Cubic feet of gas sold is sufficient to take care of annual repairs, renewals and depreciation; and his estimate of what would be a *fiar* allowance for general depreciation and renewals is $10,914.26. There is, so far as I can see, no close or constant relation between plant depreciation and plant product, and any estimate based on the assumption that there is, would in my judgment be more or less arbitrary. My conclusion is that an allowance of $12,000.00 in addition to what appears upon the company's records as operating expenses ought to be made. It is a figure which I believe, after giving due consideration to the theories propounded by counsel and to actual conditions as well, gives a fairly good approximation of what is here required to cover wear and tear and keep plant value undiminished.

The executive salaries, in comparison with those paid by other utilities producing and selling about the same amount of gas, are apparently excessive. I cannot believe the total expenditures for this purpose would have been, under the circumstances disclosed by the record, considered reasonably necessary had the business been prudently conducted with a view to making the cost of gas to consumers as low as good service and fair return upon the capital invested would justify. The operation of a public utility is a busi-

ness within the scope of government. The company's plant
89 is affected by a public use; the company has, in a qualified sense, taken upon itself, a governmental function, and is, therefore, bound in the conduct of its business to scrupulously regard the rights of the public equally with its own. A majority of the stock of the Lincoln Gas & Electric Light Company is owned and controlled by Henry L. Doughtery & Company of New York, a co-partnership engaged in banking and manufacturing and controlling, through stock ownership, over one hundred utilities—gas, water, electric and transportation—which it operates in practically the same manner as it does the Lincoln plant. Frank Fruehauff became President of the Lincoln company in 1911 at a salary of $2,400.00 a year, and at the same time—at a time when an increase of operating expenses might be doubly advantageous to him—Henry L. Dougherty became President of the Board of Directors at a salary—newly created—of $3,000,00 a year. Prior to 1911, Mr. Daugherty was President of the company and Mr. Fruehauff, as Vice President, performed, without compensation, the same services for which he now receives $2,400.00. Mr. Fruehauff visits Lincoln six or eight times a year; Mr. Daugherty, so far as the record discloses, does not come at all. Mr. B. C. Adams, an exceptionally efficient and capable man having a thorough technical and general knowledge of the gas business, is local manager at a salary of $3,600.00 a year. Of the hundred and eight properties under the supervision of Henry L. Daugherty & Co., only three or four in addition to the Lincoln plant pay Mr. Fruehauff a salary. Whether Mr. Daugherty receives a salary from any of them does not appear. Conceding that the Lincoln company may receive prestige as well as financial, educational and other advantages from its con-
90 nection with Henry L. Daugherty & Co., I nevertheless think that the items of $3,000.00 for salary to the President of the Board of Directors should, for the purposes of this case, be disallowed.

Mr. C. A. Fruehauff, a brother of the President, engaged in the practice of law in New York City, receives from the Lincoln company an annual salary of $600.00, which is charged up as part of the operating expenses. I think this expenditure, on the evidence given with respect to it, ought not to be allowed or taken into account in the decision of this case. In view of the fact that the company has, in its employ at Lincoln, a lawyer—one of the most capable and eminent in the profession—at a salary of $3,000.00 a year, it can hardly be reckoned reasonably necessary or prudent and provident management to incur this extra legal expense, especially at a time when it was claimed that compensatory earnings, measured by the dollar rate, were not coming in.

## Apportionment of Operating Expenses.

In his division of operating expenses, Mr. Lea assumes that eighty per cent should be apportioned to the gas department and twenty per cent to the electric department. This assumption is, I think,

erroneous. The expenses common to both departments ought to be divided according to the relative number of customers in each department. This seems to be an entirely fair method of division and no other method has been suggested. In 1912, 73 per cent of all plaintiff's customers were in the gas department, and 27 per cent in the electric department. The division of expenses made on this basis requires a deduction of $3,300.00 from Mr.
91 Lea's estimate of the amount chargeable to the gas department.

## Revision.

Recasting now Mr. Lea's figures to conform to the views here expressed, and taking into account an item of $8,195.00 representing occupation tax not heretofore considered, I find the gross earnings for 1912 to be $273,175.93, the legitimate operating expenses $182,015.00 and the net income with gas at $1.20 per M. cubic feet, $91,161.00. With gas at $1.00 the gross earnings would be $227,297.00, the operating expenses including occupation tax $180,639.00, and the net income $46,658.00 or 6.9 per cent on $676,565.00, the total value of the company's property used or useful in the gas business in the City of Lincoln January 1, 1913. The items aggregating such value are:

| | |
|---|---|
| Real Estate | $16,250.00 |
| Buildings | 29,381.00 |
| Works Equipment | 179,310.00 |
| Distribution system | 351,624.00 |
| Working capital | 60,000.00 |
| Going value | 40,000.00 |

## Valuation, Operating Expenses and Net Income for 1907.

If the value of plaintiff's property, tangible and intangible, on January 1, 1913, was $676,565.00, as I have found it to be, its value January 1, 1907, may be readily ascertained by eliminating all values added to the plant between these dates. The construction account shows the original cost of all such additions to the
92 physical property to be $210,437.00. An estimate given by Mr. Lea increases this amount to $371,294.00; and by an addition of $108,664.00 for going value, working capital, organization and legal expenses, he further increases it to $479,958.00. According to Mr. Adams estimate, the tangible property was worth $135,830.00 less January 1, 1907, than on January 1, 1913. Just what the actual increase of structural cost was is not entirely clear, but from a full consideration of the evidence, I find that all values tangible and intangible added to the plant between January 1, 1907, and January 1, 1913, were worth, at the latter date $240,000.00. Deducting this amount from $676,565.00, the value of January 1, 1913, leaves $436,656.00 representing the investment

upon which the company was entitled on January 1, 1907, to receive a fair return.

There is no controversy with respect to the gross earnings for 1907. They were, according to both Lea and Adams, $214,888.20. The operating expenses as shown by the company's record were $141,621.49; and according to the company's records corrected by Lea $156,766.49. It appears from the company's records that there was charged to Repairs and Renewals $12,920.00; how much to each does not appear. Nothing was charged to depreciation under that specific designation. The correction made by Mr. Lea in the company's account of operating expenses consisted in adding thereto $14,955.00 for depreciation. That some amount should be added is undeniable, but I am of opinion that the amount added by Mr. Lea is too large. The property has been depreciated on the assumption—warranted I think by the proof—that it has been kept in good order and efficient, not only by current repairs, but by renewals as well. It would, therefore, be peculiarly unjust
93 to the public to determine wholly by theoretical depreciation the sum required to cover all dim-ution of plant value not taken care of as part of the regular operating expenses. I thing $10,000.00 is a sufficient allowance. Either it is enough or the property has not been sufficiently depreciated in fixing its present worth. Deducting from $156,766.49, the total operating expenses as determined by Lea, the sum of $4,955.00/ excess depreciation reserve, leaves $151,811.49 as the operating expenses for 1907 exclusive of the occupation tax of 2½ per cent; and including the occupation tax ($5,372.00) leave $157,183.00 as the total cost of conducting the business. This gives a net revenue of $57,705.00 with gas at $1.20. With gas at $1.00, the gross income would be $178,626.00, the operating expenses, including the occupation tax ($4,466.00) would be $156,277.00, and the net income $22,349.00 at [redacted] per cent on $436,565.00, the value of plaintiff's investment in 1907.

5.12

Net Earnings Between 1907 and 1912.

I do not go into the accounts for the years between 1907 and 1912 as the calculations made by Mr. Lea show beyond question that the net income was for each of these years from 50 per cent to 100 per cent greater than in 1907. In these intervening years, there are various expenditures growing out of the present litigation which should, if necessary to sustain the ordinance, be deducted from operating expenses. There are also many items of incidental expense that should be similarly dealt with. These later items are not large in the aggregate and there is small likelihood that they would affect the result in any possible revision of
94 these findings. I, therefore, do not consider them in detail.

It may not be out of place, however, to remark that in my judgment a utility corporation engaged as it is in carrying on a public business is bound to be prudent and circumspect in the use of its revenues. It seems hardly consistent with sound principles

for such a corporation to maintain a free-list or to make expenditures for social or fratneral purposes or even for the advancement of education, morality, charity or religion and then lay the burden of its munificence upon non-consenting rate payers. The practice of any cardinal virtue is, of course, wholesome and worthy of all commendation, but when indulged in by corporations, it ought in reason to be, as in the case of individuals, at their own cost.

### The Occupation Tax Ordinance.

The ground upon which it is thought the occupation tax ordinance is unconstitutional is that it discriminates against plaintiff by imposing upon it a burden from which competitors engaged in the business of furnishing light by electrical current in Lincoln are exempt. I think the ordinance is valid. There is an obvious and substantial difference between a company manufacturing and selling gas for light and fuel and one generating and selling electrical current for light only. A classification that includes one and excludes the other is not arbitrary, but rests upon a real and material distinction between the two. The objection to the ordinance would have equal force, it seems to me, if based on the exemption from its burdens of dealers in coal, wood, gasoline, coal oil or any other product used extensively as a fuel or illuminant.

95

### Valuation of Franchise.

The company's franchise is not taken into account as part of the property devoted to the public service upon which it is entitled to a reasonable return. Whether it be a perpetual or temporary franchise is not, in my opinion, material for the purposes of this case. However valuable a franchise may be, it cannot, under the authorities as I understand them, affect in any way the rate which a public service corporation may charge its customers.

### Dividends.

The company has never paid any dividends upon its stock. Its bonded debts far exceeds the value of its assets; and its income beyond operating expenses has been, from year to year, applied upon bond interest. In estimating the value of the entire property, the stock and bonds have received due consideration in accordance with the established rule, but I cannot say that they have been influential factors.

### Return upon Invested Capital in Lincoln.

A considerable number of witnesses testified with respect to the return upon capital invested in banking, merchandising and other businesses in the City of Lincoln, and from their testimony, I find that 8 per cent is the lowest rate sought and generally obtained in such businesses. There is, however, in all these lines free competi-

tion and hazards from which a utility corporation is exempt. Banks fail; merchants go to the wall, but if any honestly capitalized
96 and conducted gas, water or electric company having a monopoly of the business in the community which it serves has become bankrupt, the fact has escaped my notice. The profits of such corporation may not be large, but they are virtually guaranteed profits, and I cannot believe that a rate not lower than 6 per cent upon their invested capital could be regarded as confiscatory. There is evidence in the record indicating that plaintiff regards investments in the stock of these corporations as especially desirable.

Probable Future Earnings at Reduced Rate.

All human experience has shown that increased consumption follows quickly a reduction in the price of commodities, and the evidence in this case satisfactorily shows that gas is no exception to the rule. I find that with gas selling at $1.00 per M cubic feet, plaintiff would have received since December 1, 1907, when the rate ordinance was to be effective, not less than 6 per cent per annum upon the value of the property employed by it in serving the people of Lincoln.

Conclusion.

My conclusion is that the ordinance reducing the price of gas from $1.20 to $1.00 has been, at all times enforceable according to its terms, and that the injunction heretofore granted restraining its enforcement should be vacated and the bill dismissed.

Respectfully submitted,

JOHN J. SULLIVAN,
*Special Master.*

97 *Supplemental Report of Special Master.*

Filed in United States District Court, District of Nebraska, Lincoln Division, September 17, 1914.

To the Court:

The evidence taken by me in this case has been returned to the office of the Clerk of this court. It consists of the original printed record containing the evidence taken at the first trial, together with seven volumes of additional evidence taken at the second trial. These volumes are identified by the following certificate pasted in or upon each, to-wit:

"This is one of seven volumes of evidence taken before me at the trial of the case of Lincoln Gas and Electric Light Company vs. City of Lincoln, et al., pending in the United States District Court, for the District of Nebraska, Lincoln Division. These volumes, together with the original printed record containing the evidence given on the first trial and certified to the Supreme Court of the

United States, constitute the whole of the evidence submitted to me, and upon which my report heretofore filed in this case is based.

JOHN J. SULLIVAN,
*Special Master.*

Respectfully submitted,

JOHN J. SULLIVAN,
*Special Master.*

98 *Defendant's Exceptions to Report of Special Master.*

Filed in United States District Court, District of Nebraska, Lincoln Division, September 26, 1914.

And now comes the city of Lincoln, defendant in the above entitled cause and excepts to the Report of Hon. John J. Sullivan, Special Master, filed herein on the 8th day of September, 1914, and for cause of exception showes:

First. The Master has in said report found and certified that an allowance should be made of twelve and one-half (12½) per cent on the total net construction cost of the physical property (excepting real estate and working capital) as "overhead expense" and added to such construction costs in arriving at the reproduction cost of plaintiff's property, whereas the Master ought to have found that an allowance of seven per cent was sufficient and proper for such purpose.

Second. The Master has, in said Report, stated and certified that all of the real estate included in plaintiff's inventory and valued by the Company's gas expert, Henry D. Lea, is sufficiently used and useful to entitle the Company to a reasonable return thereon, whereas he should have found that lots One (1) to twelve (12), inclusive, in block Seventy-nine (79), in the City of Lincoln, whereon the Company's manufacturing plant is located, are the only real estate of the Company used and useful to the Lincoln service, and the only real property upon which plaintiff is entitled to a return.

Third. That the Master has, in said Report, stated and certified that the value of the plaintiff's real estate, used and useful in the Lincoln service is $16,250.00, whereas he should have found and reported that the value of the real estate of the Company,
99 used and useful in the Lincoln service is but $2,625.00.

Fourth. The Master has, in said Report, found and certified that the reproduction cost of complainant's buildings as of January 1, 1913, was $36,767, and their present value, as of said date, $29,381, whereas he should have found such reproduction cost to be $28,135, and the present value as of said date, $19,903.

Fifth. The Master has, in said Report, found and certified that reproduction of the Complainant's property classified in the Company's inventory, and designated in the record as "Works Equipment," is $198,868, and the paresent value as $179,310, whereas he should

have found and certified such reproduction cost to be $171,273, and should have found the present value to be $130,544.

Sixth. The Master has in said report found and certified that the reconstruction cost of the complainant's distribution system, as of January 1, 1913, was $396,216, and its present value $351,624, whereas he should have found the reproduction cost to be $347,190, and its present value $223,256.

Seventh. The Master has in said report found and certified that complainant should be allowed $60,000 for working capital and has included that sum in his valuation of *Complainant should be allowed $60,000, for working capital, and has included that sum in his valuation, of* complainant's property, whereas he should have found that $20,000, was a sufficient allowance and not more than that sum should have been included in the valuation to cover this item.

Eighth. The Master has, in said report, stated and certified that the intangible item denominated "Going Value" was one proper to be included as a part of plaintiff's property upon which
100 it is entitled to a return in this case, and fixed the amount to be allowed for said item of $40,000, whereas he should have found and reported that said item was not proper to be included at all in this case, and should have excluded it.

Ninth. The Master has, in said report, found and certified that the complainant should be allowed $12,000, in its operating expenses for 1912, to cover the cost of promoting new business whereas he should have allowed no sum for said item but should have excluded it.

Tenth. The Master has in said report, found and certified that the total value of Complainant's property in 1907 was $436,565, whereas he should have found such total value to be not to exceed $268,400.

Eleventh. The Master, has, in said report, found and certified that the total value of Complainant's property January 1st, 1913, to be $676,565, whereas he should have found it to be not to exceed $374,447.

Twelfth. The Master has found and certified in said report that $5,372 should be included in the Company's operating expense for 1907, on account of an occupation tax imposed on the Company by an Ordinance then in force, in the City of Lincoln, whereas this item should have been excluded since the Company has never paid said occupation tax, and is now contesting its validity in the Courts.

Thirteenth. The Master has, in said report, found and certified that plaintiff was entitled to include in its operating expenses of 1912, the sum of $8,195, to cover occupation taxes due from said plaintiff, to the City of Lincoln, whereas said item should have been excluded since said occupation tax was not paid but is now being contested by plaintiff in the Courts.

101 Fourteenth. The Master has, in said report, failed to require the plaintiff to charge to the suburban service, wherein it furnishes from its Lincoln plant, gas to the State Farm, University place and Havelock, all outside of the city limits, of the City of Lin-

coln, a reasonable sum as a capital charge for the use of the plant and property in the City of Lincoln, as compensation for the use of the Lincoln plant, and mains, in manufacturing the gas and conveying it to the city limits, and in furnishing suitable pressure for such outside service, and has not required the plaintiff to charge to such outside service, its reasonable share of the general operating expenses, whereas he should have required such outside service to bear its just proportion of the capital investment and of the general operating expenses.

Fifteenth. The Master has, in sa-d report, found and certified that the net return earned by the complainant with gas at $1.00 per thousand cubic feet, was for the year 1907 5.12 per cent and for the year 1912, 6.9 per cent, whereas he should have found the net return for 1907 to be seventeen per cent, and for the year 1912, 23.2 per cent.

WM. M. MORNING AND
FRED L. FOSTER,
*Attorneys for Defendants.*

102 *Plaintiff's Exception to the Report of the Special Master.*

Filed in the United States District Court, District of Nebraska, Lincoln Division, September 26, 1914.

Comes now the Lincoln Gas & Electric Light Company in the above entitled cause and excepts to the report of the Honorable John J. Sullivan, Special Master, filed in the court this 8th day of September 1914, and for cause of exception shows: First, that the Master in said report stated and certified that the value of real estate in controversy is the sum of $16,250.00, whereas the Master ought to have found, stated and certified the value of said real estate not less than $18,520.00.

2. That the Master in said report stated and certified that the value of the Purifying House in controversy is the sum of $13,200.00, whereas the Master ought to have found, stated and certified the value of said Purifying House not less than $14,074.00.

3. That the Master in said report stated and certified that the value of the Generator House in controversy is the sum of $3,800.00, whereas the Master ought to have found, stated and certified the value of said Generator House not less than $4,120.00.

4. That the Master in said report stated and certified that the value of the Retort House in controversy is the sum of $6,375.00, whereas the Master ought to have found, stated and certified the value of said Retort House not less than $6,511.00.

103 5. That the Master in said report stated and certified that the value of the Meter Shop and Booster House in controversy is the sum of $2,660.00, whereas the Master ought to have found, stated and certified the value of said Meter Shop and Booster House not less than $2,883.00.

6. That the Master in said report stated and certified that the value of the Dist. Holder Booster House in controversy is the sum of

$770.00, whereas the Master ought to have found, stated and certified the value of said Dist. Holder Booster House not less than $803.00.

7. That the Master in said report stated and certified the reproduction cost of works equipments in controversy is the sum of $198,868.00, whereas the Master ought to have found, stated and certified the reproduction cost of said Works equipments not less than $253,298.

8. That the Master in said report stated and certified that the value of the Works equipments in controversy is the sum of $179,310.00, whereas the Master ought to have found, stated and certified the value of said Works equipment not less than $196,759.

9. That the Master in said report stated and certified that the value of Item No. 1 of Works equipment is the sum of $8,030.00, whereas the Master ought to have found, stated and certified the value of said item No. 1 of Works equipment not less than $9,636.

10. That the Master in said report stated and certified that the value of item No. 2 of Works equipment is the sum of $7,710.00, whereas the Master ought to have found, stated and certified the value of said item No. 2 of Works equipment not less than $9,341.00.

104 11. That the Master in said report stated and certified that the value of item No. 3 of Works equipment is the sum of $1,215.00, whereas the Master ought to have found, stated and certified the value of said item No. 3 of Works equipment not less than $1,343.

12. That the Master in said report stated and certified that the value of item No. 4 of Works equipment is the sum of $1,810.00, whereas the Master ought to have found, stated and certified the value of said item No. 4 of Works equipment not less than $2,332.00.

13. That the Master in said report stated and certified that the value of item No. 5 of Works equipment is the sum of $5,850.00, whereas the Master ought to have found, stated and certified the value of said item No. 5 of Works equipment not less than $6,648.00.

14. That the Master in said report stated and certified that the value of item No. 6 of Works equipment is the sum of $1,625.00 whereas the Master ought to have found, stated and certified the value of said item No. 6 of Works Equipment not less than $2,200.

15. That the Master in said report stated and certified that the value of item No. 7 of Works equipment is the sum of $1,380.00, whereas the Master ought to have found, stated and certified the value of said item No. 7 of Works equipment not less than $1,584.

16. That the Master in said report stated and certified that the value of item No. 8 of Works equipment is the sum of $260.00, whereas the Master ought to have found, stated and certified the value of said item No. 8 of Works equipment not less than $275.

105 17. That the Master in said report stated and certified that the value of item No. 9 of Works equipment is the sum of $275.00, whereas the Master ought to have found, stated and certified the value of said item No. 9 of Works equipment not less than $288.

18. That the Master in said report stated and certified that the value of item No. 10 of Works equipment is the sum of $150.00,

whereas the Master ought to have found, stated and certified the value of said item No. 10 of Works equipment not less than $200.

19. That the Master in said report stated and certified that the value of item No. 11 of Works equipment is the sum of $1,330.00, whereas the Master ought to have found, stated and certified the value of said item No. 11 of Works equipment not less than $1,438.00.

20. That the Master in said report stated and certified that the value of item No. 18 of Works equipment is the sum of $353.00, whereas the Master ought to have found, stated and certified the value of said item No. 18 of Works equipment not less than $366.

21. That the Master in said report stated and certified that the value of item No. 19 of Works equipment is the sum of $430.00, whereas the Master ought to have found, stated and certified the value of said item No. 19 of Works equipment not less than $570.

22. That the Master in said report stated and certified that the value of item No. 22 of Works equipment is the sum of $14,950.00, whereas the Master ought to have found, stated and certified the value of said item No. 22 of Works equipment not less than $16,-280.00.

106 23. That the Master in said report stated and certified that the value of item No. 23 of Works equipment is the sum of $1,730.00, whereas the Master ought to have found, stated and certified the value of said item No. 23 of Works equipment not less than $2,349.

24. That the Master in said report stated and certified that the value of item No. 24 of Works equipment is the sum of $327.00, whereas the Master ought to have found, stated and certified the value of said item No. 24 of Works equipment not less than $336.

25. That the Master in said report stated and certified that the value of item No. 25 of Works equipment is the sum of $160.00, whereas the Master ought to have found, stated and certified the value of said item No. 25 of Works equipment not less than $181.

26. That the Master in said report stated and certified that the value of item No. 26 of Works equipment is the sum of $858.00, whereas the Master ought to have found, stated and certified the value of said item No. 25 of Works equipment not less than $935.

27. That the Master in said report stated and certified that the value of item No. 27 of Works equipment is the sum of $9,950.00, whereas the Master ought to have found, stated and certified the value of said item No. 27 of Works equipment not less than $11,235.

28. That the Master in said report stated and certified that the value of item No. 28 of Works equipment is the sum of $3,440.00, whereas the Master ought to have found, stated and certified the value of said item No. 28 of Works equipment not less than $3,756.

29. That the Master in said report stated and certified that the value of item No. 29 of Works equipment is the sum of

107 $400.00, whereas the Master ought to have found, stated and certified the value of said item No. 29 of Works equipment not less than $441.

30. That the Master in said report stated and certified that the value of item No. 30 of Works equipment is the sum of $45,925.00,

whereas the Master ought to have found, stated and certified the value of said item No. 30 of Works equipment not less than $47,451.

31. That the Master in said report stated and certified that the value of item No. 31 of Works equipment is the sum of $14,920.00, whereas the Master ought to have found, stated and certified the value of said item No. 31 of Works equipment not less than $16,026.

32. That the Master in said report stated and certified that the value of item No. 33 of Works equipment is the sum of $404.00, whereas the Master ought to have found, stated and certified the value of said item No. 33 of Works equipment not less than $721.00.

33. That the Master in said report stated and certified that the value of item No. 34 of Works equipment is the sum of $415.00, whereas the Master ought to have found, stated and certified the value of said item No. 34 of Works equipment not less than $443.

34. That the Master in said report stated and certified that the value of item No. 36 of Works equipment is the sum of $40.00, whereas the Master ought to have found, stated and certified the value of said item No. 36 of Works equipment not less than $47.

35. That the Master in said report stated and certified that the value of item No. 41 of Works equipment is the sum of $86.00, whereas the Master ought to have found, stated and certified
108 the value of said item No. 41 of Works equipment not less than $96.

36. That the Master in said report stated and certified that the value of item No. 44 of Works equipment is the sum of $960.00, whereas the Master ought to have found, stated and certified the value of said item No. 44 of Works equipment not less than $1,058.

37. That the Master in said report stated and certified that the value of item No. 46 of Works equipment is the sum of $160.00, whereas the Master ought to have found, stated and certified the value of said item No. 46 of Works equipment not less than $183.00.

38. That the Master in said report stated and certified that the value of item No. 47 of Works equipment is the sum of $78.00, whereas the Master ought to have found, stated and certified the value of said item No. 47 of Works equipment not less than $178.

39. That the Master in said report stated and certified that the value of item No. 48 of Works equipment is the sum of $32.00, whereas the Master ought to have found, stated and certified the value of said item No. 48 of Works and equipment not less than $37.

40. That the Master in said report stated and certified that the value of item No. 50 of Works equipment is the sum of $410.00, whereas the Master ought to have found, stated and certified the value of said item No. 50 of Works equipment not less than $775.

41. That the Master in said report stated and certified that the value of item No. 51 of Works equipment is the sum of $158.00, whereas the Master ought to have found, stated and certified the value of said item No. 51 of Works equipment not less than $183.

42. That the Master in said report stated and certified that the value of item No. 53 of Works equipment is the sum of
109 $390.00, whereas the Master ought to have found, stated and certified the value of said item No. 53 of Works equipment not less than $411.

43. That the Master in said report stated and certified that the value of item No. 54 of Works equipment is the sum of $1,575.00, whereas the Master ought to have found, stated and certified the value of said item No. 54 of Works equipment not less than $1,657.

44. That the Master in said report stated and certified that the value of item No. 55 of Works equipment is the sum of $1,620.00, whereas the Master ought to have found, stated and certified the value of said item No. 55 of Works equipment not less than $1,829.

45. That the Master in said report stated and certified that the value of item No. 56 of Works equipment is the sum of $790.00, whereas the Master ought to have found, stated and certified the value of said item No. 56 of Works equipment not less than $1,090.

46. That the Master in said report stated and certified that the value of item No. 57 of Works equipment is the sum of $193.00, whereas the Master ought to have found, stated and certified the value of said item No. 57 of Works and equipment not less than $198.

47. That the Master in said report stated and certified that the value of item No. 58 of Works equipment is the sum of $1,395.00, whereas the Master ought to have found, stated and certified the value of said item No. 58 of Works equipment not less than $1,503.

48. That the Master in said report stated and certified that the value of item No. 59 of Works equipment is the sum of $549.00, whereas the Master ought to have found, stated and certified the value of said item No. 59 of Works equipment not less than $638.

110 49. That the Master in said report stated and certified that the value of item No. 60 of Works equipment is the sum of $368.00, whereas the Master ought to have found, stated and certified the value of said item No. 60 of Works equipment not less than $406.

50. That the Master in said report stated and certified that the value of item No. 61 of Works equipment is the sum of $5,110.00, whereas the Master ought to have found, stated and certified the value of said item No. 61 of Works equipment not less than $6,342.

51. That the Master in said report stated and certified that the value of item No. 62 of Works equipment is the sum of $2,075.00, whereas the Master ought to have found, stated and certified the value of said item No. 62 of Works equipment not less than $2,188.

52. That the Master in said report stated and certified that the value of item No. 64 of Works equipment is the sum of $395.00, whereas the Master ought to have found, stated and certified the value of said item No. 64 of Works equipment not less than $509.

53. That the Master in said report stated and certified that the value of item No. 65 of Works equipment is the sum of $7,400.00, whereas the Master ought to have found, stated and certified the value of said item No. 65 of Works equipment not less than $8,985.

54. That the Master in said report stated and certified that the value of item No. 66 of Works equipment is the sum of $20,225.00, whereas the Master ought to have found, stated and certified the

value of said item No. 66 of Works equipment not less than $20,808.

111 55. That the Master in said report stated and certified that the value of item No. 67 of Works equipment is the sum of $175.00, whereas the Master ought to have found, stated and certified the value of said item No. 67 of Works equipment not less than $185.

56. That the Master in said report stated and certified that the value of item No. 68 of Works equipment is the sum of -475.00, whereas the Master ought to have found, stated and certified the value of said item No. 68 of Works equipment not less than $516.

57. That the Master in said report stated and certified that the value of item No. 69 of Works equipment is the sum of $1,650.00, whereas the Master ought to have found, stated and certified the value of said item No. 69 of Works equipment not less than $1,707.

58. That the Master in said report stated and certified that the value of item No. 70 of Works equipment is the sum of $420.00, whereas the Master ought to have found, stated and certified the value of said item No. 70 of Works equipment not less than $442.

59. That the Master in said report stated and certified that the value of item No. 71 of Works equipment is the sum of $155.00, whereas the Master ought to have found, stated and certified the value of said item No. 71 of Works equipment not less than $167.

60. That the Master in said report stated and certified that the value of item No. 72 of Works equipment is the sum of $183.00, whereas the Master ought to have found, stated and certified the value of said item No. 27 of Works equipment not less than $196.

112 61. That the Master in said report stated and certified that the value of item No. 73 of Works equipment is the sum of $206.00, whereas the Master ought to have found, stated and certified the value of said item No. 73 of Works equipment is not less than $229.

62. That the Master in said report stated and certified that the net construction cost of the mains in controversy, laid in unpaved streets is the sum of $173,700.00, whereas the Master ought to have found, stated and certified the net construction cost of said mains to be not less than $179,814.00.

63. That the Master in said report stated and certified that the net construction cost of the services is the sum of $76,116.00, whereas the Master ought to have found, stated and certified the value of said services is not less than $111,689.00.

64. That the Master in said report stated and certified that the net construction cost of the Service Boxes and Cocks is the sum of $9,000.00, whereas the Master ought to have found, stated and certified the net construction cost of the Service Boxes and Cocks is not less than $11,068.

65. That the Master in said report stated and certified that the net construction cost of Service Governors is the sum of $18,950.00, whereas the Master ought to have found, stated and certified the net construction cost of Service Governors is not less than $19,902.

66. That the Master in said report stated and certified that the net construction cost of Meters is the sum of $60,500.00, whereas the

Master ought to have found, stated and certified the net construction cost of Meters is not less than $63,444.

67. That the Master in said report stated and certified that
113 the net construction cost of Railway Crossings is the sum of $2,800.00, whereas the Master ought to have found, stated and certified the net construction cost of Railway Crossings is not less than $6,220.

68. That the Master in said report stated and certified that the net construction cost of Appliances loaned is the sum of $3,250.00, whereas the Master ought to have found, stated and *and* certified the net construction cost of Appliances Loaned is not less than $3,791.

69. That the Master in said report stated and certified that he made no allowance for reproduction cost of paving over mains and services, whereas the Master ought to have found, stated and certified and made an allowance for present value of paving over mains and services in the sum of not less than $142,291.00.

70. That the Master in said report stated and certified that the Net Construction Cost of the Distribution System is the sum of $352,192.00, whereas the Master ought to have found, stated and certified the Net Construction Cost of the Distribution System is not less than $529,736.00.

71. That the Master in said report stated and certified that the Reproduction Cost of the Distribution System is the sum of $396,-216.00, whereas the Master ought to have found, stated and certified the Reproduction Cost of the Distribution System is not less than $614,493.00.

72. That the Master in said report stated and certified that the Depreciated Value or Present Worth of Distribution System is the sum of $351,624.00, whereas the Master ought to have found, stated and certified the Depreciated Value or Present Worth of the Distribution System is not less than $513,829.00.

73. That the Master in said report stated and certified that
114 the Working Capital is the sum of $60,000.00, whereas the Master ought to have found, stated and certified the Working Capital is not less than $72,037.63.

74. That the Master in said report stated and certified that the Going Value is the sum of $140,000.00, whereas the Master ought to have found, stated and certified the Going Value is not less than $225,000.00.

75. That the Master in said report stated and certified that the record shows that between 1906 and 1913, the company paid out of its earnings and charged to operating expenses about $100,000.00 for the promotion of new business, whereas the Master ought to have found, stated and certified that the amounts so expended were not in excess of $94,879.27, as shown by the record.

76. That the Master in said report stated and certified that the company should not have expended for the promotion of new business in the year 1912 more than $12,000.00, whereas the Master ought to have stated, found and certified that the company as shown by the record did expend $19,692.00 and that said expenditure was fully justified and a proper charge to operating expenses.

77. That the Master in said report stated and certified that an allowance of $12,000.00 ought to be made for depreciation in addition to what appears on the company's records as operating expenses, whereas the Master ought to have found, stated and certified that such allowance ought to be made in a sum not less than $20,865.00.

78. That the Master in said report stated and certified that the salary of $3,000.00 paid to the President of the Board of Directors should be disallowed and deducted from the operating ex-
115 penses of the company, whereas the Master ought to have found, stated and certified that the amount of said salary charged to the operating expenses in controversy was $2,400.00 and that such salary was justified and reasonable as shown by the record and a proper charge to the operating expenses of the company.

79. That the Master in said report stated and certified that the salary of $600.00 paid to the company's legal representative in New York was not a necessary or prudent expenditure and ought not to be allowed, whereas the Master ought to have found, stated and certified that the amount of said salary charged to the operating expenses, in controversy, as shown by the record was in fact $480.00; that it was a necessary and reasonable expenditure and a proper charge against the operating expenses of the company.

80. That the Master in said report stated and certified that in 1912, 73% of all plaintiff's customers were in the gas department and 27% in the electric department, whereas the Master ought to have found, stated and certified that as shown by the record, 1902 to 1912 inclusive, the average of all customers was 79% in the gas department and 21% in the electric department.

81. That the Master in said report stated and certified that a division of common expenses for the year 1912 on the basis of 73% and 27%, requires a deduction from the operating expenses chargeable to the gas department of $3,300.00, whereas the Master ought to have found, stated and certified that such readjustment, if it ought to be made, would require a deduction of not more than $460.71.

82. That the Master in said report stated and certified that the legitimate operating expenses for the year 1912, taking into account $8,195.00 occupation tax, were $182,015.00, whereas the Master ought to have found and stated and certified that the legiti-
116 mate operating expenses, including the assumed occupation tax would in fact be $205,472.13, as shown by the record.

83. That the Master in said report stated and certified that the net income for 1912 with gas at $1.20 per M cubic feet to be $91,-161.00, whereas the Master ought to have found, stated and certified the net income, considering assumed occupation tax, to be $67,-703.80 as shown by the record.

84. That the Master in said report stated and certified that the expenses for 1912 with gas at $1.00 per M cubic feet, and including occupation tax, would have been $180,639.00, and the net income $46,658.00, whereas the Master ought to have found, stated and certified that with gas at $1.00 per thousand cubic feet and includ-

ing occupation tax as shown by the record, the operating expenses would have been $204,078.97 and the net income $23,637.56.

85. That the Master in said report stated and certified that the net income with gas at $1.00 per M cubic feet would be 6.9% on $676,565.00, whereas the Master ought to have found, stated and certified that the net income for the year 1912 would be 3.5% on $676,565.00 and only 2.17% on the actual value of the company's property used or useful in the gas business in the city of Lincoln, January 1, 1913.

86. That the Master in said report stated and certified the total value of the company's property used or useful in the gas business in the city of Lincoln, January 1, 1913, to be $676,565.00 whereas the Master ought to have found, stated and certified such value to be not less than $1,090,913.00, as shown by the record.

87. That the Master in said report stated and certified that the estimates of values given by Mr. Lea showed an increase of
117 value from 1907 to 1912 in the sum of $479,958.00, whereas the Master ought to have found, stated and certified that Mr. Lea's present value 1912 was $1,090,913.00, and for 1907, $784,-682.00 as shown by the record, and that the increase in present values between 1907 and 1912, as stated by Mr. Lea, is not more than $306,231.00.

88. That the Master in said report stated and certified that $10,-000.00 is a sufficient allowance for depreciation for the year 1907, whereas the Master ought to have found, stated and certified that $14,955.00 was the necessary and reasonable allowance to charge for depreciation as shown by the records.

89. That the Master in said report stated and certified that on the basis of gas at $1.20 the net revenue for 1907, including occupation tax $5,372.00 was, $57,705.00, whereas the Master ought to have found, stated and certified that the net income under those conditions stated would have been $52,749.71 as shown by the record.

90. That the Master in said report stated and certified that with gas at $1.00 for the year 1907, the net income would have been $22,349, whereas the Master ought to have found, stated and certified that under the conditions named the net income for the year 1907 would have been $18,129.24.

91. The Master in said report stated and certified that on his assumption of net income and on his erroneous assumption of value for the year 1907 the net income was 5.12% of the value of the plaintiff's investment in 1907, whereas the Master ought to have found, stated and certified that the net income for the year 1907 was in fact as shown by the records only 2.31% of the value of the plaintiff's investment in 1907.

92. That the Master in said report stated and certified that he does not go into the accounts for the years between 1907 and
118 1912, as the calculations stated by Mr. Lea show beyond question that the net income was for each of these years from 50% to 100% greater than in 1907, whereas the Master ought to have found, stated and certified that as shown by the records the net income for the years succeeding 1907 were only from 8.9 per

cent to 57.7% higher than in the year 1907 and that for the year 1913 the net income was only 8.9% higher than the net income for the year 1907, as shown by the records.

93. The Master in the said report stated and certified that in the intervening years between 1907 and 1912 there are various expenditures growing out of the present litigation and many items of incidental expenses which should, if necessary to sustain the ordinance, be deducted from operating expenses, whereas the Master ought to have found, stated and certified that no expenditures had been made by the company during these intervening years which were not fully justified and necessary and that all expenditures were proper operating charges against the operating expenses of the company.

94. That the Master in said report stated and certified that the occupation tax ordinance is valid, whereas the Master ought to have found, stated and certified that said ordinance if enforced would operate to confiscate the plaintiff's property, as shown by the records, and should therefore and for other reasons be declared invalid, and discrimnatory.

95. That the Master in said report stated and certified that the question of whether the franchise is perpetual or temporary is not material in this case and that the said franchise, however valuable it might be, could in no way affect the rate, which the public service corporations may charge its customers, whereas the Master ought to have found, stated and certified that the question did materially affect the case and the rate of return, as well as its value and the rates, which the corporation might charge, as shown by the record.

119 96. That the Master in said report stated and certified that the bonded debt of the company far exceeds the value of its assets, whereas the Master ought to have found, stated and certified that the value of the company's assets is much greater than its bonded indebtedness.

97. That the Master in said report stated and certified that the company is free from competition and hazards, which attend other lines of business in the city of Lincoln, whereas the Master ought to have found, stated and certified that the company has many hazards as clearly shown by the record and also much competition, which necessarily affects the rate of return to which it should be entitled, as shown by the records.

98. That the Master in said report stated and certified that if any honestly capitalized gas, water or electric companies, having a monopoly of the business in the community in which it serves, has become bankrupt, the fact has escaped his notice, whereas the Master ought to have found, stated and certified that many such companies have failed and become bankrupt and that they are not exempt from the hazards of ordinary business.

99. That the Master in said report stated and certified that the profits of such a corporation are virtually guaranteed profits, whereas the Master ought to have found, stated and certified that such corporations are not guaranteed against losses nor do they have a guarantee of any specific amount of profits or rate of return, but on the

contrary, where regulation is had, the only guarantee that is given to such corporations is that they shall not earn in excess of certain specific rates.

100. That the Master in said report states and certified that he cannot believe that a rate not lower than 6% upon their invested capital could be regarded as confiscatory, whereas the Master ought to have found, stated and certified that any rate under 8% was less than usually expected in business of this character in this locality, that any rate less than 8% is considered as being non-compensatory, and therefore to the extent that it is short of said 8% proper return, it is confiscatory.

101. That the Master in said report stated and certified that there is evidence in the record indicating that plaintiff regards investments in the stock of these corporations as especially desirable, whereas the Master should have found, stated and certified that the record shows that the plaintiff company on the contrary regards its investment in this locality as being an extremely hazardous one under the existing conditions and that its stock is considered of little value in the market.

102. That the Master in said report stated and certified that all human experience has shown that increased consumption follows quickly a reduction in the price of commodities, whereas the Master ought to have found, stated and certified, as shown by the record, that because of strenuous competition of electric and other companies the demand for gas is gradually decreasing and it has only been possible for the company to make increases in the sales of gas by the expenditure of extraordinary efforts in the establishment of a new business department at large expense during the last twelve years, and that notwithstanding these extraordinary efforts the company's output for the year 1913 shows an appreciable decrease, as compared to the year 1912.

103. That the Master in said report stated and certified that with gas selling at $1.00 per M cubic feet, the plaintiff would have received since December 1, 1907, not less than 6% per annum upon the value of the property employed by it in serving the people of Lincoln, whereas the Master ought to have found, stated and certified that with gas selling at $1.00 per M cubic feet and with the tax ordinance enforced, the company would have received on the value of its property employed in serving the people of Lincoln for the year 1907 only 2.31%; for the year 1908 only 4.44%; for the year 1909, only 4.96%; for the year 1910, only 3.95%; for the year 1911 only 3.51% for the year 1912, not more than 2.17%; and for the year 1913, not more than 1.04%.

104. That the Master failed to certify and find the reproduction cost of each of the 73 items of Works equipment.

105. That the Master failed to find and certify the assumed life and age of each of the 73 items of Works equipment.

106. That the Master failed to find and certify the amount of depreciation and the rate of depreciation on each of the 73 items of Works equipment.

107. That the Master failed to find and certify the present value of each group of items of the Distribution System.

108. That the Master failed to find and certify the age and assumed life of each group of items of the Distribution System.

109. That the Master failed to find and certify the amount and rate of depreciation for each group of items of the Distribution System.

110. That the Master failed to find and certify the operating expenses, revenues and net incomes for the year 1913.

111. That the Master failed to find and certify the reproduction cost and present value of the property of the company for 1913.

112. That the Master failed to find and certify the reproduction cost and present value of the property of the company for the years 1908, 1909, 1910 and 1911, each separately.

113. That the Master failed to find and certify the amount and rate of depreciation for each of the years 1908, 1909, 1910, 1911 and 1913.

114. That the Master failed to find and certify the amount of organization and legal expense and other costs preliminary to
122 construction shown in the evidence in the amount of $33,-000.00.

115. That the Master failed to find and certify the reproduction cost and present value of paving over mains and services.

116. That the Master failed to find and certify a summary of the evidence on the values of the company's property, its operating expenses, net income and rate of return.

117. That the Master failed to find and certify the incompetency of the testimony of A. D. Adams offered on behalf of the city on questions of value of the company's property and on operating expenses and results.

118. That the Master failed to find and certify as to the franchise rights of the company involved in the issues necessary to be determined in valuing the company's property and in determining the operating expenses of the company and in determining the amount of depreciation, and failed to find and certify that the company had a perpetual franchise.

119. That the Master in said report stated and certified that he had reached the conclusion that the ordinance in controversy has been at all times enforceable according to its terms and that the injunction heretofore granted restraining its enforcement should be vacated and complainant's bill dismissed, whereas the Master ought to have found, stated and certified that said ordinance was not enforceable and its enforcement would have denied to the company just compensation and would have resulted in confiscation of the property of the company if enforced for the year- 1907, 1908, 1909, 1910, 1911, 1912 and 1913, and for each of said years, and that the injunction heretofore granted restraining the enforcement of said ordinance should be continued in force and made permanent.

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
By HALLECK F. ROSE AND
E. C. STRODE, *Its Attorneys.*

123 *Additional Exceptions to the Report of Special Master.*

Filed in United States District Court, District of Nebraska, Lincoln Division, September 28, 1914.

Comes now the Lincoln Gas & Electric Light Company complainant in the above entitled cause and excepts to the report of the Honorable John J. Sullivan, Special Master, filed in this court on the 8th day of September 1914, and for cause the exception shows:

1. That the Master failed to find and certify to the extent of the application of the revenue of the years 1907-8-9-10-11-12 and 13, each separately to reconstruction or replacement as distinguished from current repairs and operating expenses, and that the Master failed to find and certify the amount of past expenditure for reconstruction or replacement and past operating expenses including current repairs for each of the years 1907-8-9-10-11-12 and 13, and failed to find and certify how the gross receipts for the Company for 1907-1913, inclusive, for each of the said years have been expended, and failed to find and certify the amount to be set aside for the year 1913 and thereafter for depreciation, and failed to find and certify the character and probable life of the property of the company and the methods adopted in the past to preserve the properties, and failed to find and certify on questions of value operating expense, net returns, rate of return, depreciation and franchise rights of the company, being questions raised by the complainant, supported by proofs all of which the Master was directed by the Supreme Court of the United States to fully report upon by order of the said court in the case.

124 2. The Master failed to find and certify the construction cost to the company of the property involved; and that the Master failed to find and certify the investment cost to the company of the property involved, and failed to find and certify the market value of the bonds of the company outstanding and obligations of the company issued and outstanding under the directions orders and authority of the Nebraska State Railway Commission and the rate of interest on such obligations.

3. The complainant excepts to the language employed by the Master in reference to the alleged Stone report being unsupported by any evidence, and unwarranted by any deductions to be drawn therefrom.

4. The complainant excepts to the conclusions of the master that deductions should be made from the value of the services in the distribution system, on account of advancement made by consumers, and excepts to the failure of the master to find and certify the Reproduction cost and present value of the paving over mains and services for each of the years 1907 and 1913 inclusive.

5. That the master failed to find and certify as to the competency, materiality and relevancy of the testimony offered as to the Massachusetts and other companies offered on behalf of the City of Lincoln and objected to on behalf of the complainant and failed to indi-

cate whether such testimony bearing on the results of such companies was taken into account and given consideration on part of the master in reaching the conclusions submitted; and failed to find and certify whether the increased cost and amount thereof in the manufacture of gas by complainant, on account of the pressure ordinance
125 and quality ordinance was taken into account and given consideration on the part of the Master in reaching conclusions submitted.

6. Complainant excepts to the conclusions submitted without a summary of the evidence being submitted therewith, and excepts to the final conclusions submitted by the master, in view of the finding of the master to the effect that "A summarization of this evidence is quite impossible and would so far as I can see aid neither court nor counsel in testing the correctness of the conclusion I have reached." and as a result thereof the complainant is denied the benefit of the testimony offered and means of testing the correctness of the master's conclusions by the evidence considered by the master.

THE LINCOLN GAS & ELECTRIC LIGHT CO.,
By HALLECK F. ROSE,
E. C. STRODE,
*Its Attorneys.*

126 *Motion of Plaintiff to Recommit the Case to the Special Master for Additional Findings.*

Filed in United States District Court, District of Nebraska, Lincoln Division, October 8, 1914.

Comes now the Lincoln Gas & Electric Light Company in the above cause and moves the Court to require and direct the Special Master herein to make, report and certify additional findings on each of the matters hereinafter specified, all of which are fully covered by the proofs and involved in the determination of the issues, and are necessary for a review of the findings and conclusions of the Master reported and filed herein, and for a full and fair consideration of the findings under the proofs presented; and moves the Court to recommit or refer the case back to the Special Master for such additional findings. This motion is presented for each request separately for additional findings:

1. That the Master be required and directed to find and certify the facts, disclosed by the evidence and his conclusions thereon, with respect to the franchise rights of the company, a material issue in the case.

2. That the Master be required and directed to find and certify a summary of the evidence on the values of the company's property, the operating expenses, the net income and the rate for each of the years, 1907-1913, inclusive, necessary for the court in reviewing and considering the findings of the Special Master and his conclusions thereon as reported herein.

3. That the Master be required and directed to find and certify the basis of valuation employed in determining the value of the Company's property, whether reproduction cost, original or in-
127 vestment cost, commercial or market value and upon what basis of value the several items of property had been valued by the Special Master in his findings and conclusions herein.

4. That the Special Master be directed and required to find and certify the reproduction cost and present value of the mains, including the paving over the same, as of January 1, 1907 and as of January 1, 1913.

5. That the Special Master be directed and required to find and certify the reproduction cost and the present value of the services, including the paving over the same, as of January 1, 1907, and as of January 1, 1913, and for each of the years intervening.

6. That the Master be directed and required to find and certify the present value of the house services, paid for in part by consumers, referred to in the Special Master's report, as fully shown in the evidence, as of January 1, 1907, and as of January 1, 1913, and for each of the years intervening.

7. That the Master be directed and required to find and certify the amount of organization and legal expense preliminary to construction, as fully shown in the evidence.

8. That the Master be directed and required to find and certify the amount and rate of depreciation for each of the years, 1907, 1908, 1909, 1910, 1911, 1912, and 1913.

9. That the Master be directed and required to find and certify the reproduction cost and present value of the property of the company involved herein for each of the years, 1908, 1909, 1910, 1911 and 1913.

10. That the Master be directed and required to find and certify the operating expenses, revenue and net income of the company from its gas department for the year 1913.

128 11. That the Master be directed and required to find and certify the amount and rate of depreciation for each group of items of property in the Distribution System of the Company involved herein, for each of the years, 1907-1913, inclusive.

12. That the Master be directed and required to find and certify the age and assumed life of each group of property of the company involved herein in the Distribution System for each of the years 1907-1913, inclusive.

13. That the Master be directed and required to find and certify the present value of each group of items of the company's property involved herein the Distributive System, for the year 1907, and for each of the years 1908, 1909, 1910, 1911, 1912 and 1913.

14. That the Master be directed and required to find and certify the amount of depreciation and rate of depreciation on each of the seventy-three items of works equipment referred to in the report of the Master herein for the year 1907, and for each of the years 1907, 1908, 1909, 1910, 1911, 1912 and 1913.

15. That the Master be directed and required to find and certify

the assumed age and life of each of the seventy-three items of works equipment in said report.

16. That the Master be directed and required to find and certify the reproduction cost of each of the seventy-three items of works equipment referred to in said report.

17. That the Master be directed and required to find and certify the extent of the application of the revenue for the year 1907, and for each of the years 1907, 1908, 1909, 1910, 1911, 1912 and 1913, and for each separately, for reconstruction or replacement, as distinguished from current reports and operating expenses; that the Master be required to find and certify the amount of past ex-
129 penditures and operating expenses and for past reconstruction and past replacement for each of the years 1907, 1908, 1909, 1910, 1911, 1912, and 1913; and how the gross receipts of the company for the years 1907-1913, inclusive, and for each of said years were expended; and the amount to be set aside for the year 1913 and thereafter for depreciation; and the character and probable life of the property of the company and the methods adopted in the past to preserve the property, as directed and required under the opinion and mandate in the Supreme Court of the United States in this case.

18. That the Master be directed and required to find and certify the original cost and investment cost of the property involved herein and the rate and amount of depreciation to be deducted therefrom in determining the present value for the year 1907 and each of the years 1908, 1909, 1910, 1911, 1912, and 1913, and the market value of the bonds of the company outstanding and rate of interest on such obligations should be under the direction and orders of the Nebraska Railway Commission.

19. That the Master be directed and required to find and certify the basis of valuation for each of the buildings employed by the Master, and a summary of the evidence submitted on the valuation of such buildings.

20. That the Master be directed and required to find and certify the basis of valuation for the works equipment employed by the Master, and a summary of the evidence upon the value of such works equipment submitted.

21. That the Master be directed and required to find and certify the basis of valuation for the distribution system employed by the Master and a summary of the evidence on the valuation of such distribution system submitted.

130 22. That the Master be directed and required to find and certify the basis of valuation for going value employed by the Master and a summary of the evidence of the valuation of such going value submitted.

23. That the Master be directed and required to find and certify a summary of the evidence on overhead charges and the basis employed by the Master in determining the amount to be allowed thereof.

24. That the Master be directed and required to find and certify a summary of the evidence on the item of executive salaries, re-

ferred to in the report of the Master herein, and the basis of valuation employed by the Master in determining the amount thereof.

25. That the Master be directed and required to find and certify the specific amount of any further additional items, if any, in the opinion and judgment of the Master, which should be excluded from the operating expenses of the company for the year 1907, and for each of the years 1908, 1909, 1910, 1911, 1912, and 1913, referred to in the Master's report herein.

26. That the Master be directed and required to find and certify as to the competency of the testimony of Alton D. Adams offered on behalf of the City on the value of the company's property and on the operating expenses and operating results of the company and on certain operating expenses and operating results of certain Massachusetts and other gas companies.

LINCOLN GAS & ELECTRIC LIGHT CO.,
By HALLECK F. ROSE,
E. C. STRODE,
*Its Att'ys.*

131 *Order of the Court upon Plaintiff's Application to Recommit the Report of the Special Master.*

Filed in United States District Court, District of Nebraska, Lincoln Division, December 10, 1914.

This cause having been heard upon the motion of the complainant to re-commit the report of the special master herein, to the special master for further findings of fact, and submitted to the court on the 7th day of November 1914, it is

Considered, and Adjudged that said motion be overruled, and it is Ordered that said motion be and it is hereby overruled.

PAGE MORRIS, *Judge.*

Clerk:

Enter this order.

PAGE MORRIS, *Judge.*

*Memorandum.*

I do not think the report of the Special Master should be recommitted now. It may be that the case will have to be sent back for further investigation and findings. But, after the Court has considered the present report, and the exceptions thereto, I think it will be very much the better able to say whether any, and if so what, additional investigation and findings are necessary.

MORRIS, *Judge.*

132 *Application of Plaintiff for an Order Permitting Taking of Further Testimony.*

Filed in United States District Court, District of Nebraska, Lincoln Division, June 14, 1915.

The Lincoln Gas & Electric Light Company moves the court for an order authorizing and permitting the taking of further testimony in the above entitled case with respect to the services of Sloan, Huddel etc., Company, the scope of the employment and services rendered, and report, if any, submitted by said Sloan, Huddle etc., Company of Madison, Wisconsin, referred to in the Special Master's report herein, and submit in support of this motion and application copy of letter written by Halleck F. Rose under date of August 7, 1914, to Mr. Huddle of the above named firm and the answer thereto from Mr. Huddle of the above firm; the testimony in view of the Master's finding is material and could not have been anticipated by complainant from the state of the record.

LINCOLN GAS & ELECTRIC
LIGHT COMPANY,
By E. C. STRODE,
HALLECK F. ROSE,
*Its Attorneys.*

Copy.

August 7, 1914.

Mr. Huddle, c/o Engineering Department Wisconsin Railway Commission, Madison, Wis.

DEAR SIR: You will recall that I met you at Lincoln in the Gas Company's office in connection with the Lincoln Gas & Elec-
133 tric Light Company's preparation for its gas rate suit. In considering with you propriety of calling you as a witness in this rate suit, the question arose as to the embarrassment and disadvantage to which you would be subjected as an expert witness in handling such matters as the cost of developing business, or "going value," overhead allowances, annual depreciation apart from general repairs, and maintenance and the like, upon which the Wisconsin Commission, in whose service you are, had made numerous rulings. You were frank to say that in these matters it would be quite embarrassing to yourself and possibly to the commission which you served, to express an independent judgment in an important court proceeding that should be variant from the conclusions reached by your commission. In these circumstances we concluded that the proprieties were against calling you at all, although your inventory valuations of the physical properties of the company were understood to be not only just and fair, but altogether satisfactory to the Lincoln Company. The Company called Mr. H. I. Lea as a witness on value and has submitted its case. I have never had access to any report of detailed valuations of the company's physical properties

made by you, and in the trial no consideration was given to your valuations because they were not qualified by your personal testimony.

At the argument it was insinuated by the City's attorney that your valuations, in so far as you made any, were unfavorable to the position of the Company and favorable to the City, and the fact that the Company failed to produce any report from you, should count against it. As Counsel for the Lincoln Company, I would greatly appreciate it if — your data acquired in your Lincoln examination you will state to me, in a letter, the aggregate sum which you found to be the reproductive value of the Lincoln Gas & Electric Light Company's physical properties in use in its gas department, and also what you found to be the present depreciated value of the same properties, stating at the same time that these valuations excluded any allowance for "going value" or cost of a perpetual franchise.

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It is my impression that there was no radical difference between you and Mr. Lea on the valuations of the Company's physical properties, and if we conclude it is proper to do so, we would like leave to hand your letter in reply to this, to the Special Master, in order to prevent any suspicion on his part that your failure to testify in the case was due to law valuation of the Company's properties, as insinuated, without foundation, by the City's attorney.

I should appreciate your prompt reply very greatly.

Very respectfully,

(Signed) HALLECK F. ROSE.

Copy.

Sloan, Huddle, Festel & Freeman, Consulting Engineers.

Madison, Wis.: Washing Blds.
Indianapolis, Ind.: Hume Mansur Bldg.

MADISON, August 14, 1914.

Messrs. Stout, Rose & Wells, 524 National Bank Building, Omaha, Nebraska.

GENTLEMEN: In accordance with your request we hand you herewith figures showing the cost new and cost less depreciation which we found for the value of the gas property of the Lincoln Gas & Electric Light Company in our appraisal of January 1913.

135

| | Cost new. | Depreciated value. |
|---|---|---|
| 1. Land | 14,360 | 14,360 |
| 2. Buildings | 32,856 | 25,164 |
| 3. Plant Equipment | 90,239 | 69,779 |
| 4. Holders | 91,578 | 78,678 |
| 5. Mains | 191,648 | 165,559 |
| 6. Services | 56,224 | 39,919 |
| 7. Meters & Governors | 79,757 | 69,616 |
| 8. General Equipment | 14,858 | 12,668 |
| Total, Items 1-8 | 571,520 | 475,743 |
| 9. Engineering, Superintendence interest during construction, etc. 15% | 85,728 | 71,361 |
| Total, Items 1-9 | 657,248 | 547,104 |
| 10. Working Capital Material & Supplies | 17,645 | 16,873 |
| Other than material & supplies | 37,354 | 37,354 |
| Total, Items 1-10 | 712,248 | 601,331 |
| 11. Repaving | 159,851 | 129,171 |
| Total, Items 1-11 | 872,099 | 730,502 |
| 12. Land held but not used | 4,100 | 3,980 |
| Grand Total | $876,199 | $734,482 |

You will note that the figures above include no allowance for going value, goodwill or franchise value.

Trusting that this is the information you desire, we are,

Very truly yours,

SLOAN, HUDDLE, FEUSTEL & FREEMAN,

(Signed) Per W. F. HUDDLE.

R. L. F.: M.

136 *Decree.*

Filed in United States District Court, District of Nebraska, Lincoln Division, September 23, 1915.

This cause came on to be heard on the 16th day of June 1915, upon the report of Hon. John J. Sullivan, Special Master, filed herein on the 8th day of September, 1914, and the exceptions of the respective

parties to said report, and was argued by Counsel, and taken under advisement by the Court.

And now, upon consideration thereof, it is ordered, adjudged and decreed as follows, viz:

That the report of said Special Master be, and the same is, hereby confirmed;

That the Bill of Complaint herein, so far as the same relates to the ordinance of the City of Lincoln establishing a rate of charges for gas in said city be, and the same is, hereby dismissed, and the Restraining order heretofore granted against the enforcement of said ordinance is hereby dissolved:

That the sum of Thirty-five hundred dollars ($3,500.00) be, and the same is, hereby fixed and allowed as the compensation of said Special Master for his services and expenses, to be taxed as part of the cost of this action;

That the Plaintiff pay the costs of this action.

By the Court,

PAGE MORRIS, *Judge.*

(See memorandum next page.)

*Memorandum.*

I do not agree with the Special Master as to the constitutionality of the occupation tax ordinance of the City of Lincoln. On
137 that question I concur in the opinion of Judge Munger. But, inasmuch as the result reached by the Special Master would only be strengthened by a finding and decree of the Court adjudging said ordinance unconstitutional, I have not thought it necessary to pass upon it in this decree. If I agreed with the Special Master on that question I should still confirm his report.

I do not think it necessary to review the Special Master's report in detail, as the report speaks for itself.

PAGE MORRIS, *Judge.*

138 *Order to Transfer Papers to United States District Court, District of Nebraska.*

Filed in United States District Court, District of Nebraska, Lincoln Division, November 22, 1915.

An appeal in the above entitled action having this day been allowed and an appeal bond having been approved by me, one of the judges of the District Court of the United States for the District of Minnesota, sitting in this case by special appointment at Minneapolis, Minnesota, within said District.

It is hereby ordered that the papers on appeal including said bond be forwerded by the deputy clerk of the District Court of the United States for the District of Minnesota at Minneapolis, to the clerk of the District Court of the United States for the District of Nebraska, Lin-

coln Division, and to be endorsed by said last mentioned clerk as filed, as of this day, to-wit: November 22nd, 1915.

Dated November 22d, 1915.

PAGE MORRIS, *Judge.*

139 *Assignments of Error.*

Filed in United States District Court, District of Nebraska, Lincoln Division, November 22, 1915.

Now comes the plaintiff in the above entitled cause and files the following assignment of errors, upon which it will rely upon its prosecution of the appeal in the above entitled cause from the decree made by this Honorable Court on the 23rd day of September, 1915.

I.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in dismissing plaintiff's complaint in so far as it relates to the ordinance of the city of Lincoln establishing a rate of charges for gas in said city.

II.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in dissolving the restraining order theretofore granted by said court against the enforcement of the ordinance of the City of Lincoln, establishing a rate for charges for gas in such city.

III.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in approving the special master's report and overruling the plaintiff's exceptions thereto.

IV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing that the ordinance set out in plaintiff's bill, establishing the rate to be charged for gas in the city of Lincoln would be a violation of Article V of Amendments to the Constitution of the United States, in that
140 by the enforcement of said ordinance, the plaintiff would be deprived of its property without due process of law.

V.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing that the ordinance set out in the complaint establishing the rate to be

charged for gas in the City of Lincoln, to be a violation of Article V of the Amendments to the Constitution of the United States, in that by the enforcement of said ordinance, the private property of the plaintiff would be taken for public use without just compensation.

VI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing that the ordinance set out in plaintiff's bill establishing the rate to be charged for gas in the city of Lincoln, would be a violation of Section 1 of Article XIV of Amendments to the Constitution of the United States, in that by its enforcement the plaintiff would be denied the equal protection of the laws.

VII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decring that the ordinance set out in the complaint establishing the rate to be charged for gas in the city of Lincoln to be a violation of section 1 of Article XIV of the Amendments to the Constitution of the United States in that by the enforcement of said ordinance, the plaintiff would be denied the equal protection of the laws.

VII A.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and de-
141 creasing the present value of plaintiff's property, used and useful in the manufacture and sale of gas in the city of Lincoln as of January 1, 1907 to be $784,682.00.

VII B.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the present value of the property of the plaintiff, used and useful in the manufacture and sale of gas in the city of Lincoln as of January 1, 1913, to be $1,090,913.00.

VIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in excluding the cost of reopening and replacing pavements over gas mains and services on paved streets as a necessary part of the reproduction cost of the property.

IX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in refusing to find and determine

that the plaintiff was entitled to a fair return from the actual investment, not improvidently made in the property, or to a fair return upon the reproduction cost new, less depreciation, and the court was not warranted in adopting the reproduction cost, less depreciation, in those instances only where it would secure a lower valuation than the investment cost, and use the investment cost as a basis of present value in those instances only where it could secure a lower valuation than the reproduction cost new, less depreciation.

X.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling the plaintiff's
142 exception number 7 to the report of the special master as follows:

"That the Master in said report stated and certified that the reproduction cost of Works Equipment in controversy is the sum of $198,868.00, whereas the Master ought to have found stated and certified the reproduction cost of said Works Equipment to be not less than $253,298.00."

XI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the reproduction cost of works equipment of the plaintiff, used and useful, in the manufacture and sale of gas in the city of Lincoln, as of January 1, 1913, to be the sum of $253,298.00.

XII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 8 to the master's report as follows:

"That the Master in said report stated and certified that the value of the Works Equipment in controversy is the sum of $179,310.00, whereas the Master ought to have found, stated and certified the value of said Works Equipment not less than $196,759.00."

XIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing the present value of Works Equipment of plaintiff used and useful in the manufacture and sale of gas in the city of Lincoln, as of January 1, 1913, to be $196,759.00.

XIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception Number 62 as to the master's report as follows:

"That the Master in said report stated and certified that
143 the net construction cost of the mains in controversy, laid in unpaved streets, is the sum of $173,700, whereas the Master ought to have found, stated and certified the net construction cost of said mains to be not less than $179,814.00."

XV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the net construction cost of mains laid in unpaved streets in the city of Lincoln to be as of January 1, 1913, $179,814.00.

XVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception Number 63 to the Master's report as follows:

"That the Master in said report stated and certified that the net construction cost of the service is the sum of $76,116.00, whereas the Master ought to have found, stated and certified the value of said services is not less than $111,689.00."

XVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the value of services used and useful, and a part of the distribution system of the plaintiff in the city of Lincoln as of January 1, 1913, to be the sum of $111,689.00.

XVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's
144 exception number 69 to the master's report, as follows:

"That the Master in said report stated and certified that he made no allowance for reproduction cost of paving over Mains and Services, whereas the Master ought to have found, stated and certified and made an allowance for present value of Paving Over Mains and Services in the sum of not less than $142,291.00."

XIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the present value of plaintiff's property on the basis of the reproduction cost new, less depreciation, and including therein as a part thereof, the additional cost incident to and necessarily incurred in the reopening of paved streets for the purpose of laying gas mains therein.

XX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 70 to the master's report, as follows:

"That the Master in said report stated and certified that the Net Construction Cost of the Distribution System is the sum of $352,-192.00, whereas the Master ought to have found, stated and certified the Net Construction Cost of the Distribution System is not less than $529,736.00."

XXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the net construction cost of the distribution system of the plaintiff as of January 1, 1913, to be $529,736.00.

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XXII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 71 to the master's report as follows:

"That the Master in said report stated and certified that the Reproduction Cost of the Distribution System is the sum of $396,216.00, whereas the Master ought to have found, stated and certified the Reproduction Cost of the Distribution System is not less than $614,-493.00."

XXIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the reproduction cost of the distribution system to be as of January 1, 1913, the sum of $614,493.00.

XXIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 72 to the master's report as follows:

"That the Master in said report stated and certified that the Depreciated Value or Present Worth of the Distribution System is the sum of $351,624.00, whereas the Master ought to have found, stated and certified that the Depreciated Value or present Worth of the Distribution System is not less than $513,829.00."

XXV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the present value of the distribution system of the plaintiff to be as of January 1, 1913, the sum of $513,829.00.

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XXVI.

That the District court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 74 to the Master's report as follows:

"That the Master in said report stated and certified that the Going Value is the sum of $140,000.00, whereas the Master ought to have found, stated and certified the Going Value is not less than $225,000.00."

XXVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the going value of the property of the plaintiff as of January 1, 1913, to be the sum of $225,000.00.

XXVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 76 to the Master's report as follows:

"That the Master in said report stated and certified that the company should not have expended for the promotion of new business in the year 1912 more than $12,000.00, whereas the Master ought to have found, stated and certified that the company, as shown by the record, did expend $19,692.00, and that said expenditure was fully justified and a proper charge to operating expenses."

XXIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 77 to the master's report, as follows:

"That the Master in said report stated and certified that an allowance of $12,000.00 ought to be made for depreciation in
147 addition to what appears on the company's records as operating expenses, whereas the Master ought to have found, stated and certified that such allowance ought to be made in a sum not less than $20,865.00."

XXX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 78 to the master's report, as follows:

"That the Master in said report stated and certified that the salary of $3,000.00 paid to the President of the Board of Directors should be dissolved and deducted from the operating expenses of the company, whereas the Master ought to have found, stated and certified that the amount of said salary charged to the operating expenses in controversy was $2,400.00 and that such salary was justified and

reasonable as shown by the record and a proper charge to the operating expenses of the company."

## XXXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 79 to the Master's report, as follows:

"That the Master in said report stated and certified that the salary of $600.00 paid to the company's legal representative in New York was not a necessary or prudent expenditure and ought not to be allowed, whereas the Master ought to have found, stated and certified that the amount of said salary charged to the operating expenses, in controversy, as shown by the record, was in fact $480.00;

148 that it was a necessary and reasonable expenditure and a proper charge against the operating expenses of the company.

## XXXII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 80 to the master's report as follows:

"That the Master in said report stated and certified that in 1912, 73% of all plaintiff's customers were in the gas department and 27% in the electric department, whereas the Master ought to have found, stated and certified that as shown by the record, 1902 to 1912, inclusive, the average of all customers was 79% in the gas department and 21% in the electric department."

## XXXIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 81 to the master's report, as follows:

"That the Master in said report stated and certified that a division of common expenses for the year 1912 on the basis of 73% and 27%, requires a deduction from the operating expenses chargeable to the gas department of $3,300.00, whereas the Master ought to have found, stated and certified that such readjustment, if it ought to be made, would require a deduction of not more than $460.71."

## XXXIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 82 to the master's report, as follows:

149 "That the Master in said report stated and certified that the legitimate operating expenses for the year 1912, taking into account $8,195.00 occupation tax, were $182,015.00, whereas the Master ought to have found, stated and certified that the legitimate operating expenses, including the assumed occupation tax, would in fact be $205,472.13, as shown by the record."

## XXXV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception 83, to the Master's report, as follows:

"That the Master in said report stated and certified that the net income for 1912 with gas at $1.20 per M cubic feet to be $91,161.00, whereas the Master ought to have found, stated and certified the net income, considering assumed occupation tax, to be $67,703.80, as shown by the record."

## XXXVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 84 to the Master's report, as follows:

"That the Master in said report stated and certified that the expenses for 1912 with gas at $1.00 per M cubic feet, and including occupation tax, would have been $180,639.00, and the net income $46,658.00, whereas the Master ought to have found, stated and certified that with gas at $1.00 per thousand cubic feet and including occupation tax as shown by the record, the operating expenses would have been $204,078.97 and the net income $23,637.56."

## XXXVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and deter-
150 mining that the net income for 1912 with gas at $1.00 M. cubic feet in the City of Lincoln would have been $23,637.56.

## XXXVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 85 to the master's report, as follows:

"That the Master in said report stated and certified that the net income with gas at $1.00 per M cubic feet would be 66.9% on $676,-565.00, whereas the Master ought to have found, stated and certified that the net income for the year 1912 would be 3.5% on $676,565.00 and only 2.17% on the actual value of the company's property used or useful in the gas business in the city of Lincoln, January 1, 1913."

## XXXIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining and so decreeing that the net income for the year 191[illegible] with gas at $1.00 per M cubic feet in the city of Lincoln would have been 3.5% on the valuation assumed by the Special Master, and 2.17% on the

actual or present value of the plaintiff's property, used and useful in the gas business in the city of Lincoln, January 1, 1913.

XL.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 86 to the master's report, as follows:

"That the Master in said report stated and certified the total value of the company's property used or useful in the gas business in the city of Lincoln, January 1st, 1913, to be $676,565.00, whereas the Master ought to have found, stated and certified such value to be not less than $1,090,913.00 as shown by the record."

151 XLI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining that the total present value of the plaintiff's property used and useful in the gas business in the city of Lincoln, January 1st, 1913, to be the sum of $1,090,913.00.

XLII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 88 to the Master's report, as follows:

"That the Master in said report stated and certified that $10,000.00 is a sufficient allowance for depreciation for the year 1907, whereas the Master ought to have found, stated and certified that $14,955.00 was the necessary and reasonable allowance to charge for depreciation, as shown by the records."

XLIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining that the necessary and reasonable allowance for depreciation for the year 1907 of the plaintiff's property was the sum of $14,955.00.

XLIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 90 to the master's report, as follows:

"That the Master in said report stated and certified that with gas at $1.00 for the year 1907 the net income would have been $22,-
349.00, whereas the Master ought to have found, stated and
152 certified that under the conditions named the net income for the year 1907 — have been $18,129.24."

## XLV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 91 to the master's report, as follows:

"That the Master in said report stated and certified that on his assumption of net income and on his erroneous assumption of value for the year 1907 the net income was 5.12% on the value of the plaintiff's investment in 1907. Whereas the Master ought to have found, stated and certified that the net income for the year 1907 was in fact as shown by the records only 2.31% on the value of the plaintiff's investment in 1907."

## XLVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 95 to the master's report, as follows:

"That the Master in said report stated and certified that the question of whether the franchise is perpetual or temporary is not material in this case and that the said franchise, however valuable it might be, could in no way affect the rate, which the public service corporations may charge its customers, whereas the Master ought to have found, stated and certified that the question did materially affect the case and the rate of return, as well as its value and the rates, which the corporation might charge, as shown by the record."

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## XLVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 96 to the master's report, as follows:

"That the Master in said report stated and certified that the bonded debt of the company far exceeds the value of its assets, whereas the Master ought to have found, stated and certified that the value of the company's assets is much greater than its bonded indebtedness."

## XLVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 100, to the master's report, as follows:

"That the Master in said report stated and certified that he cannot believe that a rate not lower than 6% upon their invested capital could be regarded as confiscatory, whereas the Master ought to have found, stated and certified that any rate under 8% was less than usually expected in business of this character in this locality, that any rate less than 8% is considered as being non-compensatory, and therefore to the extent that it is short of said 8% it is confiscatory."

## XLVIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 101 to the master's report, as follows:

"That the Master in said report stated and certified that there is evidence in the record indicating that plaintiff regards investments in the stock of these corporations as especially desirable,
154 whereas the Master ought to have found, stated and certified that the record shows that the plaintiff company on the contrary regards its investment in this locality as being an extremely hazardous one under the existing conditions and that its stock is considered of little value in the market."

## L.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 102 to the master's report, as follows:

"That the Master in said report stated and certified that all human experience has shown that increased consumption follows quickly a reduction in the price of commodities, whereas the Master ought to have found, stated and certified, as shown by the record, that because of strenuous competition of electric and other companies the demand for gas is gradually decreasing and it has only been possible for the company to make increases in the sales of gas by the expenditure of extraordinary efforts in the establishment of a new business department at large expense during the last twelve years, and that notwithstanding these extraordinary efforts the company's output for the year 1913 shows an appreciable decrease, as compared for the year 1912."

## LI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 103 to the master's report, as follows:

"That the Master in said report stated and certified that with gas selling at $1.00 per M cubic feet, the plaintiff would have received since December 1, 1907, not less than 6% per annum upon the value of the property employed by it in servin*d* the people of Lincoln, whereas the Master ought to have found, stated and certified
155 that with gas selling at $1.00 per M. cubic feet and with the tax ordinance enforced, the company would have received on the value of its property employed in serving the people of Lincoln for the year 1907 only 2.31%; for the year 1908, only 4.44%; for the year 1909, only 4.96%; for the year 1910 only 3.95%; for the year 1911, only 3.51%; for the year 1912, not more than 2.17%; and for the year 1913, not more than 1.04%."

LII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exceptions 104, 105, and 106, wherein plaintiff excepted to the failure of the Special Master to find the reproduction cost, the assumed life and age, and the amount and rate of depreciation on each of the 73 items of Works Equipment.

LIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exceptions numbers 107, 108 and 109 and each thereof, wherein plaintiff excepted to the failure of the Special Master to find and certify the present value of each of the groups of items of property in the Distribution System, and find and certify the age and assumed life for each of said groups of property, and find and certify the amount and rate of depreciation on each of said groups of property.

LIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 110 to the special master's report, wherein plaintiff excepted to the failure of the Special Master to find and certify the operating expenses, revenues and net incomes for the year 1913.

156 LV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 111 to the special master's report, wherein plaintiff excepted to the Special Master's failure to find and certify the reproduction cost and present value of the property of the company for 1913.

LVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 112 to the Special Master's report, wherein plaintiff excepted to the failure of the Special Master to find and certify the reproduction cost and present value of the property of the Company for the years 1908, 1909, 1910 and 1911.

LVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 113 to the Special Master's report, wherein plaintiff excepted to the failure of the Special Master to find and certify the rate and

amount of depreciation for each of the years 1908, 1909, 1910, 1911 and 1913.

LVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 114 to the special master's report as follows:

"That the Master failed to find and certify the amount of
157 organization and legal expenses and other costs preliminary to construction shown in the evidence in the amount of $33,000.00.

LIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 115 to the Special Master's report, as follows:

"That the Master failed to find and certify the reproduction cost and present value of paving over mains and services."

LX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 116 to the Special Master's report, as follows:

"That the Master failed to find and certify a summary of the evidence on the values of the company's property, its operating expenses, net income and rate of return."

LXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 117 to the Special Master's report, as follows:

"That the Master failed to find and certify the incompetency of the testimony of A. D. Adams offered on behalf of the city on questions of value of the company's property and on operating expenses and results."

158 LXII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 118 to the Special Master's report, as follows:

"That the Master failed to find and certify as to the franchise rights of the company involved in the issues necessary to be determined in valuing the company's property and in determining the operating expenses of the company and in determining the amount of depreciation, and failed to find and certify that the company had a perpetual franchise."

## LXIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 119 to the Master's report, as follows:

"That the Master in said report stated and certified that he had reached the conclusion that the ordinance in controversy has been at all times enforceable according to its terms and that the injunction heretofore granted restraining its enforcement should be vacated and complainant's bill dismissed, whereas the Master ought to have found, stated and certified that said ordinance was not enforceable and its enforcement would have denied to the company just compensation and would have resulted in confiscation of the property of the company if enforced in the years 1907, 1908, 1909, 1910, 1911, 1912, and 1913, and for each of said years, and that the injunction heretofore granted restraining the enforcement of said ordinance should be *contained* in force and made permanent."

159

## LXIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 1 to the report of the Special Master, as follows:

"That the Master failed to find and certify to the extent of the application of the revenue of the years 1907, '8, '9, '10, '11, '12 and '13, each separately, to reconstruction or replacements as distinguished from currect repairs and operating expenses, and that the Master failed to find and certify the amount of past expenditures for reconstruction or replacement and past operating expenses, including current repairs for each of the years 1907, '8, '9, '10, '11, '12 and '13, and failed to find and certify how the gross receipts for the company for 1907-'13, inclusive, for each of the said years had been expended, and failed to find and certify the amount to be set aside for the year 1913 and thereafter for depreciation, and failed to find and certify the character and probable life of the property of the company and the methods adopted in the past to preserve the properties, and failed to find and certify on questions of value, operating expense, net returns, rate of return, depreciation and franchise rights of the company, being questions raised by the complainant, supported by proofs, all of which the Master was directed by the Supreme Court of the United States to fully report upon by order of the said Court in the case."

160

## LXV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 7 to the report of the Special Master, as follows:

"The complainant excepts to the conclusions of the Master that deductions should be made from the value of the services in the

distribution system, on account of advancement made by consumers, and excepts to the failure of the Master to find and certify the reproduction cost and present value of the paving over mains and services for each of the years 1907 to 1913, inclusive."

## LXVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 5 to the report of the Special Master, as follows:

"That the Master failed to find and certify as to the competency, materiality and relevancy of the testimony offered as to the Massachusetts and other companies offered on behalf of the complainant and failed to indicate whether such testimony bearing on the results of such companies was taken into account and given due
161 consideration on the part ot the Master in reaching the conclusions submitted; and failed to find and certify whether the increased cost and the amount thereof in the manufacture of gas by complainant, on account of the pressure ordinance and quality ordinance was taken into account and given consideration on the part of the Master in reaching conclusions submitted."

## LXVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 6 to the report of the Special Master as follows:

"Complainant excepts to the conclusions submitted without a summary of the evidence being submitted therewith, and excepts to the final conclusions submitted by the Master, in view of the finding of the Master to the effect that "summerization of this evidence is quite impossible and would so far as I can see aid neither court nor counsel in testing the correctness of the conclusion I have reached," and as a result thereof the complainant is denied the benefit of the testimony offered and means of testing the correctness of the Master's conclusions, by the evidence considered by the Master.

## LXVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's application to recommit the case to the Special Master for additional findings.

## LXIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not decreeing that the ordinance set out in the complaint imposing an occupation tax on gas companies in the city of Lincoln to be a violation of Section
162 I of Article XIV of Amendments to the Constitution of the United States in that by its enforcement the plaintiff would be denied the equal protection of the laws.

## LXX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not permanently enjoining the enforcement of the ordinance of the City of Lincoln, imposing an occupation tax on gas companies in the City of Lincoln.

## LXXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling exception No. 94 to the Master's report as follows:

"That the Master in said report stated and certified that the occupation tax ordinance is valid, whereas the Master ought to have stated, found and certified that said ordinance if enforced would operate to confiscate the plaintiff's property, as shown by the records and should therefore and for other reasons be declared invalid and discriminatory."

Wherefore, the plaintiff prays that the said decree be reversed and the said District Court of the United States be instructed to grant the relief prayed for in plaintiff's complaint.

HALLECK F. ROSE,
E. C. STRODE,
*Solicitors for Plaintiff.*

163 *Petition for Appeal.*

Filed in the United States District Court, District of Nebraska, Lincoln Division, November 22, 1915.

To the Honorable Page Morris, District Judge of the United States, and to the Honorable United States District Court for the District of Nebraska, Lincoln Division:

The above named Lincoln Gas and Electric Light Company, plaintiff herein, feeling aggrieved by the decree made and entered in this cause on the 23rd day of September A. D. 1915, does hereby appeal from said decree to the Supreme Court of the United States for the reasons fully specified in the assignments of error which are filed herewith, and made a part hereof, and it prays that its appeal be allowed and that citation issue as provided by law, and that a transcript of the record, proceedings, and papers upon which said decree is based, duly authenticated, may be sent to the Supreme Court of the United States. And your petitioner further prays that the proper order touching the security to be required of it to perfect its appeal be made, and that a proper order be made continuing in force the injunction in this cause during the pendency of the appeal and fixing bond therefor.

HALLECK F. ROSE,
E. C. STRODE,
*Attorneys for Plaintiff.*

164 *Order of Court on Plaintiff's Application for Allowance of Appeal.*

Filed in United States District Court, District of Nebraska, Lincoln Division, November 22, 1915.

This cause having come on for hearing before me, one of the Judges of the District Court of the United States for the District of Minnesota sitting in this case by special assignment, at Minneapolis, Minnesota, within said district, on the plaintiff's petition for the allowance of an appeal:

It is hereby ordered that the petition of the plaintiff be granted and the appeal therein prayed be allowed and that a duly authenticated transcript of the record proceedings and papers upon which said decree is based be sent to the Supreme Court of the United States.

It is further ordered that the injunction in this cause be restored and held in effect during the pendency of this appeal upon the plaintiff filing bond duly approved in the sum of Five hundred seventy five thousand ($575,000) Dollars conditioned as required by law and that the same act as a supersedeas and also to keep said injunction in effect and as a bond for costs and damages on appeal.

PAGE MORRIS, *Judge.*

Dated November 22, 1915.

165 *Supersedeas Bond.*

Filed in United States District Court, District of Nebraska, Lincoln Division, November 22, 1915.

Know all men by these presents: That the Lincoln Gas & Electric Light Company, a corporation, under the laws of the State of Nebraska, the complainant herein as principal, and National Surety Company, a corporation, under the laws of the State of New York, as surety, are held and firmly bound unto the Clerk of the District Court of the United States, for the District of Nebraska, in the penal sum of Five hundred and seventy-five thousand dollars ($575,000) lawful money of the United States, to be paid to the said Clerk, and his successors in office, for the benefit of all gas consumers, who have been patrons of, and who have purchased gas from the said complainant, during the pendency of the above-entitled action, from the commencement thereof, and for all gas consumers, who shall purchase gas of the said complainant, or its successors hereafter, at any time before the final determination of said suit, and for the benefit of all whom it may concern, including the defendants herein, for which payment well and truly to be made the said principal and surety hereby bind themselves, their successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and duly signed and executed by us this 19th day of November, A. D. 1915.

Whereas, by virtue of an order and decree entered herein on the 23rd day of September, 1915, the temporary injunction heretofore granted in said cause, restraining the defendants from putting into effect and enforcing an ordinance known as Ordinance Number 432 of the City of Lincoln, Nebraska, regulating the price of manufactured gas and fixing the price for all manufactured gas
166 sold within said city, at one dollar ($1.00) per one thousand cubic feet thereof, and providing that any Gas Company may add a penalty of not more than ten cents per one thousand cubic feet of gas sold, for non-payment after six days from the date such Gas Company has furnished a bill or statement to any consumer, and providing for a minimum monthly charge of twenty-five cents for a single gas service, was by said Court dissolved; and

Whereas, the above named Lincoln Gas & Electric Light Company has obtained an appeal to the Supreme Court of the United States, to reverse the judgment of said District Court, in said cause;

Now, therefore, the condition of this obligation is such that if the said Lincoln Gas & Electric Light Company shall prosecute its appeal to effect, or failing to make its appeal good, if it shall answer all costs and damages and refund for all over-charges, collected from gas consumers, above the price fixed by said Ordinance and shall pay to the Clerk of this Court, or his successor in office, for the benefit of all whom it may concern, and in particular for the benefit of all gas consumers entitled to refunds, all overcharges collected from such gas consumers since the granting of the original injunction in this suit, above the price for gas fixed by said Ordinance, together with interest thereon, when the several parties lawfully entitled thereto and the amount of the refund due each as aforesaid shall have been ascertained in this action in such manner as the Court shall direct, and when so ascertained, the determination to be binding upon all parties to this bond, then and when all the conditions of this bond shall have been complied with, this obligation shall be void, otherwise to be and remain in full force and effect.

LINCOLN GAS & ELECTRIC
LIGHT COMPANY,
By FRANK W. FRUEAUFF, *President.*

Attest:
J. J. McWHINEY,
*Ass't Secretary.*

[CORPORATE SEAL.] NATIONAL SURETY COMPANY,
By W. S. McCURDY,
*Its Attorney-in-Fact.*

L. R. GREENE,
E. W. O'TOOLE,
*As to Surety.*

167 STATE OF NEW YORK,
*County of New York, ss:*

On the 19th day of November, in the year one thousand nine hundred and fifteen, before me personally came Frank W. Frueauff, to me known, who, being by me duly sworn, did, depose and say that he resides in New York City, New York; that he is president of the Lincoln Gas & Electric Light Company, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation; and that he signed his name thereto by like order.

[NOTARIAL SEAL.] HARRIET C. THERKIELD,
*Notary Public, New York County, No. 97,*
*New York Register No. 7053.*

STATE OF MINNESOTA,
*County of Ramsey, ss:*

On this 19th day of November A. D. 1915, before me personally appeared W. S. McCurdy to me personally known who being by me duly sworn, did say that he is the attorney-in-fact of the National Surety Company, the corporation described in and who executed the foregoing instrument, and that the seal affixed to said instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors, and said W. S. McCurdy, acknowledged said instrument to be the free act and deed of said corporation.

[NOTARIAL SEAL.] E. CEDARLEAF,
*Notary Public, Ramsey County, Minnesota.*

My commission expires June 2nd, 1920.

168 The above and foregoing bond approved this 22nd day of November *of November,* 1915.

PAGE MORRIS, *Judge.*

Know all men by these presents, that the National Surety Company, a New York corporation, having its principal office in the City, County and State of New York, doth hereby make, constitute and appoint W. S. McCurdy and C. M. Bend of St. Paul of the state of Minnesota, its true and lawful Attorneys in Fact, with full power and authority to sign, execute, acknowledge and deliver in its name, place and stead, as surety bonds, undertakings and writings obligatory in the nature thereof, and when said bonds undertakings and writings obligatory are signed by either the said W. S. McCurdy or the said C. M. Bend as such Attorneys in Fact to bind the Company as fully and to the same extent as if the same were signed by the President of the Company, sealed with its common seal, and duly attested by its Secretary; and the said Company hereby

ratifies and confirms all the acts of the said Attorneys in Fact done pursuant to the power and authority herein given.

This power of attorney is made and executed in accordance with and by authority of a certain By-Law adopted by the Board of Directors of the National Surety Company at a meeting duly called and held on the Second day of February 1909, which reads as follows:

"Article XII.—Resident Officers and Attorney-in-Fact.

"Section 1. The President, First Vice-President or any other Vice-President may from time to time "appoint Resident Vice-Presidents,
Resident Assistant Secretaries, and Attorneys-in-Fact to rep-
169 resent and act for and "on behalf of the Company, and either the President, First Vice-President, or any other Vice President, the Board of Directors or the executive Committee may at any time remove any such Resident Vice-President, Resident Assistant Secretary or Attorney-in-fact and revoke the power and authority given him.

"Section 4. Attorneys-in-Fact.—Attorneys-in-fact may be given full power and authority to execute for and in the name and on behalf of the Company, any and all bonds, recognizances, contracts of indemnity and other writings obligatory in the nature of a bond, recognizance or conditional undertaking, and any such instrument executed by any such Attorney-in-Fact shall be as binding upon the Company as if signed by the President and sealed and attested by the Secretary."

And, at a meeting of the Board of Directors of the National Surety Company, duly called and held on the Seventh day of March, A. D. 1912, a quorum being present, the following additional section to the foregoing By-Laws was adopted:

"Section 6. Attorneys-in-Fact.—Attorneys-in-fact are hereby authorized to verify any affidavit required to be attached to bonds, recognizances or contracts of indemnity, policies of insurance and all other writings obligatory in the nature, thereof, and are also authorized and empowered to certify to a copy of any By-laws contained in Articles VI, XII and XIII of the By-laws of the Company."

In witness whereof the National Surety Company has caused these presents to be signed by its First Vice President and its corporate seal to be hereto affixed, duly attested by its Assistant Secretary, this 22nd day of May, A. D. 1912.

[CORPORATE SEAL.] NATIONAL SURETY COMPANY,
By WILLIAM J. GRIFFIN,
*First Vice President.*

170 Attest:
WM. I. HAWKS,
*Assistant Secretary.*

STATE OF NEW YORK,
*County of New York, ss:*

On this 22nd day of May A. D. 1912 before me personally came William J. Griffin, to me known, who being by me, duly sworn, did depose and say, that he resides in the City of New York; that he is the First Vice-President of the National Surety Company, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

[NOTARIAL SEAL.] ETTA B. GEWECKE,
*Notary for Kings County, No.* 35.

Certificate filed in New York County, No. 21, Queens, Richmond, Westchester & Nassau Counties. King's County Register's Office No. 3952. New York County Register's Office No. 4090. My commission expires March 30, 1914.

STATE OF NEW YORK,
*County of New York, ss:*

I, Wm. I. Hawks, Assistant Secretary of the National Surety Company do hereby certify that the above and foregoing is a true and correct copy of a power of Attorney executed by said National Surety Company on the 22nd day of May, A. D. 1912 which is still in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seal of said Company at the City of New York, this 13th day of October, 1915.

[CORPORATE SEAL.] W. I. HAWKS,
*Assistant Secretary.*

171 National Surety Company of New York.

Wm. B. Joyce, President.
Hubert J. Hewitt, Secretary.

*Financial Statement June* 30, 1915.

**Assets.**

| | |
|---|---|
| Cash in Banks and Offices | $738,060.32 |
| Government, Municipal and Other Bonds, and Stocks | 5,577,240.03 |
| Real Estate, Mortgages and Collateral Loans | 142,484.41 |
| Unpaid Premiums (excluding Premiums 90 days overdue | 630,087.80 |
| Accrued interest and Accounts Receivable | 487,009.76 |
| Total | 7,574,882.32 |

Liabilities.

| | |
|---|---|
| Unearned Premium Reserve | $2,129,681.68 |
| Reserve for Contingent Claims and Expense (Less Reinsurance) | 1,344,160.48 |
| Reserve for taxes and Unpaid Commissions (not due) | 194,645.63 |
| Accounts Payable (not due) | 97,849.35 |
| Dividend Declared Payable July 1, 1915 | 60,000.00 |
| Burglary Reinsurance Fund | 7,347.47 |
| Capital Stock | 2,000,000.00 |
| Surplus | 1,741,197.71 |
| Total | 7,574,882.32 |

[CORPORATE SEAL.]

STATE OF NEW YORK,
*County of New York, ss:*

Ruffin A. Smith being duly sworn, says: That he is Assistant Secretary of the National Surety Company; that said Company is a corporation duly organized existing, and engaged in business
172 as a Surety by virtue of the Laws of the State of New York, and has duly complied with all the requirements of the Laws of said State and of the Laws of the State of —— applicable to said Company, and is duly qualified to act as Surety under such Laws; that said Company, has also complied with and is duly qualified to act as Surety under the Act of August 13, 1804; entitled, "An Act Relative to Recognizances, Stipulations, Bonds and Undertakings, and To Allow Certain Corporations To be accepted as Surety Thereon" as amended by the Act of Congress of March 23, 1910. That the foregoing is a full, true and correct statement of the financial condition of said Company on the 30th day of June, 1915.

[NOTARIAL SEAL.] RUFFIN A. SMITH.

Sworn to before me this 10th day of August, 1915.

WM. M. WEAVER.

173 *Citation.*

Filed in United States District Court, District of Nebraska, Lincoln Division, November 24, 1915.

United States of America to City of Lincoln et al., its Mayor and City Attorney, Greeting:

You are hereby cited and admonished to be and appear in the United States Supreme Court to be held at the City of Washington in the District of Columbia, United States of America, within thirty days from the date of this writ, pursuant to an appeal filed in the Clerk's office of the District Court of the United States for the District of Nebraska, Lincoln Division, wherein Lincoln Gas and

Electric Light Company is plaintiff and you are defendants, to show cause, if any there be, why the judgment against the said appellant as in said appeal mentioned should not be corrected and speedy justice should not be done the parties in that behalf.

Witness the Honorable Edward D. White, Chief Justice of the Supreme Court of the United States of America, this 22d day of November, A. D. 1915.

PAGE MORRIS,
*United States District Judge for the District of Minnesota.*

Service of the within citation and receipt of a copy thereof accepted this 23 day of November, A. D. 1915

W. M. MORNING,
C. PETRUS PETERSON,
*Attorneys for Defendants.*

A certified copy of this citation has been lodged and remains among the files in said case.

[Endorsed:] In the District Court of the United States for the District of Nebraska, Lincoln Division. Lincoln Gas and Electric Light Company, a Corporation, Plaintiff, vs. The City of Lincoln et al., Defendants. Citation. Filed in Lincoln Division at — M., Nov. 24, 1915. R. C. Hoyt, Clerk, by J. H. McClay, Deputy. No. 290, O. B.

174 *Certified Copy of Order Extending Time to Prepare Transcript of Record.*

Filed in United States District Court, District of Nebraska, December 17, 1915.

Lincoln Gas & Electric Light Company having filed and presented its application for an extension of time in which to prepare and file a transcript of the record in the Supreme Court of the United States in the above entitled case, and it being made to appear that owing to the large amount of testimony taken upon the hearing of said case, and the large volume of the record necessary to be prepared for said appeal, the said record could not be prepared within thirty days from the day of the order allowing the appeal herein, and further it being made to appear that it would require an additional time of four months from December 21st 1915, in which to complete the transcript of the record in said case,

It is, therefore, ordered that the time within which to prepare and complete the transcript of the record in this case be extended for a period of four months from December 21st, 1915, and that said time is by order of said court allowed and granted to the Lincoln Gas & Electric Light Company pursuant to this order.

PAGE MORRIS, *Judge.*

Dated this 22nd day of November, 1915.

Endorsed: Filed in Lincoln Division, November 22, 1915. R. C. Hoyt, Clerk, By J. H. McClay, Deputy. Entered in order Book at No. 290.

175 UNITED STATES OF AMERICA,
*District of Nebraska, Lincoln Division, ss:*

I, R. C. Hoyt, Clerk of the Court of the United States for the district of Nebraska, do hereby certify the above and foregoing to be a true and correct copy of an order made and entered in the record of the proceedings of said Court in the above entitled case on the 22nd day of November, 1915; the original order having been mailed on the 17th day of December, 1915, to the clerk of the Supreme Court of the United States.

Witness my hand and the seal of said court at Lincoln, in said District this 17th day of December, A. D. 1915.

[OFFICIAL SEAL.]

R. C. HOYT, *Clerk,*
By J. H. McCLAY, *Deputy.*

Original sent to U. S. Supreme Court December 17th, 1915.

176 *Certified Copy of an Order Enlarging Time to Prepare and Complete Transcript.*

Filed in United States District Court, District of Nebraska, Lincoln Division, April 5, 1916.

Lincoln Gas & Electric Light Company having filed and presented its application for an extension of time in which to prepare and file a transcript of the record in the Supreme Court of the United States in the above entitled case, and it being made to appear that owing to the large amount of testimony taken upon the hearing of said case, and the large volume of the record necessary to be prepared for said appeal, and owing to the engagements and illness of counsel for the complainant the said record could not be prepared within the time heretofore allowed by the court, and it further being made to appear that it will require an additional time of four months from August 21st, 1[illegible] in which to complete the transcript of the record in said cause,

It is therefore ordered that the time in which to prepare and complete the transcript of the record in this case be extended for a period of four months from April 21st, 1916, and that said time is by order of said court allowed and granted to the Lincoln Gas & Electric Light Company pursuant to this order.

PAGE MORRIS, *Judge.*

Dated this 4th day of April, 1915.

Endorsed: Filed in Lincoln Division, April 5, 1916. R. C. Hoyt, Clerk, By J. H. McClay, Deputy.

UNITED STATES OF AMERICA,
*District of Nebraska, Lincoln Division, sct:*

I, R. C. Hoyt, Clerk of the United States District Court, for
177 the district of Nebraska, do hereby certify that the foregoing is a true and correct copy of an order filed and entered on the 5th day of April, 1916 (original forwarded to the Clerk of the Supreme Court of the United States).

Witness my hand as clerk and the seal of said court at Lincoln, Nebraska, this 5th day of April, A. D. 1916.

[OFFICIAL SEAL.]

R. C. HOYT, *Clerk,*
By J. H. McCLAY, *Deputy.*

(Revenue stamp.)

Original Order sent to U. S. Supreme Court, April 5, 1916.

178 *Stipulation.*

Filed in United States District Court, District of Nebraska, Lincoln Division, August 22, 1916.

It is hereby stipulated and agreed between the parties that owing to the inability of the clerk of the court to complete the transcript in the time heretofore allowed, that the time may be extended in which to prepare such transcript until October 20th, 1916, and that the order and citation heretofore issued and entered may be enlarged and extended until such time, and defendants waive further citation of service thereof, and consent that an order of the court may be entered in accordance with this stipulation.

Dated this 11th day of August 1916.

E. C. STRODE,
*Att'ys for Plaintiff.*
C. PETRUS PETERSON,
W. M. MORNING,
*Att'ys for Defendant.*

179 *Certified Copy of an Order Extending Time within which to Prepare Transcript.*

Filed in United States District Court, District of Nebraska, August 22, 1916.

It being made to appear to the court by the showings on file, and by the stipulation of the parties presented and filed, that owing to the large amount of testimony taken on the hearing of said case and the large volume of the record necessary to be prepared for the appeal, the said record cannot be prepared within the time heretofore granted in the order and citation of November 22nd, 1915, and the two enlargements thereof by which the time was extended to August 21,

1916; and it appearing further that the defendants by their counsel, waive further notice of any enlargement of the citation herein, and consent thereto and further waive any citation herein, and it further appearing that the citation herein issued by the court has not yet expired, it is therefore ordered that the citation herein be extended and enlarged for good cause shown until October 20th, 1916, and the time in which to prepare and complete the transcript of the record is likewise extended until such time and that this order of enlargement be filed with the clerk of said court.

Dated this 12th day of August, 1916.

PAGE MORRIS, *Judge.*

To the Clerk:

Enter this order,

PAGE MORRIS, *Judge.*

DISTRICT OF NEBRASKA,
*Lincoln Division, ss:*

180 I, R. C. Hoyt, Clerk of said court here certify that the foregoing is a true and correct copy of an order made on the 12th day of August 1916, and entered on the 22nd day of August 1916.

In testimony whereof I have hereunto set my hand and affixed the seal of said court at the city of Lincoln, in said District this 22nd day of August, 1916.

[OFFICIAL SEAL.]

R. C. HOYT, *Clerk.*
J. H. McCLAY, *Deputy.*

Original order sent to U. S. Supreme Court, August 22, 1916.

181 *Order.*

Filed in United States District Court, District of Nebraska, Lincoln Division, August 22, 1916.

It appearing to the Court from the showing made and by stipulation and agreement of the parties hereto that it is desirable and proper that the original exhibits be used on the appeal as part of the record in place of copies thereof,

It is therefore ordered that the original exhibits included in volume- 1, 2 and 3 of the exhibits settled and allowed as a part of the record in this case are to be used on the appeal as the exhibits, so that copies need not be made thereof, and in the preparation of the printed record by the clerk of the court such exhibits are to be used in all respects the same as copies thereof, eliminating from such printed record exhibits Nos. 9, 10, 16, 19, 20, 21, 22, 66, 83, 84, 85, 102, 113 to 132 inclusive, 135 to 143 inclusive, 150, 226, 265 to 269 inclusive, 382, 383, and 442, 223, 224, 225, 227, 228 and 258, pursuant to agreement and stipulation of the parties.

Dated this 12th day of August, 1916.

PAGE MORRIS, *Judge.*

To the Clerk:

Enter this Order.

PAGE MORRIS, *Judge.*

182 *Præcipe and Plaintiff's Agreement.*

Filed in the United States District Court, District of Nebraska, Lincoln Division, October 4, 1916.

The clerk of said court is hereby requested to prepare a transcript of the record in the above entitled cause and file the same in the office of the Clerk of the Supreme Court of the United States under the order of Appeal and the Appeal heretofore perfected to said court and to include in said transcript the pleadings, orders, decrees, reports, exceptions and papers on file and of record in your office appurtaining to said cause, enumerated as following:

1. The condensed narrative statement of the evidence, including exhibits settled and allowed by the court as a part of the record in this case.
2. The complaint.
3. The Restraining Order of December 27th, 1906.
4. The Answer.
5. The Replication.
6. Motion for order substituting John M. Stewart, City Attorney, as one of the defendants, including the Council Record filed therewith and order of the court thereon under date of June 28th, 1909.
7. Memorandum of opinion of March 20th, 1909.
8. Decree filed April 6th, 1909.
9. Petition for allowance of appeal filed April 10th, 1909.
10. Assignments of error filed April 10th, 1909.
11. Order allowing appeal filed May 27th, 1909.
12. Mandate of the Supreme Court of the United States.
13. Order of the court appointing J. J. Sullivan Special Master.
14. Report of Special Master filed April 8th, 1914.

183 15. Second supplemental report of Special Master filed September 19th, 1914.

16. Motion of plaintiff to recommit the case to the Special Master for additional findings filed October 8th, 1914.
17. Order of the court upon plaintiff's application to recommit the report of the Special Master filed December 10th, 1914.
18. Plaintiff's exceptions to the report of the Special Master filed September 26th, 1914.
19. Plaintiff's additional exceptions to the report of the special master filed September 28th, 1914.
20. Defendant's exceptions to the report of the Special Master filed September 26th, 1914.
21. Plaintiff's application for an order authorizing and permitting the taking of further testimony with respect to the Sloan-Huddle report filed June 14th, 1915.
22. Decree filed May 23rd, 1915.
23. Order directing the papers on appeal including bond be forwarded by the Deputy Clerk of the District Court of the United States for the District of Minnesota at Minneapolis, to the Clerk of the Dis-

trict Court of the United States for the District of Nebraska, Lincoln Division, dated November 22nd, 1915, and filed on said date.

24. Plaintiff's assignments of error filed November 22nd, 1915.

25. Plaintiff's petition for appeal filed November 22nd, 1915.

26. Order of the court on plaintiff's application for allowance of the appeal dated November 22nd, 1915, and filed on said date.

27. Supersedeas bond filed November 22, 1915.

28. Citation issued November 22nd, 1915, and filed on November 24th, 1915.

184 29. Order extending and enlarging the time in which to prepare and file the transcript of the record in the Supreme Court of the United States dated November 22nd, 1915, and filed December 17th, 1915.

30. Order enlarging and extending the time in which to prepare and complete the transcript of the record dated April 4th, 1915, and filed April 5th, 1915.

31. Stipulation for extension and enlargement of time in which to prepare and complete record on appeal dated August 11th, 1916, and filed August 22nd, 1916.

32. Order enlarging and extending the time in which to prepare and complete the record on appeal, dated August 12th, 1916, filed August 22nd, 1916.

33. Order directing the use of original exhibits on appeal dated August 12th, 1916, filed August 22nd, 1916.

34. This præcipe with the acceptance of service and agreement of counsel endorsed thereon.

Said transcript to be prepared as required by the rules of the Supreme Court of the United States, and file the same with the clerk of the United States Supreme Court on or before October 20th, 1916.

E. C. STRODE,
*Attorney for Plaintiff.*

Receipt of a true copy of the foregoing præcipe for transcript of the record is hereby acknowledged this 11th day of August, 1916.

C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for —.*

It is agreed that the foregoing Præcipe enumerates all of the record proceedings and files necessary for the hearing of the cause in the Supreme Court of the United States.

Dated this 11th day of August, 1916.

C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Defendants.*

185 As attorney for Intervenors I do not care to be heard on the appeal—and do not ask for the service of any papers on me.

JOHN M. STEWART.

September 20, 1916.

186 *Stipulation.*

Filed in the United States District Court, District of Nebraska, Lincoln Division, October 4, 1916.

It is hereby stipulated and agreed by and between the parties hereto that printing of the record as provided by an act of Congress entitled "An Act to Diminish the Expense of Pleadings on Appeal and Writs of Error or Certiorari" approved February 13, 1911, is waived and election made to take the record in the United States Supreme Court and there to be printed under the supervision of the Clerk of said court under the rules and practice of said court.

Dated this 11th day of August, 1916.

E. C. STRODE,
*Attorney for Plaintiff.*
C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Defendants.*

187 United States District Court, District of Nebraska, Lincoln Division.

I, R. C. Hoyt, Clerk of said court hereby certify that in obedience to rules of the United States Supreme Court and rules of this court and in compliance with the præcipe for transcript of the record, and agreements and stipulations in regard thereto, this record is made and certified to be true and faithful transcript of the pleadings, proceedings and evidence of record and file in the office of the clerk of said court as mentioned in said præcipe for transcript, in the matter of Lincoln Gas & Electric Light Company versus the City of Lincoln, No. 10 Docket A.

It is further certified that said transcript of the record consists of two volumes, lettered A and B respectively; that Volume A contains an agreed statement of the evidence as settled and allowed by the trial judge, covering 1853 pages numbered consecutively from 1 to 1853 inclusive; that Volume B to which this certificate is attached, contains pleadings, orders and other proceeding, covering one title page, one index page and 186 pages of transcript of the record, numbered consecutively from 1 to 186 inclusive.

It is further certified that the three volumes of exhibits designated Vol. 1, Vol. 2 and Vol. 3 respectively and each bearing the authenticating certificate of Hon. John J. Sullivan, the Special Master before whom the evidence in this case was taken, Stipulation as to inclusion and exclusion in printing the record, and original order of Hon. Page Morris, settling and allowing and transmitted herewith, constitutes a part of the original record filed by Special Master John J. Sullivan and referred to in his certificate.

188 Volume One contains the exhibits received with the testimony of Henry I. Lea and are lettered consecutively A to X inclusive.

Volume Two contains the exhibits received with the testimony of A. D. Adams and are numbered consecutively from 180 to 440 inclusive.

Volume Three contains 422 miscellaneous exhibits numbered consecutively from 1 to 422 inclusive.

Witness my hand as Clerk, and the seal of said Court, at Lincoln, Nebraska this 14th day *day* of October, 1916.

[Seal United States District Court, District of Nebraska, Lincoln Division.]

R. C. HOYT, *Clerk,*
J. H. McCLAY, *Deputy.*

[United States internal revenue documentary stamp, series of 1914, ten cents, cancelled 10/14/16. J. H. M.]

189 In the Supreme Court of the United States.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Plaintiff,

vs.

THE CITY OF LINCOLN et al., Defendants.

*Stipulation.*

It is hereby stipulated and agreed that the clerk of the Supreme Court of the United States in the preparation of the printed record on appeal in this case shall omit therefrom exhibits 9, 10, 16, 19, 20, 21, 22, 66, 83, 84, 85, 102, 113 to 132 inclusive, 135 to 143 inclusive, 150, 223, 224, 225, 226, 227, 228, 258, 265 to 269 inclusive, 382, 383, and 442 in the above case for the reason that the matters contained in such exhibits are fully covered by the testimony of witnesses or other exhibits, or are deemed by the parties hereto immaterial under the issues of this appeal.

Dated December 30th, 1916.

W. M. MORNING,
C. PETRUS PETERSON,
*Attorneys for Defendants.*
CHAS. A. FRUAUFF,
E. C. STRODE,
*Attorneys for Plaintiff.*

....

December 30, 1916.

190 [Endorsed:] 744/25,574. In the Supreme Court of the United States. Lincoln Gas & Electric Light Company, a corporation, Plaintiff, vs. The City of Lincoln et al., Defendants. Stipulation.

191 [Endorsed:] File No. 25,574. Supreme Court U. S. October Term, 1916. Term No. 744. Lincoln Gas & Electric Light Co., Appellant, vs. The City of Lincoln et al. Stipulation to omit parts of record in printing. Filed January 20, 1917.

1–5 In the District Court of the United States, District of Nebraska, Lincoln Division.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Plaintiff,

vs.

THE CITY OF LINCOLN, NEBRASKA, et al., Defendants.

Appearances:

For plaintiff: E. C. Strode, Esq., and Halleck F. Rose, Esq.
For defendants: C. Petrus Peterson, Esq., City Attorney, and W. M. Morning, Esq.

LINCOLN, NEBRASKA, August 11th, A. D. 1916.

Received of the attorneys for the plaintiff the within condensed statement of the evidence, including the exhibits, for examination and amendment.

C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Defendants.*

LINCOLN, NEBRASKA, August 11th, A. D. 1916.

We herewith return the within proposed condensed statement of the evidence and exhibits, with no amendments, and consent to its allowance and settlement by the court.

C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Defendants.*

6 Be it remembered, that on the 21st day of March, A. D. 1913, hearing was begun in the above entitled cause before Honorable J. J. Sullivan, Special Master, and said hearing was concluded on the 14th day of March, A. D. 1914, and the report of said Special Master was filed with the Court on the 8th day of September, A. D. 1914; and thereupon on the 23d day of September, A. D. 1915, the findings of fact and conclusions of law of said Special Master were by the Honorable Page Morris, Judge Presiding duly confirmed; Messrs. E. C. Strode and H. F. Rose, appearing for the plaintiff, and Messrs. Fred C. Foster, and W. M. Morning appearing for the defendant City of Lincoln et al.; at which said hearing before said Special Master the plaintiff and the defendant City of Lincoln introduced and offered evidence and testimony as hereinafter set forth, and objections were made thereto, rulings had thereon, and exceptions taken to the same as follows:

7 MICHAEL E. MALONE, being first duly sworn, testified on behalf of the complainant as follows, pages 68 to 93, printed transcript:

Direct examination by Mr. Rose:

I am 48 years of age and reside at Denver. I do gas engineering work. At present I am employed as superintendent of the gas department by the Denver Gas & Electric Light Co. I started in 20 years or more ago in the gas business as a clerk and worked up to be superintendent. I worked at Columbus, Ohio, and Madison, Wisc., and Denver, Colo., and have had occasion at different times during those 20 years to put in all kinds of gas apparatus in those places, and in addition on my own hook I have built some two or three different gas plants complete, and have also made a number of reports on plants and put additions to them both in the distribution system as well as in the manufacturing plant. I am, and have been for the past ten years, familiar with the price of material going into the construction of gas plants, and also the price of labor and know what equipments are required, and I am familiar with the requirements of such properties as the Lincoln Gas & Electric Light Company's plant at Lincoln. I made an examination of the physical properties of the Lincoln Gas & Electric Light Co. used in its gas department about two months ago. I spent five days here at that time, three of which were put in entirely at the plant. I measured up the apparatus and made a note of everything then took it to the office here and went over it and had some correspondence with the manufacturers to enable me to get the price at present on such apparatus. I also had access to the plats of the mains and books of the company and I examined them. I went over them carefully and measured up on the maps all of the different streets where the streets were paved and unpaved to find out the number of miles of mains they had, the different qualities and amounts under paved streets, and dirt streets. I took a buggy and drove out over most of the mains, and I checked it up so as to make a detailed state-

8 ment of the property and its value. Gas was discovered back about 1792. Since then the manufacturing process has been greatly improved. At present the manufacture of coal gas is really a destructive distillation of coal in a retort usually made of fire clay. The retorts are erected in what is called gas furnaces or benches, the number of benches depending on the size of the plant, running all the way from three to nine retorts and sometimes more, a bench. There are what are called free or plain fire benches, and also what are commonly called recuperative or regenerative furnaces. In modern and up-to-date plants they generally have one of these furnaces and they draw the hot coke directly into the furnace. Attached to three of these benches also are what are called bench fuel economizers, whereby some of the gases are drawn back under the grate bars and the inert gas is converted into combustible gas which saves a great deal of expense in fuel. The retort or retorts are hermetrically sealed and the air is excluded from the retorts, the gas passing up what is called a standpipe attached to the front of the re-

tort or mouthpiece. From there it is delivered into a hydraulic main. It might be called a water pump to prevent the gas from coming back to the retort and exploding or igniting. From the hydraulic main the gas usually passes into a primary condenser to reduce the temperature of the gas and drive off the globules of tar, etc. Before this the temperature is as high as 175° and we try to draw it down to 130° at the exhauster, which is the next apparatus to the primary condenser, when it is cool. The purpose of the gas exhausters is to draw the gas from the retorts through the hydraulic main at what is called atmospheric pressure or vacuum line from which point it is forced through a series of apparatuses for scrubbing and condensing. The first apparatus is what is usually called the tar extractor which takes up a certain percentage of tar and varies in different plants with different forms of gas. 50% of what is remaining after what is taken off at the main is taken off by the extractor.

From the extractor the gas goes through a series of air or water tube condensers, some plants having one or two and others as high as ten or twelve. From the condensers it is driven through one or more tower scrubbers, sometimes as high as 120 ft.; usually, though, from 30 to 60 ft. These scrubbers are filled with cork or other suitable material, wooden blocks, or trays, the gas passing in at the bottom and passing through this material in a counter-current to the liquid with which it is washed. The liquid is ammoniacal water in most cases though in some cases they use plain clear water. From these scrubbers the gas then passes to what is called the rotary scrubber. This is the condition in Lincoln, and is the last vessel for the removal of the remaining particles of tar and ammonia gas. From the rotary scrubber the gas passes to the purifying boxes, usually four in number. However, these vary according to the size of the plant. The gas passes through the purifying material in these boxes. The material usually used in this country at the present time is called oxide of iron or iron sponge, made from iron borings and from corn cobs, shavings, ground cork, or any like material that is used as a carrier of the oxide of iron preventing it caking and making a back pressure. From these boxes the gas passes to the station meter which is a meter of sufficient capacity to take all of the amount of gas made every hour which varies at different periods of the 24 hours. This meter measures all of the gas at whatever the temperature of the atmosphere or room may be at the time the gas passes through the correction being made to reduce this to a standard condition which is 60° temperature and 30° barometric pressure. From the meter the gas passes to what is commonly called the storage holder. Due to the fact that in most large cities at the present time holders are not built of sufficient weight to give the desired pressure for the ordinary distribution system, it becomes necessary to pump the gas from the holder and force it into the street mains under an initial pressure of 3, 5, or 6 inches of water column.

What we call "water column," 1 inch in height, that is, normal, reduced to pounds three and four-tenths or 3.4 inch would represent only two ounces of sea level. From the holder the gas passes through the main transmission and then into the distributing

main and service pipes into the houses where it is measured by the consumer's meter.

Water gas is manufactured by what is called the decomposition of steam by passing it through a fuel bed varying in depth from five to eight or nine feet. The steam is first pre-heated to a high temperature, generally delivered into the machine at about 80 pounds pressure. That is what is commonly called water gas. Up to this point it is a blue gas having no luminosity whatever. It goes as a rule through the fuel bed from the bottom up though there are machines which have reverse runs. After passing through this fuel bed it goes into what is called the carburetor at which point gas-making oil is admitted for the purpose of enrichment. The oil used is generally called a gas listillate. Oil is very high at present and it is necessary to use a grade of oil that is not prohibitive and gas distillate is a grade of oil from which one or two lighter distillates have been taken at the refinery. It is hardly a product of petroleum. Some of the petroleum is taken from it but it is a crude oil with one or two distillates taken off and one of the distillates is petroleum for which they get a very much higher price. The balance makes just as good a gas but not so much of it as it would make if the petroleum was left in. The vessel in which the oil is admitted is called the carburetor. That is where the carbon is admitted to the gas and brought from a blue gas up to what is called the carburetted water gas. The gas then passes down through the carburetor which is filled with fire brick arranged in a checker-work fashion laid on edge and staggered so the gas is compelled to permeate through the entire mass of fire brick through the openings where it is
11 partly fixed into a gas. It then crosses over to the third vessel called the superheated which is filled with fire brick. Here is where it gets its final fixing and is finally fixed into a permanent gas-y form, little of it being reduced back to a liquid form. From this vessel it passes through the seal pot which is identical to the hydraulic main in the coal gas. From there it passes to the various condensers, scrubbers, washers, and coolers similar to those used in the manufacture of coal gas and from these it passes to the relief holder. The relief holder of a water gas plant is for the purpose of storing the gas as fast as it is made, it usually being made much faster than the apparatus can handle it. It is pumped from this holder and forced through the apparatus, purifiers, etc., at a rate at which the apparatus is able to handle it. It is then measured through the station meter the same as the coal gas and stored in the storage holder from where it is delivered mixed with the coal gas. The mixture in most plants is made at the entrance to the purifying apparatus. The two gases are mixed and generally in the proper proportion and pass together through the boxes and are measured, in most cases, jointly. In a great many cases they keep the entire system separate. I know of four kinds of coal in the United States that are really suitable for gas-making. These are the Virginia coal, the Youghiogheny coal of Pennsylvania, the Fairmont, and some other good coals of West Virginia, some good coal from around Trinidad, Colorado, and some from Washington. Most all the other

coals are simply steam or domestic coal. I understand that the coal used here in Lincoln comes from Pennsylvania. It is cheaper to buy the Youghiogheny coal from Pennsylvania at present although the freight is up to $4.50. One of the best steam coals in the country comes from Hocking, Ohio. It has about three and a half feet of gas per pound of coal. The Youghiogheny coal has usually
12 about five feet. If you were to put up a plant to handle the Ohio coal you would have to have a plant that much larger to handle the same output. Also, coal that is over one per cent sulphur is almost prohibitive. I have seen so much sulphur in the gas during coal strikes that we had to almost shut down the plant. The people couldn't use the gas in their houses and the cost of apparatus to take out one or more per cent of sulphur per pound of coal would be such that we couldn't use it. Coal that has a high percentage of gas cannot be used frequently because of such a considerable percentage of sulphur in it. That is true of Kansas coal. It would be practical to use the Kansas coal if a plant had about ten times the ordinary scrubbing, condensing, and purifying capacity but it would not be economical or efficient. They had to discontinue using it right here. It adds very much to the economical efficiency of the plant to be able to manufacture both coal and water gas.

Sometimes you are at the mercy of the oil market which is controlled by the Standard Oil Co., principally, and if you have nothing but a water gas plant they raise the price of oil at will. I have known them to do that with other companies, and it is necessary to have both processes in order to operate that which is the cheapest—either coal or water gas. The same thing would occur if you had an exclusive coal gas plant. They might raise the price of coal and put it out of business. It makes your system more flexible. You can operate part of either. It is also necessary at times to have a water gas plant in order to bring up your candle power requirements. In a great many cities the candle power requirements are such that by the use of coal alone you are unable to bring it up to the necessary requirements. You can also manufacture the coke by the coal gas process and use it in the water gas process, and you can do it much cheaper than you can buy it in ordinary quantities. In large furnaces you can use coke for making both coal and water gas. I don't know as I would regard the plant here as efficient for results, considering the
13 size of the town and the plant. The water gas and coal benches are not modern and up-to-date, but the balance of the system is in good shape as are also the purifiers. They have just rebuilt the furnaces in the coal gas plant and they are modern. The quality of the gas is all right but the cost of manufacture is more. They have one machine called a springer water gas set. It has all three compartments in one cell instead of having three cylindrical vessels in line to pass the gas through. This is an old-fashioned machine. It cost a good deal of money when it was put in but it is not modern and you don't get the efficiency that you would from modern machinery. It is not used regularly now and is only there as a relief set. It is used in emergencies when they are called upon to make up a deficiency which they are not able to make in the coal gas plant.

It was one of the first pieces of apparatus put on the market and was regarded as efficient at that time. I have done over the inventory of the company's property and have checked over the cost of replacement. I am not so familiar with the cost of the real estate and I had to take the opinion of outside parties on that but that is a very small item. I made a detailed estimate of the replacement value of the physical properties which I made from my inspection. The cost of the physical properties alone exclusive of getting the money, organization, etc., is $691,000. This does not include any of the property used in the manufacture and distribution of electricity with the possible exception that the steam plant is installed in the electric department and we had to estimate the steam power capacity necessary to operate the gas plant, and the building for it, and all items that are used in common by both departments have been apportioned so that the estimates that I am giving hereafter include only the gas plant. To replace the present coal gas manufacturing apparatus would cost $80,605; the water gas apparatus would cost $31,503; the buildings at the gas plant exclusive of the electric plant would cost $37,-
14 289. The real estate, including the two-thirds of the ground occupied, would cost $7,200; two-thirds of the total real estate is used by the gas plant and one-third by the electric plant. In fact, they have such a large storage for coke and oil that they probably use over two-thirds of the ground for the gas plant.

There are 62 miles of street mains. Their replacement cost which includes the cost of relaying the paving where the mains are under paved streets is $220,605. The service pipes which include the cost of repaving and cost of permits, amounts to $107,106. The gas meters in use have a replacement cost of $36,282; the meter connections, $13,184; piping for gas ranges, $16,500. The engineering expense on $550,272, at 2½% which is a very low figure, is $13,756. The next item is the contingent expense. This is an expense which will accrue on many jobs of $5,000 and upwards and on large jobs the large corporations or factories allow for contingent expenses. I have never had any experience putting in a plant of this size but I have placed it here at 12½%. It varies all the way from 5% to 20%, and would run at least 12%. That contingent expense does not include the expense of engineering. Neither does it take in the real estate. On the figures, $543,072.76, the amount of it is $67,884.09. The working capital amounts to $59,146, which makes up the total of $691,000. The estimates that I have given above include the cost of the material and labor and contemplates the items in place as they now are. In addition to this, other expenses would necessarily be incurred in constructing a plant. You would have to have an engineer make plans and designs and you would have to have superintendence. Page one of my report is headed Coal Gas Apparatus, and it covers all of the apparatus used in that department. It shows in detail each piece of equipment and my estimate of the replacement cost for each. This apparatus is now in actual use by the company and this replacement cost contemplates entirely new stuff. My report is marked Exhibit 1. The next heading in this exhibit shows all of the water

gas apparatus in the local plant and opposite each item of
15 equipment is found my opinion and estimate of the reasonable replacement value and the cost of each of those items. The next subdivision in this exhibit is headed Real Estate and Buildings. The company has a full block of 12 lots for its plant, and I have given my estimate of 8 lots which is two-thirds of a block. That portion I estimate is used exclusively for the gas plant. I have specifically described each one of the buildings and the furnishings and opposite each I have given my estimate and opinion of the replacement cost and value, and also of the real estate. Where part of these buildings are used jointly by both departments I have given the replacement value of the portion used by the gas department. I don't think the sewage system could be replaced in that wet ground for the amount I have given. The total cost of the real estate and buildings I have estimated, as shown by this exhibit, at $44,486. The next heading of this exhibit is Cost of Replacing Gas Main Distribution System in dirt streets and there I have given the total miles of main in dirt streets and the number of miles of each kind and opposite each I have given my estimate of the replacement cost. The total cost is $90,578, which includes the permits for digging up the streets for which they charge you 50¢ each. This, in my opinion, is a good, fair average cost in a great many cities I have had experience in, and I think it would be more than fair here. There is nothing included in this sum for engineering and contingent liabilities nor for accidents or anything of that kind, and plants of that kind are not constructed without detailed engineering plans. It is also a fact that there is a certain element of hazard in work of this kind that increases the cost over and above the cost of material and labor. I have known of explosions to take place in a system of that kind in a number of miles of main at the same time and this is an element that ought to be
taken into consideration. On the next page of this exhibit I
16 have shown the miles of main of each size under paved streets and opposite each I have shown the cost of replacing. The total cost of replacing the mains under paved streets of this company in Lincoln is $130,027, which includes the permits at 50¢ each and this is exclusive of any contingent expenses or liability of accident and attorney's charges and financing, and does not include broken pipe. It is just the actual cost of labor and material. In actual practice in order to find what the cost is you must add to these items the percentages for contingent expenses and engineering cost, broken pipes, attorney's fees, and financing.

I have next shown the number of services under dirt streets and then follows the services under the different kinds of pavement and opposite each is my estimate of the cost of replacing each kind. The services are pipes laid from the gas main in the street to the residence or lot which is to receive the gas service. They are a necessary part of the construction of a gas system, and in actual practice these services are largely placed clear into the residence at the expense of the company. They do that in order to promote the gas business and the consumption and sale of gas. The total cost of all the services amounts to $107,106.82. In my opinion this is the fair and reason-

able replacement cost of these services. The number of the services under the wooden block pavement were estimated. It took a long while to make that up and there are some mistakes in it but it is more than fair. There are more services under the asphalt pavement and there are more expenses under such a condition than when the services are under the dirt streets. The next item I have shown in this exhibit is the cost of the gas meter connections. The fair and reasonable replacement cost of these connections is $13,184. After we get to the end of our service pipe we generally have to run ten or fifteen feet of pipe to the location of the meter. The consumers frequently insist that the meter be placed on a certain wall to get away from the furnace or ice box or coal bin or something, and the aver-
17 age length of this pipe is ten to twelve feet. Then there are two sets of meter connections. Sometimes they are made of lead pipe which contains a shut-off cock so that in case of accident you can shut the meter off, and two unions that screw on to the meter, and altogether we estimate these connections to cost about $2.25 each, $1.05 being for the material and $1.25 for the labor. These connections are necessary in order to sell the gas to the individual tenant, and in actual practice this company has to make them.

The next item in this exhibit is piping for the gas ranges. These pipes commence at the meter and run from there to the gas range, and the estimated distance is about 30 feet. They generally use ¾-inch pipe and in ordinary use these pipes cost about $3 apiece, which includes the labor. It is necessary to do this to promote the sale of gas, and the work must be done very carefully to avoid drips and leaks. The cost of maintenance on one of these things if not done right is very heavy. The total replacement cost of the piping for gas ranges, in my opinion, is $16,500. The next heading in my exhibit shows the details of the gas meters that are owned and set up by the company, showing the number of each kind and the replacement cost. The aggregate value of the company's meters in actual use is $36,282.90. I next show in my exhibit the items making up the working capital, which totals $59,146.88. I consulted with the manager of the company and ascertained the amount of stock necessary to carry and from that I made this table. The coal needed here for gas making purposes comes from Pittsburgh. It is several days in transit and in order to guard against strikes, floods, and other contingencies which might arrise they aim to carry an average stock of 3,300 tons. The fluctuations of the market does not affect ordinarily the size of the coal stock because the coal is usually contracted for at a certain season of the year for one or two year periods and the price remains the same throughout that
18 period. The usual term of credit extended to the patrons of the company is over a month and the company cannot operate and withhold payment for its fuel and labor, and the like of that until the bills are paid. During that time the company has to pay its own labor and material bills. Usually the labor is paid twice a month. I have known that in order to keep the workmen we have to pay them daily, and weekly at least. It is customary to carry about 90-days' stock of coal. 30-days' stock of oil is about

all that is necessary to be carried. Unless you carry that much a railroad wreck may put the plant out of business. This is also true with pipe stock. You must carry a reasonable stock on hand as you may meet with accidents and it will be necessary to replace some of your mains. Also, extensions are sometimes put in on short notice and it is necessary that about a mile and a half, or something like that, of pipe be carried. It is customary to carry that much. The same consideration requires the company to keep on hand a stock of tools and supplies sufficient to operate from 30 to 60 days. In addition to those I have mentioned it is necessary to carry 30 to 60 days' stock of purifying materials. Also, pipe stock, all kinds of brass goods, fittings, supplies of gas ranges, water heaters, and other domestic and industrial fuel appliances, tools, steam fuel, coke, office stationery, and in addition a sum of money necessary to meet pay-rolls and freight, things that have to be met weekly, semi-monthly, or monthly, must be carried. The amount I have given here as working capital is necessary to operate a plant of the size here. I have included in the working capital the office rooms, work rooms, and office appliances. I have gone over and taken a sort of invoice of the company's property now actually employed, and substantially the items shown in the schedule are in actual use by the company. This amount, I am satisfied, is a very reasonable sum and would not be considered large. I have worked out very carefully, perhaps more carefully than any other one item, the amount of pipe under the paved streets and I have tabulated it, showing every block of pipe under paved streets.

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I compiled this report deliberately and altogether I put in about fourteen days. I spent five days my first trip here, three days my second trip, and I went over it several times at Denver. I also had several conversations with interested parties and in addition I had quite a number of people working for me. I have not included in the figures I have given anything for interest on the money invested before the plant was put in operation. In a plant of this size the capital in the original cost would be invested on an average of about a year before there would be any return. It might be nine months and it might take fifteen, but a year is a fair average, and it would be necessary to invest $631,000 for one year before there would be any return on it. The rate is usually 5% and the interest during this period would be $31,595.65. My company in Denver has sold bonds to a considerable extent and I know the cost there of getting money and from my connection with this business I know the cost in other places from hearing people talking and discussing it. I have assisted in selling some of the Denver plant's notes. Mr. Henry L. Doherty is president of that company and Mr. Frueauff is vice-president and general manager. I have never handled it with brokers direct. I know that the cost of procuring funds and financing an enterprise of the kind here runs from 15% to 20%. Part of that per cent is allowed for discount on bonds. They generally allow two or three per cent discount. I am also acquainted with the cost of pipe and have taken that into consideration as well as the cost of other machinery. It is customary when we buy appa-

ratus for plants to get quotations from different firms, figures and specifications and blue prints of their apparatus, and the cost of foundations and everything connected with it. The cost price is higher now than it has been in former years and the price of oil has been going up for the past five years, and coal for the
20 last two or three years. Also, the price of labor is increasing very rapidly. It has increased 50% in Denver in the last year and a half. The labor and material used in the manufacture and distribution of gas in the past five years has increased. It is much higher at present. The rise has been more in the last three years. On the whole I think both the water and coal gas departments of this plant are reasonably sufficient with the exception of the one machinery there that is called the springer gas set. That is the machine that was purchased and installed at the time the plant was moved to its present locality. At that time it was considered reasonably up-to-date and efficient. Since then they have invented improvements to water gas apparatus that are considered a great deal more efficient than that particular style, and later on the company here purchased a new one. They now manage to make all the water gas with the new machine and occasionally, however, they find it necessary to fall back on this springer machine to take care of the increased send-out due to something like a State Fair. It is simply an emergency or reserve set to be used in instances of that kind or if the other machine should break down, need a relining or anything of that kind. It is perfectly satisfactory as an emergency but I would not want to use it continuously. I think this location makes the cost of gas high on account of the chance you run of getting out of supplies. That is, the price is high as compared with other locations. That holds good principally on all supplies that enter into the manufacture of gas, principally coal. It is not quite so bad on the oil. You are a great distance from the pipe, coal, and oil markets and the cost has increased because you have to carry a large supply—larger than ordinary, and in addition you have to pay the cost of delivery here. The proportion of the number of services per mile of main here is a little better if anything than in the average town. It is much more scattered in Den-
21 ver in proportion to the population but the situation is much better in Madison, Wisc. It would not compare with New York City at all. There they have a consumer every fifteen or twenty feet on account of their high buildings. It is not as favorable in the heart of the city here as in Denver but taking the city as a whole I think it is a little more favorable here. The cost of manufacturing gas in a town like Lincoln situated in this locality, on account of the long distance from supplies, is necessarily larger than it is in other cities closer to lake freights on the Great Lakes and railroad centers, and to coal mines and iron supplies. Denver is better situated on account of the coal market. They get their coal much cheaper there than here, and also oil and there are extensive iron works at Pueblo, located 117 miles from Denver. There is also in connection with the work of this kind the expense of organizing the company, and also the cost of procuring a franchise and the right

to do business. There is considerable cost of that nature attached to every company and it doesn't run in proportion to the size of the company. It ordinarily requires the employment of time and labor and attorneys to draw ordinances and to get them through. The cost of organizing a company in a city of this size I estimate would be $24,950, which includes the cost of securing a franchise. The cost of obtaining the money at 20% is $149,512, and this, with the interest and other items, amounts in all to $904,572. This does not include the value of the franchise. A company is also required to expend money to promote the sales throughout the time to work up the patronage in order to get up to the present patronage of this company. Also, there is required advertising, which requires a considerable sum—more than is needed for most articles that are put on the market for sale. The cost per stove runs from five to fifteen dollars, depending on the town and locality, and in addition where there is a new gas plant it costs a great deal more to get it started. When people get educated to the gas it is not
22 quite so expensive. I have estimated what that item of cost is in Lincoln, and have shown the number of stoves in use. The schedules that I have gotten up are correct to my personal knowledge. I do not think there is any error in them. I know they are correct so far as extensions and prices are concerned. In Denver we have 210 miles of main and 26,000 services. Here there are only 62 miles of main with 5,597 services. There are more services per mile of main in Denver than there are in Lincoln. There are 120 per mile there and it is less than 90 here. As a rule, where a company is as old as this one and has been in the business as long they have more services than they have here, and they are not so scattered. This town itself is built up pretty well. The small number of services per mile of main requires a great deal more mains to obtain a certain number of customers per mile.

MICHEAL E. MALONE, recalled for further cross-examination, testified on behalf of the complainant as follows, pages 179 to 201, printed transcript:

Cross-examination by Mr. Stewart:

My valuation of the coal and water gas apparatus was of what it would cost the company to replace them in Lincoln and not what they originally cost them. On the springer water gas set the amount of money estimated represents the value of an up-to-date machine that would make the amount of gas that that machine does. I understand that it cost over $9,000 when new but I could buy one now for $6,700 that would make as much gas. I would not buy one like that now and would give but little for that kind of a machine. I have done the same thing all the way through—figured on new and up-to-date apparatus. On the 2-inch pipe I figured 25¢ a foot approximately, which is 13¢ for the pipe and 12¢ for excavation, back filling, tamping, and watering. The next size is 4-inch pipe, and that figures about $3,150 a mile. I think the pipe cost about $30 a ton which is about 55¢ a foot and the labor cost is $1.75

for ten hours. The 6-inch pipe is $4,660 a mile, and the
23 pipe costs $30.85 a ton. These quotations were gotton especially for this location. The balance was for labor and back filling and runs about 46¢ per foot. These figures include the lead, yarn, wood to melt your material, and coke. The 6-inch pipe is $30 a ton or 55¢ a foot. The cost of stringing is 1¢ a foot; of digging and back filling, about 15¢, varying from 12¢ to 18¢; laying and handling is 5¢; lead and yarn, 7¢; hauling wood, coal, coke, and different fuels used, 7¢. This makes it 87¢. I took the back filling at $1.15, making it 90¢ instead of 87¢. The labor cost is figured at $1.75. They pay that for eight hours in Denver. I don't know what they pay here. On the paved streets I took the same figures as on the dirt streets plus the expense of taking up and putting down the paving. On the wooden block paving I figured $1 a square yard to tear up and replace the old concrete base. I got this from actual figures of cost furnished me by the superintendent here. That is with the trench 2½ ft. wide at the top, for the 6-inch pipe. On the two-course brick pavement it requires 1/6 of a yard of sand to cover one square yard of surface. This at $1 a yard would make that item 16¢. It takes about 100 brick on a two-course pavement. I allowed only 50 because I assumed that you could use 50 brick out of the two-courses taken up. The 50 brick at $18 a thousand would amount to 90¢. The labor would be 50¢, which makes the total of $1.56 per square yard. I have a total of 15,375 square yards of two-course brick pavement over the mains on a total of 61,500 lineal feet. On the asphalt pavement the cost of removing the concrete is $1 a square yard. That would have to be let by contract. $2.50 for the asphalt makes a total of $3.50 for the cost of re-surfacing trenches 2 ft. wide. There were 10,922 square yards. The total of the three items of taking up and replacing pavement is $63,378. The balance of the cost of mains in the paved streets is

the ordinary cost of excavating, supplying the pipe, back
24 filling, yarn, lead, and the other little items. The service pipes in dirt streets cost $13.50 each. That is on the average length of service required in Lincoln. The pipe costs 6⅔¢ per foot; the excavating and back filling costs about 15¢ or 16¢. It is a little more than on a main because you have the curb stone and you have to punch a hole through the front cellar wall and must also avoid trees and bushes. 16¢ is generally what we figure. The labor of stringing is 1¢. The labor of laying and handling is 3¢; this makes 26⅔¢ per running foot. And then it costs $1 for the permit. The average length of service pipe in Denver is 67 ft. It would run about 70 or 75 ft. here. I don't remember just what distance I did take. I find that I have here 50 ft. to the service. The streets are 120 ft., 100 ft., 80 ft., and 60 ft. On the services under wooden block pavement the same items would enter into the cost and that would enter into the cost of the mains under wooden block pavement. The rate per service under wooden block pavement is $19.66 as against $16.50. The difference is the cost. Multiply 13.50 by 854 services and the difference between that and the other amount

would be the cost of replacing the two-course brick pavement on services.

In the cost of meters I figured on the ordinary dry gas meter which is about the only style in vogue. There are a dozen or more manufacturing this meter in the United States and they all run about the same price. These prices I have given are the wholesale price. There are cheaper prices but I doubt if they can be bought any cheaper here. The figures given under the heading, Cost of Organizing were secured from different sources, some in Denver, some in Lincoln, and for some I had to make special inquiry. The attorney's fees are Denver prices. I have never had any actual experience in organizing a company except in a very minor degree. I don't pretent to have much actual personal knowledge on that. I did not mean to say that this total sum, $24,950 included the cost of getting a franchise. When I was asked about that I
25 thought they were referring to attorney's fees. I didn't mean going into city councils and lobbying or anything like that. I know of one case where it cost $300,000 to get a franchise. You can't get them in Colorado at this price but I don't know anything about this company. The item, $67,884.09, contingent expenses, is 12½% on the original cost of the plant. It reads 2½% and should be 12½%. That is to cover possible contingencies that might involve an expense during the progress of the work.

I have never had anything to do with the handling and managing of finances in the construction of a plant nor in raising the capital. I have helped here and there in getting the charter or franchise but not very much. I have had experience in regard to items like contingent expenses. I have been in touch daily for ten or twelve years. No engineer would put in a service without putting in an estimate of the cost in advance. No building or apparatus is put in without first having to have a requisition gotton out before the requisition on the purchasing agent is allowed to go through. I don't know what the actual contingent expenses were in the construction of the Lincoln plant but I know what it would amount to in the replacing of that plant. You might come out ahead or behind. It varies. Lots of times you come out behind regardless of how high you make it. I have in here an item of interest on money invested in the construction of a plant for a year and I mean by that that the entire cost of the plant is invested for a whole year without any return. It is not customary to lay some mains and service pipes so that they could begin to sell gas. They generally complete their plant and put in a reasonable number of miles. I wouldn't think that they would start here until they had 40 miles completed. I think it would take about a year to do that. They have almost two years on their plant at Salt Lake City, but in order to get enough miles of mains down to afford to start the plant it would take a year. It might be done in nine months and it
26 might take fifteen months. You wouldn't have to have the whole $631,000 the whole year but you would have to get your money. You would have to put the money into it as required. You would first have to borrow it because you wouldn't start the

plant unless you knew where you were going to get your money. It would be a risk not to have your money idle. I would be very careful to see that I could put my hands on it when I wanted it. It is customary to do that also in street improvements and in municipalities. You couldn't very well draw interest on it unless you put it in the bank for a year before you drew it out. I don't see any way out of it unless you could loan it for a short time. I have seen $5000,000 laid idle in the county treasurer's office for upwards of three years. I would borrrow the $59,146 of working capital a year in advance. You have to have your money all in advance. It is hard to get a second loan. It is safer to get it all in advance. I think that is the way it is ordinarily done. Lots of times you have $50,000 or $60,000 to go on that they allow for accidents. You might kill a man and for law-suits and lots of things that might enter into the matter. It is the best way to have all of your money on hand before you start the work—even the working capital.

It is a fact that they sold stoves in Salt Lake City for over a year and had their full force of supervisors at work and had a carload put in residences and connected up and had their office room running full force for over a year before they commenced to sell the gas. You would hardly need 3,000 tons of coal on hand all that year but you would need it when you got to making gas. This 20% for the cost of obtaining the money, that is what has to be paid in case you don't have any money to build the plant with and are going to borrow all of it. He might have other security to put up before the plant was completed but he wouldn't put them up. The same thing is done with street railways and telephone companies.

Redirect examination by Mr. Rose:

27 There is considerable inevitable depreciation every year of the property entering into a gas plant. This is due to natural deterioration and accidents from every cause. It is also due to the demands upon the plant out-growing the capacity of the equipment originally installed. I know of one instance in particular where the manager of the gas company insisted on having a new purifying house, in fact, everything but the generators and benches re-built because they were too small. He asked for 16-inch pipe connections with different apparatus. At that time they were 8-inch and he wanted to jump them up 16-inches. He knew it would cost a good deal of money and cause a loss to tear it out. They put in 12-inch and inside of six years they had to tear them out and it wasn't over a month and a half and then they went to 18-inch.

There is no certain way in which engineers can anticipate future demands on a public utility plant of this character. It is all guess work and you have to be a good guesser. In a town like Lincoln was a few years ago, had there been an effort to anticipate the future demands upon this plant it would have been necessary to increase the capacity requirements from 50% to 100%. If you anticipate increase regardless of depending on good times and a profitable

business you may put your plant out of business. There is no way to get rates to double the capitalization and then wait for development. I don't know of anybody willing to invest money that way. The revenues would not be sufficient to pay the interest on the invested capital for such excessive requirements. This same principle more than holds good in respect to the laying of mains. I have known of mains put down in Denver that were expected to take care of a certain district that had to be taken up in less than eighteen months. That would be true in any city where the center was shifting. That was in a paved street, too. These instances are incidental hazards of this business and they occur quite frequently,

28 and are a necessary consequence of conducting plants of this kind. In my opinion the item of depreciation is a necessary item in the maintenance of a plant of this kind, in addition to, and outside of the item of ordinary repairs and maintenance. It is necessary to allow a sum for depreciation outside of what is actually expended in ordinary repairs to maintain the integrity of the plant. The depreciation account should be entirely separate from the repair and maintenance account. The item of depreciation would apply to the larger appliances such as holders and machinery and water gas sets and coal gas benches. All of them are subjected to more or less hazard and to danger from explosions. Steam boilers in constant operation for 24 hours a day at the pressure they are required to stand in a plant of this kind would have an ordinary life of from seven to eight or maybe ten years, but I have known them to be thrown out in three years in a larger plant, not because of depreciation but because they were too small. They put in larger boilers taking up less space. I have also contended that 5% should be allowed for depreciation outside of the items of repair and maintenance. I have heard lots of engineers say it was too small but I think that would cover it in an ordinary gas plant. I think people who invest their capital in a utility of this kind are entitled to have the plant kept up to its efficiency so that the replacement for new material *material* would represent the capital upon which the company was entitled to derive its revenues. If it was not kept up they would be justified in censuring the management.

I have gone over the system of classification used by this company in the manufacturing end of it. I did not pay much attention to the financial end. I watched the classifications for the cost of manufacturing and distribution pretty closely. We used the identical system at Denver. All of the companies in the McMillan syndicate use the same system of reports. I think this system of distributing the manufacturing cost and all of the items of manufacturing is just and correct. I think it is an ideal and good system.

It is the best system in the country. I think this particular

29 style of classification is the most accurate and just. No other system for this industry would approach it in accuracy. I have heard of one that expects to be better but it is not yet in actual operation.

Recross-examination by Mr. Stewart:

The McMillan syndicate owns and controls a number of gas plants. Mr. Doherty is president of the Denver company. The Denver company don't belong to the syndicate. I am superintendent of the gas department of the Denver company. We pay 6¢ a gallon for oil there and we pay $4 per ton for Colorado coal. I think we pay more for oil there than they do here and less for coal. The kind of gas we make in the greater quantity depends on the condition of our apparatus. Sometimes we make more water gas and sometimes more coal gas. We are making very little water gas now. At the present our annual output amounts to about half-and-half but ordinarily we make more coal gas. We are able to make gas cheaper in Denver because we get the material at a lower rate. The labor cost is about the same. We also make a greater quantity there which would, even at the same price for material, make the cost less. I have seen the cost of gas in Denver go upward to 50¢ a thousand. It varies. It is in the neighborhood of 50¢ per thousand now. That is just the cost of manufacturing. The distribution cost will run from 30¢ to 35¢. The Denver plant and this plant are run under the same system of accounts and they are under the same general management and the president of that company is the president of this company. Even if the repairs to the worn out pumps and broken mains and apparatus are taken care of in the general operating expense account there would still have to be a further fund provided to take care of natural depreciation. Even if you keep your plant up to a reasonable degree of efficiency you have still got to provide a fund to take care of depreciation. In one of these we had occasion to put down 1,200 feet of 2-inch main in boxes covered with pitch to protect it from electrolysis. In three months half of it was eaten out and they had to be replaced and the other half we are going to take out now and put it through a bridge to get away from electrolysis. This was done from funds in the operating expenses account. If we charged up the replacements to operating expenses we wouldn't have enough receipts left to take care of it at the time. Even though the funds set aside for operating expenses are sufficient to take care of repairs as they go along you still need another fund to take care of the depreciation. You can't take care of it entirely through the operating expense. If you did you would keep on repairing until the plant falls down and after a number of years you would have to tear it down and put up a new one. There is a limit on repairs on everything. Of course, when you pay for a replacement of a particular part out of the operating expenses you don't need a depreciation fund to take — of that particular part. If you set aside 70¢ on every thousand feet of gas for operating expenses and to take care of the necessary repairs and replacements that would be just the same as to set aside 60¢ for operating expenses and 10¢ for general depreciation, but you would have to take care that the repairs didn't eat up the entire 70¢. Theoretically that is an adequate provision. I have known gas mains to last eighteen or twenty

years and have known them to go out in seven months. The average life of wrought iron mains is eight to ten years, taking into consideration all sorts of depreciation. It depends somewhat on the nature of the soil. I do not know what the soil is here and what affect it has on wrought iron pipes. Cast iron mains will last from sixteen to twenty years and maybe twenty-five years; depending on the weight and grade. 4-inch pipe that runs 20 pounds to a foot and water pipe running 26 pounds to a foot and pipe running 30 pounds to a foot—those kinds will last longer. I think the standard pipe that they have here would run about 30 pounds to the foot for 4-inch pipe. I have read some articles in tech-
31 nical journals on the life of cast iron gas mains but they are not always reliable. The depreciation is 5% on the cost of the article which is put away. The history of a gas plant for 25 years might show what was the necessary expense for depreciation. I have known of cases where it wouldn't. Lots of plants today are selling less gas than they did 25 years ago and that would have a bearing on the depreciation. It would vary in almost every town. If a person who was thoroughly acquainted with the operation of the gas plant for 25 years and was capable of judging he would be better qualified to judge what was necessary to be charged for depreciation than some outsider. I never heard until within the last week that anyone ever thought that anything less than 5% was adequate for depreciation. I have heard lately that 4% was sufficient. It usually runs as high as 10%. I would rather have for depreciation 5% of the value of the plant than 5% on the receipts. The 5% of the value is carried on each year and they spend it if they have any replacements to make. Lots of times they have to spend it every year. I never knew of a company where the gross receipts were greater than the capital unless it was the Standard Oil.

Redirect examination by Mr. Rose:

The details of the $24,000 organization expenses is on page 8 of my report. The item there for the value of the franchise is simply left blank. My details did not show that anything was paid for the franchise. I have there for filing articles of incorporation with the Secretary of State at $250. I understood the filing fee in this state was 50¢ a thousand. With an authorized capital stock of two and a quarter millions the filing fee would amount to $1,125, and in that respect my estimate of the item of organization is very much too low. The usual and ordinary repairs and maintenance charges are paid daily by companies of this sort, and this 5% depreciation which I have mentioned is required to maintain the plant over and
32 above the item of ordinary repairs and maintenance. It has always been provided for in every company that I have ever worked for. This 5% is on the actual cost of the buildings of the plant and any other portion and not on the receipts. It is figured on the actual replacement cost of the manufacturing and distribution plant. The figures I gave on the old springer water gas set were less

than what it would cost to replace it, and were less than the original cost. On the other items in my estimate the figures give what are the sums necessary to replace equipment of the same identical type and to replace the identical plant. The springer set is the only exception. I figured 2-inch wrought iron mains foot for foot wherever the company has them and the same is true of cast iron mains and buildings and sheds and everything that the company now has.

Cross-examination by Mr. Stewart:

There have been no material changes in meters in the last ten or twenty years. The type is identically the same as it has been for 50 years. There has been a little improvement here and there. A difference in material perhaps and possibly an extra rivet is about the only change. I allow 5% depreciation on the actual cost of the plant. That would not apply to the real estate. That would enhance if anything. The market has advanced on some of the other apparatus required in the gas plant and in making up this schedule I advanced the price over what it cost from ten to twenty per cent, but I would still allow 5% depreciation on it. Even if a machine put in a year ago had increased 10% in value I would still allow the 5% depreciation. It might depreciate 50% during the year. It is an average condition. There are always contingencies that might arise that would be bound to keep the actual percentage at 5% depreciation. If natural gas should come in here this plant would be on the bum right away and you would have to sell it for junk. There are two or three towns in Kansas where that has happened. That is one of the greatest
33 hazards and must be provided against. Some put depreciation as high as 15%. Prof. Bemis, one of the greatest authorities in the United States, has put it as high as 15%. We have got it right in Denver. I would capitalize this company for $2,200,000 if I thought that I was going to require that amount of money to build this plant and would need it inside of a year or eighteen months. I would not capitalize it for more than what my plant would amount to in the course of a year *to* two. I would build wisely, or aim to at least run three or four years. You cannot always guess or anticipate. Prof. Bemis makes an allowance of 15% for interest and depreciation—10% is for depreciation. He divided it in that way. That is found in one of his original works. I understand he has repudiated some of those things and he has got it at a lower figure but still claims 5%. I do not think that is based on receipts from consumers.

Redirect examination by Mr. Rose:

Equipment will always depreciate. Even though of greater value it cannot be sold second-hand. Depreciation from wearing out is a physical change. If would depreciate even if you operated it only one day. It would be just as good but you couldn't get anywhere near as much for it. I would think 75% would be right. Appreciation and depreciation are based upon entirely different conditions. The fact that the price of material had fluctuated would not affect the fact that the plant had depreciated and would affect physical condition.

34 WILLIAM BRADFORD, being first duly sworn, testified on behalf of the complainant as follows, pages 93 to 97, printed transcript:

Direct examination by Mr. Rose:

I am an engineer and I graduated from the electrical engineering course at the University of Wisconsin, with additional work in chemistry. The electrical engineering course includes work in mechanical engineering, steam engineering, and work of that kind. I live in Lincoln at the present time. I am superintendent of the manufacturing department of the gas company. The year following my graduation at Wisconsin I was at the University as an instructor in experimental engineering. After leaving Wisconsin I went to Denver with the Denver Gas & Electric Light Company, and spent three months there working at the gas plant and then I came here and spent nine months as gas engineer at the plant until last July, when I took this position as superintendent of the manufacture. My total experience here is two years and I have had immediate and direct charge of the manufacturing plant at Lincoln, and I am acquainted with the processes in use here. Compared with the same size plant under local conditions I think the manufacturing plant of this company here in Lincoln is an efficient plant. We get as nearly the maximum gas out of the product used in the manufacture at as low a cost as could be expected under conditions here. I have access to the books of the company. I have made and assisted to make an examination to classify the consumers of this plant according to the amount of gas consumed per meter, and I probably spent four or five days on that. I worked a good deal with Mr. Warner, the secretary. He lives in Lincoln, also. The actual work of getting the summaries off the books was done by the regular bookkeepers and some of the other employees about the company. There was a tabulation compiled by Mr. Warner, myself, and others giving the classifications. This tabulation is Exhibit A. Exhibit B is the form in which we worked on it. The classifications contained

35 in this tabulation are correct as far as my knowledge and examination extends. The general summary was gotton into this form by Mr. Honeywell from the data which had been gathered together. I am familiar with the station cost of the manufacture of gas of the plaintiff company for the year ending December 31, 1906. The data showing the cost of the manufacture from time to time is furnished to the accountants from various sources. The cost of the material is taken from the general books and compiled in one general report. The manufacturing data is furnished by myself. In addition there is the distribution cost and the collection cost and the general cost. I have done over the reports to ascertain from actual experience what it cost the company for the manufacture of gas per thousand cubic feet for the year ending December 31, 1906. The total cost for that year was 82.68¢ per thousand cubic feet. The total manufacturing cost, net, was 47.89¢ per thousand cubic feet. That is exclusive of the cost of distribution without any interest on the cost of the plant or administration costs of

any character or collection. It is just the material and labor. It does not include the cost of promoting the business. The manufacturing cost of coal gas was 54.26¢ per thousand feet; of water gas, 41.95¢ per thousand feet. By employing both systems in the same plant it lowers the cost because from the coal gas we can produce our own coke for the water gas cheaper than it can be secured by buying it on the open market. Also, to depend on oil or coal alone is not so good as this since in this way we have both to fall back on. With the regulations we have and the standard of quality the cost on the general average of using both systems is about the same. The quality required here is 625 B. T. U. per thousand cubic feet of gas, and a candle power of 18. A B. T. U. is the British thermal unit. It is the measure of heat value. It is the amount of heat required to raise one pound of water one degree, Fahrenheit. A candle
36 power is the light given out by a standard sperm candle. From my personal knowledge of the cost of manufacture these costs as I have given them are correct.

37 B. C. ADAMS, being first duly sworn, testified on behalf of the complainant as follows, pages 97 to 101, printed transcript:

Direct examination by Mr. Rose:

I am in the gas and electric light business. I live in Lincoln and am employed by the Lincoln Gas & Electric Light Company as general superintendent. I graduated from the University of Wisconsin in 1903 and worked for three years after that with the Madison Gas & Electric Co. at Madison, Wisc. In July of 1906 I was transferred to Lincoln and have been with this company since. I am familiar with the manufacture of gas. I have, due to my position, been compelled to keep in touch with the reports of the manufacturing and distribution of gas from month to month. I have made no further examination than that. It has been my business to run the manufacturing end of it as well as the distribution. I am thoroughly acquainted with the machinery and equipment of the Lincoln plant. In my opinion the efficiency of this plant for economical manufacture and distribution of gas in view of the size of the town and the plant is first class. The quality standard of gas in Lincoln is 625 heat units and 18 candle power per thousand cubic feet. That is high as compared with the standards ordinarily in general use in cities of this class, and is higher than the standard in common and general use by companies situated as this one is. That standard increases the cost of the manufacture of gas. Our distance from the market of all of the materials that we use increases the cost of the manufacture of gas because of the freight we have to pay on the materials. In my opinion any eastern town is much more compact than Lincoln. You cannot get services to the pipe laid at the intersections of crossings. In the last year and a half we have lost between 15% and 20% of gas between the station meter and the consumers' meters. That is due to the fact that the pipes

will leak through the joints. The gas is a volatile substance
38 and hard to hold. It is absolutely impossible to construct a system at a reasonable cost that will not have leaks. The gas unaccounted for in the year 1906 ending December 31st was 16.56% of the gas manufactured. The average cost for that year of the mixed gas in the holder was 47.89¢. That is just the manufactured gas and does not include anything for distribution or interest on capital or collecting or leakage or stolen or lost gas from any cause. The cost of the coal gas manufactured that year was 54.26¢ per thousand feet. The water gas cost 41.95¢ per thousand cubic feet. The cost of manufacturing and distribution exclusive of any interest on capital was 82.68¢. As far as I know these costs are absolutely correct. These reports are made up by the bookkeepers but I know where we spend the money and approximately how much it should cost per thousand each month. The expense of manufacture of gas has increased during the past two or three years in Lincoln because of the increased cost of material and labor. The cost of the material for the manufacture and distribution has increased all the way from ten to twenty per cent. The trend of the market in all of these supplies that we require has been on the increase for the past five years. I was connected with the construction of the Madison plant for a year and a half and have been in actual charge of the construction of this plant since July of last year. I helped Mr. Malone in his items of construction shown in his testimony. I went over the items of the mains and equipment and figured the necessary cost in labor and material and such things as that, and I have been over it with him to see that there were no discrepancies. In my opinion the actual cost of the replacement of the Lincoln property are the figures given by Mr. Malone. I know his standing as an expert and gas engineer. It is good, and he is a practical man.

B. C. ADAMS, being recalled for further examination, testified on behalf of the complainant as follows, pages 465 to 468, printed transcript:

39 Direct examination by Mr. Rose:

I supervise and superintend the work of construction in the streets and am familiar with the improvements that are made and with what the practical requirements for trenches and the like of that are. In actual experience a trench 18 inches wide must be dug to lay a 2-inch main in dirt. If the trench must be put under asphalt pavement the width required is 24 inches. If you open a brick pavement you must make a trench 26 inches wide. For a 4-inch main the trench in dirt must be 18 inches wide, and for asphalt pavement, 24 inches wide, and for brick, 26 inches. A 6-inch main in dirt must have a trench 20 inches wide; asphalt, 26 inches wide; brick, 28 inches wide. For an 8-inch main the trench in dirt must be 24 inches wide; asphalt, 30 inches; brick, 32 inches. The trench for 8-inch pipe must be 4 ft. 8 in. deep; for a 10-inch

main we dig 24 in. wide in dirt; 30 inches in asphalt; and a trench 32 in. wide in brick pavement, and they are 4 ft. 10 in. deep on the average. 12-inch iron pipe require 30-inch trenches in dirt; 36 in. in asphalt; and 38 in. in brick, and the average depth is 5 ft. A 16-inch main requires a 30-inch trench in dirt; 36 in. in asphalt; and 38 in. in brick, and the average depth is 5 ft. 4 in. 18-in. mains require 38 inches in dirt; 42 in. in asphalt; and 44 in. in brick. The average depth is 5 ft. 6 in. 20-in. mains require 36 in. in dirt; 42 in. in asphalt; and 44 in. in brick. The average depth is 5 ft. 8 in. Our 1¼-in. service requires an 18-inch dirt; 24 in. in asphalt; 26 in. in brick. The average depth is 3 ft. 6 in. In trenches this deep in order to make connections workmen have to go in and work with tools and a workman cannot work with efficiency and profit in a trench only 12 in. wide. I give the orders for this work. We have tunneled and bored in streets but we do it very seldom. We consider it bad practice because when you tunnel in this soil it is almost impossible to make it straight and the tool will twist and turn, and go upward, and the pipe after
40 going in follows the grade left by the tool and will not drain properly. It reduces its capacity by collecting moisture in the low portions and reduces the cross-section of the pipe available for the passage of gas. There is wooden block pavement here in Lincoln and we have been called upon to make openings in it and we have gas mains under them. I do not know whether or not these blocks have concrete under them. It has been reported to me that there is concrete under them. It is poor practice and there is no economy where the capacity of the main of any section is deficient to leave the old main there and attempt to re-enforce the service by digging another trench and laying another pipe parallel to it of the same or smaller size because it is cheaper to take up the smaller pipe and put in a larger pipe in its place. That figures in the saving of the cost of pipe and in leaking the gas mains after being laid. If you have two pipe- you have to take care of two instead of one and the old main can be used. It can be taken out and used in sections farther from the center of distribution where its size will be equal to the demand upon it.

Cross-examination by Mr. Stewart:

There is some wooden block pavement around the University grounds on the north side. There is a block there and there is a block down on F street west of 11th. What there is of it is so rough that a man has to hang on with both hands to keep his seat in a buggy.

41 HOMER HONEYWELL, being first duly sworn, testified on behalf of the complainant as follows, pages 101 to 139, printed transcript:

Direct examination by Mr. Rose:

I live in Lincoln and am general manager for the Lincoln Gas & Electric Light Co. I am 35 years of age and have been in the

gas business 17 years the first day of October. I have done nothing else for a livelihood since I left school. It is the only employment I have had. All of the time has been in the employ of the Lincoln plant here and I am familiar with the properties of this gas company. I have been general manager since February 1, 1904. Prior to that time I was bookkeeper, collector, and general roustabout. When I first went into the employ of this company, D. E. Thompson was the active head and J. K. Honeywell was the practical manager and head of the office. I am his son. I am familiar with the books and accounts of this company, and all of the employees of this company are under my immediate supervision and control. I have gone through all of the books and accounts to ascertain the actual investment made by the company in its properties here used in the manufacture and distribution of gas alone, and I have compiled some tabulations to show the cost of the properties. The books of the company are voluminous. This examination was made in the offices of the company and the books that I had access to are here in the offices open to the inspection of the solicitor for the defendants in this case. It is not practicable or possible for the court to go over all of the volumes of records that I have examined. I have been in touch with the reports made up monthly of the cost of manufacturing and distributing gas for the years 1906 and 1907, and have looked over those accounts and also the early books that were gotten up, and also the classification or summary. I did not do all the actual work myself but I did part of it and it was under my charge. It is impossible for one man to go through all of
42 these and do all of the work within reasonable bounds and get it out. It is a work of great magnitude to prepare these summaries. I think I had eight men working on the slips we got out. Some of them worked as many as twelve days. I have worked on it altogether, not devoting all my time, about six weeks. I compiled summaries annually. Exhibit C is a correct resume of the business of the gas department for the year ending December 31, 1906. Exhibit D is a correct report and resume of the business done in the gas department for the year ending June 30, 1907. We have competition in the lighting business from electricity, coal oil, gasolene plants. and gasolene lamps. The Lincoln Light, Heat & Power Co. is competing with us in the electric business and the city is furnishing the street lighting. The city does not do any commercial lighting. The city is now lighting their engine houses, etc., where heretofore they have had gas lighting. There is not a day but what electricity comes in direct competition with gas for illumination purposes. The companies operating in the electric field have not been, and are not at this time, subject to any occupation tax such as is imposed by one of the ordinances against the gas company. Gas is sold for both lighting and fuel. We have to compete with hard coal, soft coal, wood, gasolene, and coal oil stoves. I never heard of any of the dealers in these commodities having to submit to any occupation tax of 2½% or any other sum. This company was organized in March, 1872. The original company was the Lincoln Gas Company. They continued to do business until October, 1890, I think. At that time they purchased

an electric plant and ran both gas and electricity under the name of the Lincoln Gas Company until June, 1900, when the name was changed to the Lincoln Gas & Electric Light Company. There was a new company formed. The Lincoln Gas & Electric Light Company purchased the properties from the Lincoln Gas & Electric Company. The Lincoln Gas & Electric Company got their franchise
from the Lincoln Gas Company, and the franchise, and the
43 books and accounts, and everything were transferred right
through the three corporations. I have served under the administration of each of these companies. The books of the original company, the Lincoln Gas and Electric Company, are at the office down stairs. The books that I have gone over were the books kept from the inception of their organization of the original company, up to June 30, 1907. Something over $603,000 has been expended for the acquisition of the company's properties which they now hold in Lincoln for the manufacture and distribution of gas. That sum does not include anything for discount on bonds. It does include organization expenses. I do not remember the amount but they are quite modest. I don't think it includes anything for the value of the franchise. I haven't seen anything.

I can produce the schedule of the items that make up the $603,000. They are itemized by years. Real estate, apparatus, and other portions of the structural organization entering into the construction of the manufacturing and distributing plants at this time is greater than it was at the time this money was put in. It is of greater value now than when it was bought. The Lincoln Gas and Electric Company purchased this property in May, 1900, and that was the first change in the organization since 1873. The Lincoln Gas and Electric Light Company took the property over on December 19, 1901. I do not know on what terms. The Gas & Electric Company took over $333,000 of bonds on the property and took $1,000,000 of stock for which they paid $40 a share, or $400,000. In round numbers the company paid last year for taxes, $10,000. For the year ending just now the revenues from our gas department are considerably in excess of the revenues of the electric department. Two-thirds of the value of the plant is in the gas department and we apportion two-thirds of the taxes to the gas department, which would be $6,600 and some odd dollars. Our bond interest last year was $59,000 in round numbers.
It would be proper to charge two-thirds of that to the gas de-
44 partment. It is not divided, however, like taxes. The correct amount of bonds outstanding is approximately $1,129,-
600. The $333,000 of these bonds draw 6% and the balance, 5%. I do not know what the holders of these bonds paid for them or whether they were sold in the market for actual cash. Some of them were issued during my administration. We issued them for extensions and improvements to our property. Those bonds that have been issued since my time have been paid for with money. I do not know how much the company got for each $1,000 bond outstanding for those issued. During my administration we got 100% on the dollar. When we issued $10,000 worth of bonds that is what we got back for them. I do not know what they sold for but I know that is

what we got. They have not been marketable and we have not been able to sell them for the last two years, and we could not get any money for them except at a ruinous rate of discount. We have had emergencies in the last two years that have required the borrowing of funds. There was one stock option where we tried to borrow $100,000. We were able to get it but it had to be taken up by some of the officers interested in our company. We issued notes bearing 6% interest payable semi-annually, and they carried an option to buy stock at 10¢ on the dollar for $1,000,000. We couldn't float it here and it had to be taken up by some of the officers in order to carry on business. At the present time we are trying to float a loan of $1,000,000. We have made the interest on the notes and they run for two years at 7%, payable semi-annually, and have put up as collateral for those notes $200,000 in bonds, and we haven't been able to sell those notes and I have an offer of 2% to anybody who can sell them in addition to the 7%. I have not been able to dispose of any of them at that rate. We have tried Chicago, Kansas City, Denver, New York, Omaha, and any place where we thought they had money. There has been no time in the past three years when the 7% notes of the company would command par at the market, and there has been no time during my administration when the 5% bonds of the company would command par or any figure within 20% of par. That is the reason that we issued the notes at the present time. We thought the notes would go better than the bonds. Nobody wanted the bonds. We are offering a collateral, par value of $200,000, in order to get a $100,000 loan and our 7% notes with 2% commission are going begging at that offer.

I am interested in other gas plants. I think we have here an efficient manufacturing and distributing system and I think it is an economical one. For the year ending December 31, 1906 the cost of the manufacturing and distribution per thousand feet of gas without allowing anything for interest on the investment was 82.86¢ per thousand cubic feet. The net rate received from the consumer was $1.20. The net profit applicable to interest and depreciation was $58,729.02. If we had in effect a rate of $1 with a 2½% occupation tax on the same business and the same cost we would have had $24,154.11 to apply on interest on the investment and depreciation. We sold that year 153,663,600 cubic feet of gas for which we received $184,395.02. In my opinion 10% on the entire value of the property is a fair and reasonable allowance for depreciation each year. Engineers usually count 10%. Assuming a plant valued approximately at $900,000 if we had worked at the net rate the total net revenue would have lacked $66,000 of making up the item of depreciation, and would have lacked about $30,000 of making a return of 6% on the estimate of Mr. Malone's of the value of the capital invested, $900,000. The net earnings in the last year at the present rate of income would not have been sufficient to enable the company to save anything at the legal rate of interest on the invested capital of $900,000. I could not have maintained the company solvent if I had had a rate last year of $1 and I could not at the present time. There is no possible way that we

could sell gas and make gas at a rate of $1 and get a return.
46 For the year ending June 30, 1907, as shown in Exhibit D, the net cost to the company for the manufacture and distribution of gas was 82.31¢ per thousand cubic feet. That would not allow any item for earnings of any character on the invested capital or depreciation. The net profit per thousand cubic feet before allowing for earning on invested capital and depreciation was 38.61¢. That was during a portion of the time that this ordinance would have been effective had not the injunction been issued in this case. If the occupation tax ordinance of 2½% on the gross receipts had been in force and the net rate of $1 prescribed by the ordinance had been in force the company's net profit to be applied on depreciation would have been 16.41¢ per thousand cubic feet. During that year the net average received was $1.2091 per thousand cubic feet of gas. The net profits during that year for the sale of gas before allowing for the item of depreciation and interest on the invested capital were $54,646.35. That, in my opinion, is not sufficient to maintain the plant and keep it up and does not allow any return on the investment. From these items is eliminated entirely the item of bond interest.

Lincoln is not advantageously situated for the manufacture of cheap gas. We are too far away from all of the materials that enter into it and then, too, we have a scattered town with small population, wide streets that make long services, and big stretches of main across it. And parts of the town are changing. The residential part is changing. The lots were laid out to face north and south and they are now building on the back end of the lots and facing the houses east and west which requires practically double investment along there. In the distribution system this increases the leakage and it requires more capital. I am familiar with the methods upon which the classification of consumers in Exhibits C and D are based. For the year ending December 31, 1906, we had 101 consumers or meters that used less than 1,000 cubic feet of gas per year. In order
47 for the company to come out even and get the whole cost of service the minimum bill ought to be $2 a month. If it is not that much that individual consumer does not pay the actual cost of his service with the rate at $1.20. With the rate fixed at $1 64.29% of our consumers would get their service on the flat rate system prescribed by the ordinance at less than the actual cost to the company of furnishing service without allowing anything in the cost for interest on the investment and for depreciation. 20% of our consumers at the present time bring the company one-half of its total revenue, and 80%, smaller consumers, bring the balance. On the ordinance system of level meter charges the losses on the small consumers are required to be made good by the larger and profitable consumers. $9 per year as meter rent is necessary to defray the actual cost of maintaining the meter according to the system of distribution which I think is correct. This is 75¢ per month. 25¢ per month rental permitted by the ordinance is insufficient to defray the actual cost to the company of maintaining the meter. I tabulated and classified the consumers according to the amount consumed. A level charge would reduce the unprofitable consumers just that much

more. It would make them just that much more unprofitable. It would take away some of the profit from our bigger consumers that are now helping to carry the others. You could not by a level or by a straight meter rate, reduce the rates enough to everybody to get the industrial business and get everybody to use all the gas they could. We carry a larger consumer at a less rate and still make a profit, and then we can handle the business of the small consumer. The larger consumer does not occasion so much expense. The charge that we are required to make to all persons on a level meter system, in my opinion, is such as would be prohibitive of its use by a large consumer for industrial purposes. If we were permitted to classify the rates according to consumers we
48 could then take on more profitable business than we now have. We are unable to take on that business at the present time because we must serve one and all at the same rate per thousand no matter what expense they occasion.

We have probably 50 industrial consumers in Lincoln. The two largest ones are newspaper offices. They run linotypes and melt lead and one thing and another and they have got to have the gas. We are unable under this system to take on the business of the big hotels and restaurants. They use coal ranges and charcoal burners in place of gas. If we were allowed to make a reasonable service charge or meter rental proportioned to the demand upon our plant which these large consumers would have we could after taking on their business and getting their proportion of the fixed charges or rental, make a profit at any sum that happened to be above the station charge. Because we are restricted in exactions of rentals to 25¢ and restricted in charges to small unprofitable consumers to a level meter rate the larger consumers have to pay more than what their just proportion of the expense would justify,—more than they ought to, in order to carry along the little ones. Somebody has got to pay that. We cannot sell gas at a loss. There is a flat or level meter rate charge in vogue here in Lincoln applicable to electricity. The Traction company gets 15¢ a kilowatt and 5¢ a kilowatt. There is no regulation by the city of Lincoln that requires electric companies to give the same level meter rate to all consumers of electricity. And there is no company in Lincoln in the lighting business which in actual practice makes a level rate to all consumers, large and small. I have learned that from coming in competition with them. The effect of this upon the gas business is bad. It brings to us the unprofitable consumers and takes away the profitable ones. An electric light company has the right to charge a meter rent sufficient to compensate it for the service and this enables the competing electric company to avoid taking on the unprofitable business and forces that on
49 to the gas company and enables them to take the profitable business which we could get if we had the same system in vogue. We meet that and feel that right along in our business.

Cross-examination by Mr. Stewart:

Exhibit E contains just construction. There is a well-defined line between replacements or repairs and construction. It does not in-

clude replacements in any sense at all. The plant was built new in 1900 and 1901, and those were additions and not replacements.

Redirect examination by Mr. Rose:

The total gas sales alone for the year ending June 30, 1907 were 167,445,600 cubic feet. The gross receipts were $200,693.39. If the net maximum rate after discount had been $1 per thousand we would have received for that, $167,445.60, and if we had been paying in addition to the regular property tax an occupation tax of 2½% that would have amounted to $4,186.14. The net returns on the $1.20 rate applicable to interest on the investment and depreciation were $64,646.35. Had the rate been $1 and we had been subject to the 2½% occupation tax the net receipts applicable to interest on the investment and depreciation would have been $27,212.42. That sum would have been inadequate to meet the item of depreciation alone on the valuation of the properties employed, and the company would have been unable to make any profit whatever on the capital invested. If the rate of $1 had been in effect during that year and we had been subject to this 2½% occupation tax the receipts would not have equalled the actual cost of the service, not counting anything for profit or interest on the investment. I am acquainted with the handwriting of the different persons who made entries in the books of account which I have examined during the period that I have been acquainted with the company. They were made by persons in the actual employment of the company and the entries in the books were correct so far as I know and they give a correct history of the daily transactions of the company from time to time during its existence. I have worked on these books off and on. I do not know that there are any entries in my handwriting. The gas company has been making up monthly summaries and reports of the actual condition of the business since 1900. Previous to the final passage and taking effect of the ordinance in controversy in this suit the Lincoln Gas & Electric Light Co. offered to exhibit its books of account to a committee appointed by the city council in order to prove to them that we could not supply dollar gas. That was done in open council meeting in my presence. We also asked them to suspend the rate until we could complete our investigation. They refused to do that, and they acted on it abrusquely. I do not remember that any motion was made in the city council. The suggestion of the company as I recall was received by silence. The city did not, before the passage of this ordinance, examine into, or have examined into, the details of the company's business to ascertain what was the cost of manufacture and distribution of gas in the city of Lincoln, and they did not go over the properties of the company or its books to ascertain what the cost of manufacture and distribution of gas was, and they did not ascertain the capital necessarily employed in the conduct of the business. I was present, I think, at all the meetings at which the ordinance in controversy here was introduced, read, and considered. I was a pretty regular attendant those days, and I heard the expressions made by

the councilmen on the floor of the council chamber in respect to the gas company's inability to reduce the rate to a dollar, and I heard the expressions of the members of the council of the effect of the adoption of such a rate on the solvency of the company. Mr. John S. Bishop said the only way that they would ever get the water out of the stock or bonds of the company was to put it into the hands of a receiver and he in his humble way would do all he could to bring that about. Those are about the words. He was one of the councilmen who acted on this ordinance. That statement was made
51 in open council during the discussion of this ordinance and the ordinance was afterwards passed. The passage of the dollar ordinance was also agitated in the local daily papers.

Cross-examination by Mr. Stewart:

The bonded indebtedness is $1,129,600; $333,000 draws 6%, and the balance, 5%. The outstanding stock is $2,250,000. We have not been paying any dividends on that. By hard scraping we have kept our interest on the bonded indebtedness paid up. When we sold $10,000 worth of bonds at the time we were hard-up I do not know who the purchasers were. The money was deposited to our account at New York. I don't know whether the bonds sold for 80¢, 90¢, or $1.10, or what. We sent the bonds to Emerson, McMillan and Co. They are bankers and brokers in New York City. We have issued in that way in the neighborhood of $50,000 or $60,000 of bonds. I believe those were issued in 1902. It was at a time when the present owners of the plant were the owners. The electric lighting business is conducted in connection with the gas business. The expenses, except officers' expenses, and by that I mean superintendent and superintendent of manufactures and clerical expenses and taxes, are divided accurately—just what they use. Coal is given to the electric department and they use their own oil and an accurate account is kept of that. Some is divided half and half and some, two-thirds and one-third. The receipts of the electric department are not as much as the gas department. I don't remember what the yearly receipts of the electric department are. The plant and equipment of the electric department is probably about one-third the whole investment. And we make a division of the expenses approximately one-third to the electric department and two-thirds to the gas department on the investment proposition. Exhibit E includes the amounts spent in real estate investments. When the original plant was built it was built for a certain specified contract sum and
52 with that contract they got three lots on the corner of 7th and N streets. When the gas company was moved the three lots at the corner of 7th and N streets were traded to the Burlington railroad for a block of ground known as block 79. No additional investments were made for real estate. There were additional investments made for buildings and permanent improvements, machinery and equipment and things like that and mains and services. We probably do not have on hand now all of the property that is represented as having been purchased by these various sums for the different

years. I remember of three boxes there, a central seal, etc. that we sold. Those are the only pieces of apparatus that I remember of.

The $52,247 spent in 1873 was the contract price for building the gas works at that time and I suppose included the equipment outside of the mains. Those old boxes that we sold were a part of that plant. They made a different style of gas in those days to what we do now. I think we have the holder that was bought in 1873, and possibly some oil tanks. The sums spent in 1890, $34,301; in 1891, $48,429; in 1892, $71,284, were spent when we moved the works from 7th and N streets over to the new block. They cover the construction of the buildings and apparatus and holders and laying new mains. The gas company was rejuvenated at that time and we bought new machinery and constructed practically a new plant outside of the mains. We also put in new mains. We did a big lot of new work in building this new plant and moving it over there. We did not count that as a replacement of the old plant. I think there was only one piece of apparatus that was moved over there and that was the springer water gas set. That is the one that Mr. Malone spoke about as being out-of-date. The figures I have given here include all of the expenses that went into the building of the new plant. The expenditures in 1900, 1901, and 1902 was after the time the old gas company sold out to the Lincoln Gas & Electric Company and a corporation for the new business was started and mains and services were laid and
53 new boxes and scrubbers, etc., bought. That does not include any construction for the electric department at all. It is confined strictly to the gas department. This $603,278 includes all that has been paid out in constructing the gas plant and where the plant was re-built and the old one abandoned, but it does not include replacing mains. We have an account called Main Maintenance in which that would be put. For instance, if you took up a 4-inch main worth 50¢ a foot to us and laid down an 8-inch main that was worth $1 to us we would charge construction with the difference—50¢, only. We wouldn't charge it up with the $1 again. This is only an arbitrary illustration. If the old main was entirely worn out and had to be replaced by an entirely new one it would all be charged to maintenance. No part would go to construction at all. I don't know about the old wooden mains. When they would have to lay an entirely new line there I don't know whether that would be charged up to construction or maintenance. That was before my time. There was very little of that and they would have no figure on the various matters. In 1904 we had to re-lay some of our iron mains on M street and we relaid them and put them down again. In 1901 we took up another main on P street. We took them up to give a better service and put in larger mains. We have not had to take up old lines of iron mains on account of their being worn out. We have at different places taken up parts on account of electrolysis. We do some of that right along. We have not done any of that within the last two or or three years, though. We were bothered a good deal down at Harley's corner and also at H. W. Brown's place. We probably took up a length or two there. When we took that up and put in a new main we charged that up to maintenance. We renew services right

along. We have not had to take up old lines of main laid down for a period extending back for 17 years. We had to take up an old line on 27th street when we ran out to the State Farm. It was eaten through place after place and we took it up but we did not
54 take it up because we knew it was bad but we ran a line out to the State Farm and had to put in a bigger pipe. The 2-inch main would be wrought iron and a larger main is cast iron. The cast iron pipes are the more expensive and are supposed to last longer. The wrought iron pipe is easier to lay and you can put it in more cheaply and in small sizes it does just as well. All of our 2-inch mains are wrought iron pipe and all of the mains larger than that are cast iron.

I would have some trouble in getting the details of the items making up the figures in Exhibit E, especially for the other items. For the later ones I can. As the output increases the distribution cost per thousand would be less and also the office administration. It might not be noticeable in the manufacturing. You would have to have a very big increase in output to make a small decrease in the cost of manufacture, but in the distribution and office expense there would be some difference. Our output last — was 167 million feet in round numbers. If we would double that output there would be some reduction in cost. We have had a fair increase in output. The output for the year ending June 30, 1907 shows an increase of about 14 million feet over the output for the year ending December 31, 1906. For the past five or six years there has been a general increase in the output. The net earnings for the year ending June 30, 1906 are less than the net earnings for the previous year because the material and labor and repairs have probably gone up. I could tell you just what from looking at that or getting those figures. It is a fact that notwithstanding the increase in our output the account shows a decrease in the net earnings. The fact that the distribution expense for the year ending June 30, 1907 was nearly a cent less per thousand than for the year ending December 31, 1906 was probably due to the repairs of mains and cutting down the leakage, etc. The leakage is in the distribution cost as is also the repairing of mains.
55 That is not remarkable that the distribution cost should fluctuate as much as 1¢ per thousand. The report for 1907 shows an increase over the previous one in the manufacturing cost per thousand. That is due to the increased cost of material and labor. Coal is more expensive now than the year before and oil is also, and labor is, too. It shows in the detail of this report. We pay $5.52, F. O. B. cars, Lincoln for Youghiogheny coal. In the report for the year ending June 30, 1907 we have the coal on hand marked as having cost us $6.41. That is handling it in there. That is coal all told. During the 12 months we have it charged at $5.47. We had a cheaper price and our contract price changed in April and we get credit for all the lower price coal we have in stock at that time. We take an average price on it. Coal is more expensive now. We had a lower price then. The reports show the average price. It does not show the two prices. The average for these 12 months is lower than for the previous 12 because we started in April of this year on the high price

coal. The oil stock is shown on page 11 of Exhibit D. It shows only the amount used. On page 10 is shown 67 million feet of coal gas made, and on page 11 we show 130 million feet of water gas made. That is all mixed together and it is sold and some of it leaks and some of it is used by the company. The leakage is charged to the distribution cost. 20% is not so very large a leakage for a good plant. They usually figure 10% to 20% and over 20%, in a well-constructed first-class plant. That is what other people lose by leakage. The biggest item in the distribution expense is the leakage.

On page 10, lines 1041 and 1042, the items of receipts per ton for coke sold and receipts per ton for coal carbonized are not carried out. They have been filled out from the coal stock in the rear. They are credited in the manufacturing report: Coke residuals 1004 and tar residuals 1005. The credit is taken directly to the manufacturing for the coke and tar. It is a credit there. You see, the
56 gas costs so much and then we take credit for the coke and tar made and deduct that from the cost. It is taken directly out of the manufacturing cost. You will find it down at the bottom of the manufacturing report, pounds per ton of coal carbonized, 1250 lbs.; and coke used for bench fuel, 138 lbs. That is coke used in the furnaces to head the retorts. And, tar per ton of coal carbonized, 8.8 gallons. We credit the tar at 2¢ a gallon. There is no market for it and you couldn't sell any quantity for 2¢. You have to find a market. The coke is credited at $5. I don't know what it is worth on the market. I haven't bought any coke for such a long time. We figure the return at $7 to $7.50. That is shown in the report under coal expense, the number of tons received, the amount of money, and the coke expense on there in coke stock. That means delivered at those prices. The breeze per ton is the fine part of the coke. Then you say 1250 lbs. you don't get that amount. You get 10%, the rest of the breeze is fine dust. This is included in the 1250 lb. The coke sold and coke used is 4663 tons, and is shown together. The breeze is credited up at $1 per ton. It is worthless. There is no market for it. We have the coke and breeze combined figured at $28,103, an average of $5.56 per ton, and that is the amount we have taken from the manufacturing cost of the gas. That includes some handling. The coke is credited at $5 per ton and the breeze at $1 per ton. These items have all been deducted from the manufacturing cost. In addition we get some carbon out of the retorts, but we credit that back to the manufacturing cost whenever we sell it. There is no market for it and we have to pile it up in the years. There is a small quantity of it. The water gas is not always cheaper than the coal gas. We make part coal and part water gas in order to take advantage of any market on materials and then in order to make our own coke in order to run our water gas set, and we also run both in order to keep up the calorific value in better style. I don't think we
57 could buy our coke and still manufacture water gas cheaper than what the mixed gas is costing us. I think we would have to pay $1.50 to $1.85 more a ton for the coke; possibly more at times. Ordinarily coke would cost us $7 here. We would have to get it from some plant farther east toward the coal regions.

In laying our mains we are required to keep ahead of the paving. We have taken up mains in paved streets and re-laid them. I do not recollect at the present time of laying only originally in paved streets. In the reports we spoke of using Kansas coal. That is a coal that comes from Kansas. It is used for bench fuel. We might possible have made some gas out of it but it is prohibited. We cannot do it on account of the sulphur. The gas leakage or unaccounted-for gas is ascertained by reading the consumers' meters and reading the station meter to know what the company has used and sold and the difference is what is lost and unaccounted for. Part of it is leakage, and part is condensation and that also takes in the amount covered by thefts of gas by consumers or people, so it is not all leakage. The leakage ought not to be a percentage of your manufacture. That is not a good way to put it. It ought to be a leakage per mile of main which should be reduced to a common basis. For instance, in the city of St. Joseph that has got as many miles of mains as we have I think about the same number and they use two or two and a half times as much gas. There the percentage would not be the same as here and the percentage basis doesn't signify anything there. They might put out twice as much gas but they wouldn't have in per cent twice as much leakage as we would have. The 20% of gas is gas that is unaccounted for. It doesn't say leakage. We get the check on this by reading our station meter and the consumers' meters. The engineer in the engineer's office has to take the reading of the station meter at a certain time every day—7 o'clock in the morning, and the daily send-outs are added up and as reported into the office. I have the original books. Exhibits C and D are compilations from the books made by different employees. More than one person has had a hand in it. No one person did the whole thing. It could be done by one person but for convenience it is not. My conclusion that the company
58 could not operate and pay a profit on its value if the rate was reduced to $1 a thousand is arrived at from studying the results of this plant as shown by the reports. The report shows the expense that is apportioned to the gas department. It does not show what proportion.

On page 20 is the steam account going to the electric department. We buy the steam for the gas department from the electric department. We have but one steam plant and we give the steam department credit for the steam used. I cannot tell you the rate. The figure was arrived at by running one of the boilers of the company through a stated period of time. It was gotten from actual practice. We have only one boiler house down there and the blacksmith shop and a barn that are used jointly by the gas and electric departments. The steam that we use for both departments comes from the same boilers but we arrived at the amount charged to the gas department by taking one of the boilers separately. We pay the electric department for the steam just as though we bought it from the Traction company or anybody else. The gas department is a bigger consumer of steam than the electric department. There is no ordinance regulating our charges for electricity and there is no object in appor-

tioning less expense to the electric department than should properly go there but there is an object in apportioning these expenses the way they should be because we compare our reports with other companies scattered around and we naturally are anxious to show just as good a report and that we manufacture stuff just as cheaply as any of them. And we are running these departments just as though they were two concerns as near as we can. If the electric department takes anything from the gas department they pay for it, and it is not our purpose to load anything on the gas department that is not a proper expense of that department.

59 Redirect examination by Mr. Rose:

This system of reports was not devised for the purpose of this investigation. It was gotten up by a committee from the different companies. They spent lots of time and money getting up what they thought was an ideal report so that the expenses can be analyzed. If we are high on one item the auditor knows about it under this system and we get called. Reports are made at the expiration of each month. We started to do this about 1900 or 1901. We tried to make the best showing we can as to earnings at this plant to attract prospective investors and give credit to our securities. The monthly reports are taken from the general books of the company from time to time as the business itself was transacted. They would have been in this same form if this law-suit and controversy had never arisen. The original records from which these reports are taken are here and at the disposal of the solicitor for the defendant, and I will endeavor to make up the other records which he has called for. It will be no easy job to make up the schedules of moneys invested in permanent works. It will not be a job that can be completed in a hurry. The item of $603,000 invested in the plant did not cover any investment necessary for supplies on hand and what has been termed working capital. It is necessary to keep supplies on hand and money invested in working capital because we have to have money enough to run our business longer than a month—from 45 to 60 days, because nobody pays cash for gas. They all take 30 days before they commence to pay for it. You have to keep a stock of stuff on hand and a big stock of coal on account of the distance from the market and the frequent labor troubles and strikes and you must keep pipe and meters on hand and oil and oxide, pretty nearly everything that is used. We cannot run right up to the handle. The gross income of the gas department last year was approximately in round numbers, two hundred thousand dollars, which is a little less than
$20,000 per month, and we have to manufacture and deliver
60 the sum of $20,000 worth before getting any return for it.
The discount day is the 6th of the month following that in which the gas was used, and before we get any return on it at all we have approximately invested in gas manufactured and delivered the sum of $20,000. We pay our bills and pay our pay rolls twice a month and supply bills and things of that kind are coming in constantly and we cannot get along and maintain our credit

in the bank without a balance of cash on hand. We cannot get bank accommodations unless we keep some balance on hand, ordinarily. If you do it is with difficulty and good collateral.

The filling in a coal bench will not last three years. We have tried to charge it out in that time but that is too long. By actual experience they could run 24 to 30 months but the bench would be in pretty poor shape in that time. There would be 40% or 50% depreciation on that particular class of property. We have taken out mains in recent years chiefly because of their smallness. We have had to increase their size in order to give better service. It is mechanically and practically impossible in establishing works of this character to anticipate what the future demands may be on the particular main. In recent years residences have been built and are now being built on the back ends of lots to a considerable extent and the residence district has gone farther out, and the desirable residence portion has changed. This is not due to any default in the original design of construction. Nobody could have told or can now tell where the residence section or business section was going to land. Contingencies of this kind must arise in a plant of this kind in a growing city, and they must be met as they arise. You cannot anticipate them. The Fitzgerald tract is another illustration of this. We have service there to Mrs. Fitzgerald that ran up clear from B street. Now we have to cut that and have got to run a big 2 or 4-inch main along each of those streets in order to provide for the houses that are being built there. That makes it necessary for us to lead out from our plant in a little different direction with larger mains.

61 With a new residence district developing like this we have to carry more pressure and have a bigger holder and it also loads up the leads from the holder. In order to relieve the unusual load on a small main we have to replace it with a larger one. Gas leaks at the joints and through the holes in the pipe that have been eaten by the action of some chemical in the earth. This is done by electrolysis and by some salts in the earth. The leakage under the same pressure would be increased by multiplying the services or meters along the line. The service that we have to put in ahead of the pavement is of no use at all until the lot is improved by a building except to make the little leakage. The law requires us to lay a service to every lot in advance of the paving on paved streets. This must go inside of the curb. Where property is built on the alleys we have got to take up the pavement and run a main down the street. That provision does not obviate the necessity of again lifting the pavement. There are some places where the guarantee has not yet run out that we cannot cut the pavement and put in the services where required. In order to put in service under the pavements we have to go to the city and pay a dollar for a permit to open the pavement and run a trench for the service. Then tap the main and put the pavement back as good as we can. If it is asphalt pavement we have got to get the contractors to pave it, and pay for it. In these services to vacant lots on paved streets we have to anticipate a public improvement and demand for our service. If there is not a house there for ten years we have to have the service anyhow, and in figuring replace-

ment value the new company would be required to open the pavement to put these stub services in. On that my impression is that they would not be compelled to dig up the pavement and dig a service into the lot. They would only put service into the houses where they had actual consumers. The per cent of leakage would be greater where there are only 90 meters on an average to a mile of main than it would where there were 200, because when you send double
62 the amount of gas through the mains the per cent of leakage does not increase proportionately. By adding to the number of meters on the services already made you would not increase the number of joints from which the gas leaks. We could not make all the gas we need with the water gas set that we have now, and in order to increase our capacity of water gas we would have to built another building and make new connections with the holder and new connections with the steam and boiler. The capital upon which we could claim a revenue would have to be increased. To increase the capacity of our coal gas set we would have to build on to the present house. The increase would have to be in a set of three benches of 6's. Coke and tar are our by-products here. We have no way of saving the ammonia. The $7 price that we receive for coke includes advertising, soliciting, delivery, and hauling. The tar product we burn in the boilers of the electric department and we pay the gas department 2¢ for every gallon we burn. The steam used by the gas department is credited to the electric department at the actual cost of manufacture and delivery.

I procured from the city clerk of Lincoln and the county clerk of Lancaster county the certificate showing the assessed valuation of the company's property for the year 1907. For that year we paid state and county taxes in the sum of $5,256.75. There are $6,672.53 of taxes levied against the company and payable at the office of the treasurer of Lincoln for the year 1907. 2.17% of the total taxes levied by the city of Lincoln for the year 1907 was levied against the properties of the plaintiff company. The fractional parts of lots 11 and 12 in block 77 included in the certified statement by the city treasurer and assessed to Halleck F. Rose are included because they were originally bought for the gas company's use and in order to avoid having them covered by the blanket mortgage they were put in the name of Mr. Rose. The gas company paid the considera- for the purchase and holds the unrecorded deed of Mr. Rose for the same, and the
63 gas company also collects the rents of the property. If we sold 175,000,000 cubic feet for the year 1907 the 2½% occupation tax on the gross receipts would amount to $5,250 at a $1.20 rate per thousand cubic feet, and that would make the total tax levy against this company for 1907 by the city of Lincoln and Lancaster county, $17,179.28.

Exhibits F and G offered and received in evidence.

The properties of this company are supposed to be assessed at their full value for taxation purposes. The valuation shown there are one-fifth of the actual reported valuation of the company. The city taxing authorities have included $60,000 for the value of the franchise.

Taking into account the general valuations of all of the property here in Lincoln, I think that the estimate certified here by the city and county clerks is a little high for the properties within the taxing district owned by the Lincoln Gas & Electric Light Co. I have lived here all my life and I am acquainted somewhat with the industries and enterprises located here. I think $38,977,700 is much below the actual value of all of the taxable property within the taxing district in the city of Lincoln. This is five times the amount which the city clerk has certified as the total assessed valuation of all property. We ought to have $50,000,000 worth of taxable property and I do not doubt but what there is that much within the taxing district of the city of Lincoln. I was once secretary or assistant secretary of the Lincoln Gas and Electric Light Co. and as such I held the record books of the company in my hands and these books and the record books of the companies succeeded by it are now in my charge. The handwriting of the record of the minutes of the stockholders held on July 9, 1900 of the Lincoln Gas Co. appearing on pages 162 and 163 is in the handwriting of J. K. Honeywell, and his signature is appended in his handwriting. At that time he was secretary and this book was kept by him. The entry on page 164 of another meeting of the board of directors of that company is also in his handwriting and so is the signature and at that time he was secretary of
64 the company. The same is true of the minutes on page 166.
This book is now in my custody and subject to the inspection of the solicitor for the defendants. The following portion of that record offered and received in evidence:

"Page 162, July 9, 1900, Minutes of the Meeting of the Stockholders of the Lincoln Gas Company, held July 9, 1900 at the office of the company in the city of Lincoln.

"Meeting called to order by the president, D. E. Thompson.*

"Resolved, that the treasurer and officers of this company be and they hereby are directed to sell the property, rights, and franchise of this company to the Lincoln Gas & Electric Company, and to execute and deliver to it such deeds and instruments as may be necessary to effect said transfer.

"The motion was duly seconded and upon being put was unanimously adopted."

Page 164 from the minutes of the board of directors meeting:

"Mr. Tomlinson read to the meeting a resolution passed by the stockholders at their meeting held this day directing the sale of the property, rights, and franchise of this company to the Lincoln Gas & Electric Company, and offered the following resolution and moved its adoption:

"Resolved, that the directors and officers of this company as directed by the stockholders sell the property rights, and franchise of this company to the Lincoln Gas & Electric Company, and that they cause to be prepared and execute and deliver such deeds and instruments as under the advice of counsel may be necessary to effect such transfer.

"The motion was duly seconded and the resolution unanimously passed."

The following was offered in evidence from the record of the meeting of the board of directors of July 12, 1900:

"Mr. Thompson reported that pursuant to the resolution passed at the meeting of the stockholders and directors of this com-
65 pany, its property, rights, and franchises have been sold to the Lincoln Gas & Electric Company, and that they have received the consideration therefor."

I was assistant secretary and treasurer of the Lincoln Gas & Electric Company mentioned in those minutes, and I have now in my custody in my office the minute books of the meetings of that company and on page 2 of that book the following is found, which was offered in evidence:

"Meeting of the subscribers to the capital stock of the Lincoln Gas & Electric Company.*

"It was, on motion duly made and seconded

"Resolved, that the entire capital stock of this company, to wit, 15,000 shares, par value of $100 each, be issued to the Lincoln Gas Company in consideration of, and in part payment for, the transfer to this company of the property, rights, and franchises of the Lincoln Gas Company."

It also contains the minutes of the proceedings of the board of directors held July 9, 1900, which are offered in evidence, as follows:

"It was, on motion duly made and seconded

"Resolved, that this company purchase from the Lincoln Gas Company its property, rights, and franchise, and that the officers of the company be directed to issue, upon the receipt of valid deeds, an instrument transferring to this company the property, rights, and franchises of the said Lincoln Gas Company to the party procuring such transfer and in consideration thereof, and in part payment thereof, the entire capital of this company."

Exhibit H is the book containing the record of the minutes of the proceedings of the stockholders and board of directors of the Lincoln Gas & Electric Light Company, and is produced by me. I am acquainted with and know the signature of A. Lincoln Eglinton, secretary, and Louis E. Wettling, chairman, appearing on page 5 of the record of the first meeting of stockholders held December 17, 1901.

66 The record of the passage of the preamble and resolution for the purchase of the properties of the Lincoln Gas & Electric Company, contained in Exhibit H, offered and received in evidence.

From Exhibit J, the minute book of the Lincoln Gas & Electric Company, the record of the proceedings of the stockholders' meeting held on December 18, 1901, appearing on page 26, offered and received in evidence.

Also, is offered from page 35, the record of the action of the board of directors of the Lincoln Gas and Electric Company upon the same question. I do not remember what was the outstanding indebtedness of the Lincoln Gas & Electric Company in December, 1901, which was transferred. I don't know that the underlying bonds of

$333,000 were then outstanding. I think the total bond issue at that time was about $1,000,000. The $333,000 issue is still outstanding, and I think the other bonds were taken up by the Lincoln Gas & Electric Light Company bonds.

Recross-examination by Mr. Stewart:

I don't know the details of the transfer from the Lincoln Gas & Electric Company to the Lincoln Gas & Electric Light Company. I had nothing to do with the practical turning over of the company or sale of the company. I do know of some cash being paid. There was something like $77,000 or $100,000 that was actually paid by the bondholders. I don't know under what arrangement this was done. I have heard it said that they paid $300 more to keep a thousand dollar bond. They practically got $100,000 out of it. In the transfer from the Lincoln Gas Company to the Lincoln Gas & Electric Company the stockholders of the Lincoln Gas Company were paid off in money and the Lincoln Gas & Electric Light Company assumed the mortgage of $333,000. The money was paid by Wood & Havenmeyer. I don't know how it was handled on the books. They paid the money in purchasing the stock from the stockholders.

67 The money did not go to the company. I guess there was really no cash that went to the Lincoln Gas Company. It went to the stockholders. There is no account in Exhibits C and D for additions to capital or a construction account. There are accounts for maintenance under the headings, Repair account, Service maintenance, Street maintenance, and Meter maintenance. In addition to the street main service and meter maintenance expenses they have to repair buildings and apparatus. They are called repairs rather than maintenance. The first three appear on page 13 of the report. The other repairs appear in the manufacturing report for the different departments. These items of maintenance cover the keeping of mains and services up to a certain extent. If we find a leak in a service we get out and repair it or maintain it. The taking up of a pipe and putting in a new one is included in maintenance. Whenever any of the apparatus or buildings get out of order or out of repair and we fix it up we put it in the repair account. In the case of the repair of benches you can save the iron work but you have to fill the benches out. Sometimes some of the iron work is worn out. But when you take these out and fill them up they call it bench repairs. We keep account of that in the contingent bench repair account in the general books. The total sum is charged into the operating expenses over the period that we estimate that the benches will last. The last time we thought the benches would last three years but they will not. The total bench repairs are first put into the contingent bench account and from that charged up to monthly bench repairs. The operating expense account shows what the bench repairs were. If we were to take out this old springer set and put in a new water gas set we would charge the new one up to construction and credit the plant with whatever we could get out of

the springer set. We have nothing in the nature of a replacement account in the books. The first mains were laid in Lincoln in, I think, 1872. No one of them are now in use that I know of because they were wooden mains. I think they were just allowed to rot in the ground and never were taken out. I don't know
68 when the first iron mains were put in. It is further back than I can remember. The new coal gas benches were built in 1890 or 1891. I can't tell how many times those arches have been rebuilt, or how many times those benches have been re-filled, but we re-built the arches and re-filled the benches this last year. That was charged to contingent bench repairs and we spread it over a period in the operating expense that we think the benches will last. The three south benches were put in in 1901. The Fort Wayne water gas set was put in in 1901. That, of course, has been re-lined and repairs made on it right along. The meter that we have now was put in in 1890 or 1891. It has been repaired a couple of times and there is nothing but the shell of the original meter left. The 205,000 ft. gas holder was built in 1890 or 1891. They have got to have a new holder now as it is in bad shape. The boxes were built in 1890 or 1891 when we were re-building there and another one was put in in 1901. The coal gas exhauster was put in in 1891. We have changed engines on that a couple of times and of course kept up the repairs on it. There was a coal gas meter put in in 1890 or 1891. That has been repaired a number of times and fixed over here in the last year. That was charged to repairs. The new plant was constructed when the location was moved in 1890 and 1891. Some of the scrubbers we now have were put in new then. It is my impression that they were put in in 1901 or 1902. Some of the cast iron main lasts very long, and some of it does not. It depends on the ground it is in and the conditions. I do not know what the average life of a cast iron main is or a wrought iron main. I do not recall any places where we have to take it up frequently.

Redirect examination by Mr. Rose:

In 1904 we borrowed some money on stock options at 6%. In addition to the stock option pledged we had to pledge a double amount of bonds. The stock option is to purchase the stock at the rate of $10 a share. The par value was $100. I don't know
69 who furnished the stock to meet that option. I understand a holding committee held that stock but I don't know absolutely. Those notes matured the first of June or the first of February, 1906. The notes were surrendered and instead of paying money for them the company issued $100,000 worth of stock and realized that much for the stock. That $100,000 was not added to the assets of the company or to the capital. There was no account made of it but it was put into the company and the assets were increased by this $100,000. The company never paid anything out for it except its capital stock. I have not included that in my estimate of valuation here. None of this went into the electric department. The whole $100,000 went together. That is the statement

of the construction, the way I was able to take it out from the old books, and the new books which I know are absolutely right, but on the old books there were different bookkeepers and different systems and it was long before my time. We were behind about $40,000 on our bills, and taxes, at that time, and for some time prior we had been unable to maintain the plant and meet the interest on the bonded indebtedness and that was the emergency that required the contribution of $100,000 from stockholders. We were in dire distress for money and we couldn't borrow it.

Recross-examination by Mr. Stewart:

We are compelled to spend a good deal of money every year for extensions. We tried to take care of this even if our bills have to run behind but we don't always succeed. The time we were in distress for cash we were adding to the value of the plant by building extensions. There were some going in at that time, but you can see when we cut down on that by that table. The statement that I have given is the construction account the way I was able to get it off the books for those years and I want it understood that we got $100,000 of money outside of that that was paid into the company, but I would not say that that was paid out for construction in addition to what has been shown here.

70 Redirect examination by Mr. Rose:

I am not prepared to show that the figures I have given here include all that the company has expended in the equipment of its plant. I may be in error on some of these old things. There were different bookkeepers and they had a different system of keeping books and I wouldn't say that this was absolutely sure. I would say that I have found all that was expended, to my best knowledge and belief, and that that was all that I could find, but I may have missed something.

Recross-examination by Mr. Stewart:

The oil that we use in the manufacture of gas comes from the Sugar Creek refinery in Kansas. We pay 4.2¢ per gallon for it, F. O. B. cars, Lincoln. The contract a year ago was 4.1¢ but the price fluctuates according to whether they want to boost it or not. It is not crude oil but what they call gas oil. I am unable to give you the average life of the iron main and I don't know the average life of a service pipe. I have no data on that. We have had cases here in Lincoln where we have had to partially replace service pipes—places where they would go through a certain strata of earth and we found that they gave out frequently. We had to take them up and put others in their place. I don't know of any case where we have had to replace every foot of any service pipe at one time. When we put a repair of that kind in the service pipe or replace part of it it is charged to street maintenance and distribution expense which is a part of the general operating expense. The three

recuperative benches of 6's complete with economizer referred to in the inventory of the property were started in February, 1907. Everything except the foundation was new at that time. The 3½ depth benches without economizer were originally installed in 1901 or 1902, and filled in 1904. The one No. 6 Root's coal gas exhauster with engine was installed in 1890 or 1891, and the Bristol recording gauge I think was put in in 1904 or 1905. That is used to
71 show the vacuum on the exhauster and is attached to it. The No. 3 E. & A. tar extractor with by-pass connections was installed when the plant was built in 1890 or 1891. The tower scrubber, 66 x 30 x 16 in., by-pass connections, was installed in 1902, and the water tube condenser, 54 x 25, with 16 in. by-pass connections was installed at the same time. The standard rotary scrubber and by-pass connections was put in in 1890 or 1891, and the coal gas meter, 5 x 5, with by-pass connections, was put in at the same time, as was also the one set of horizontal water-cooled condensers. The ammonia circulating pump and motor was put in within the last year or 18 months. It is a new one. The one Root's economizer, blower, engine, pipe system, gauges, etc., was installed in 1904. The 132 ft. of foul main from benches to purifiers was put in in 1890 or 1891. I am under the impression that three of the 25 x 21 x 5 purifying boxes with central seal carriages and connections were put in in 1890 or 1891, and the other one about ten years later. The 10 x 10 McDonald station meter was originally put in in 1890 or 1891, and the Hinman drum with by-pass connections was put on the meter this year. That is the inside workings of the meter and it costs about $2,500. I am not prepared to say now whether that went into the construction account or maintenance account. The 205,000 ft. two-lift gas holder was put in in 1890 or 1891. It will have to be replaced on account of its age. We have tried to keep it in repair but there may be a time when we will have to put it out of service. We will replace it as soon as we can raise the funds. We are trying to get them now. The brick tank for this holder was put in at the same time. The 20-inch Connelly street main governor and connections was installed in place in 1890 or 1891. The booster outfit and the motor with connections was installed in 1904. One of the four 6,000 gallon iron shell storage tanks for tar was put in when the plant was originally built, and the others as they needed them. There are six altogether.

72 The one gas calorimeter was installed about 1905. The one bar photometer was put in in 1901 or 1902. The Western Gas Construction Company water set complete with connections was put in in 1901 or 1902, and the operating floor for it was put in about the same time. The springer water gas set was put in in 1890 or 1891. The No. 10 Buffalo forge blower with piping was put in in 1904. The one 35 horsepower, 1004 H. P. M. D. C. motor and auto-starter was installed in 1904 or 1905, and the one 15 horsepower, 1200 H. P. M. reserve blower and motor was put in possibly in 1903 or 1904. We used to run that blower on the old set with steam and had a little steam engine to run it and then we

replaced it with this motor. The 50,000 cubic foot relief holder was installed in 1890. I don't know how much older it was but I think we had that holder over at the other plant and there was some work done on it when we put it up there. It is only in fair condition. The brick tank was installed at the time the plant was put up. The foul main from gas machine to the holder and from holder to the purifiers was put in about the same time, as was also the 12,500 gallon oil storage tank, and I think the 10,000 gallon oil storage tank was installed about that time also. Of the small items the oil pump and motor were put in in 1904 or 1905. The oil spray system and drilling apparatus was installed about 1904 I think. The one tar separator circulating system, two pumps and pipe connections was put in in 1906. The 150 horse power boiler erected is an estimate of what it would take to run our gas plant and what our boiler system amounts altogether. We changed boilers right along. We put one in a month or so ago. The present buildings were erected in 1890 or 1891, and then one of the buildings was extended for a scrubber and condenser, I think, in 1901. The material is brick and stone. Some have shingle roof and some have corrugated iron. They are in fairly good condition now with the exception of the coal house. That isn't in particularly good condition. I expect if we had time enough I could prepare
73 a detailed statement to show how long the various lines of main and service pipe have been in. I don't suppose we could go back much farther than 1901, though. It would be hard to get a record beyond that on account of the different systems of keeping it. It is made up, for instance, of different systems of bookkeeping during the different ownerships of the gas company.

When we put in a service we charge the amount we put into it to the construction account and credit construction back with the amount the consumer pays. On that we charge to construction the amount we actually put in from the main to the lot line and the consumer pays from the lot line into his house and for making the connection. When we install meters the consumer don't have to pay for that. We furnish that. We put the pipe connections to a new range the first time without cost. After that we charge the consumer for moving it or connecting it up. If he has an old range we charge him for connecting it up. When we make a connection for light the consumer is supposed to drop the riser down to where the meter goes in and we make the connection without charge. Our books show what the connections for meters and ranges cost us. The setting of a meter costs about a dollar. That means just connecting to the service pipe or riser. I can't tell you exactly about the range connections but they run in the neighborhood of $3. Our books will show that. We aim to keep not less than 2,500 or 3,000 tons of coal on hand. We probably have more than that now. If we have 3,000 tons on hand we think we are pretty short and we aim to keep more than that on hand. Any profit that we make on the gas range with which we supply our customers is credited up to the expense of range sales. The footing of items A to G on page 15 of Exhibit D under the head of

analysis of special expense accounts should be $12,920.42 instead of $1,292.42. They have made a mistake and left off one cipher. It is a clerical error and does not affect the general balances. The correct of this is carried on the same page under the heading 1507, promoting new business which is intended to represent this footing.

74

Our inability to negotiate loans and secure money for the company was caused by the constant pounding and turmoil that the company has been under here and this affected the market. I started out in December to get this first money and money was easy at that time. We had a number of other people who tried to float this loan in addition to my efforts. It was not due to the fact that money was not to be had on the market. It was due to other causes. I don't think the amount of bonds we had out made any difference. If we had had no incumbrances on this property I still think they would have been unable to borrow the $100,000 with the local conditions the way they were at that time. That is only a surmise, however. Our items of expense for the manufacture of gas barring the cost of material compare very favorably with other companies. We could not begin to compare with a town like Chicago if their cost of manufacturing is 25¢ per thousand because of the difference in the number of consumers, the cheap price of material, and their probably running their plant on a mechanical basis. They can afford to have mechanical stokers and charging machinery and then we must consider also the amount of their output. The amount of output would make some difference in the cost of manufacture. A dollar more per ton for the coal would make the gas cost, roughly estimated, 10¢ per thousand more. If oil was a cent a gallon more the gas would cost us about 3.9¢ to 4¢ a thousand more.

Redirect examination by Mr. Rose:

The large holder had had repairs on it. It has to be repaired to keep up its efficiency and avoid the extravagent waste by leakage. We are making some repairs right along and it is necessary to scrape and paint the holder once a year. Notwithstanding all of that, in my judgment, that holder has practically reached the stage where it is necessary to replace it out of the fund which I estimate for depreciation. The mantles have done a great deal to bring gas lighting up to the efficiency and conforts of electricity for domestic lighting. The form of the inverted mantle principally makes it look more like electricity. I think that with these modern devices gas lighting in modern homes is as confortable and efficient as electric lighting. We have to sell gas to the man who uses it for light and fuel at the same price—$1.20 per thousand. The Traction Company is ambitious and they can send out their solicitors and make that man any rate they want to. When they get him we have an investment there with our revenue decreased. The house is piped but the man don't use the gas and we have lost a part of the revenue but we still have our

75

investment there. There are considerable districts in the city where our gas meters are in the same house with the electric meter of the Lincoln Traction Company. They are in the south portion, and in the south-east portion and later in the north-east portion. They are down in the business district, too. Most of the good residences have combination fixtures which permit the use of either gas or electricity for lighting, and in that case the company that would make the lowest rate would get the business. If you are compelled to keep a stationary rate you can't get it and the competing company selling electricity is not bound by any arbitrary ordinance rates of the city.

Recross-examination by Mr. Stewart:

I don't know that we have been scraping and painting our holder quite as often as once a year but when we have done it it has been charged to expense. It is an iron and steel boiler and that is the material that they make them of at the present day. It deteriorates by being eaten out. It is exposed to the weather all the time. It would eat out even though it was kept painted. It is down in the water, then it is up in the dry. Then in the cup there is a water seal and it fluctuates up and down, wet part of the time and dry part of the time.

76 HOMER HONEYWELL, recalled for further examination, testified on behalf of the complainant as follows, pages 173 to 179, printed transcript:

Direct examination by Mr. Rose:

In 1899, up to October 1st, we had in effect a rate of $1.80 net for illuminating gas and $1.35 net for fuel gas. On the 1st of October of that year we started to reduce our illuminating price 7½¢ per thousand until the light and fuel rate was the same. Then when Mr. Van Riper came he made a rate of $1.75 gross for light and $1.50 gross for fuel gas, with a discount of 25¢ per thousand for prompt payment which made the rate $1.50 net for light and $1.25 net for fuel and that ran along until June, 1904, when we reduced the price of both kinds to $1.50 per thousand gross with a discount of 30¢ for prompt payment which made both rates $1.20 net, and we also agreed to remove one meter and supply the gas all through a single meter. There was no time intervening when the price of fuel and illuminating gas was all metered by one meter and the rate was $1.25 net for both.

Cross-examination by Mr. Stewart:

The increase per capita consumption under the reduction of these rates for these years could be figured out but I don't know what it is. I would not say that it had increased greatly but I don't know. Our books show that the reductions reduced the revenues. The gross receipts have increased constantly on account of putting on more customers. 1905 showed a decrease in the gross receipts over 1904. That was the time of the last reduction. You can charge a price so

high that the consumers won't use the gas, but I don't think that has been the case with a good many gas companies. I would not say that it has not been but I know of no place where the charge was so high that the people did not use it. It was something else that caused it. I would not say that the reduction in price has always had the effect of increasing the output and consumption. If you hadn't gone out after the business or if you went out as you
77 had the year before you would get some natural increase anyhow. Barring that natural increase you would reduce your revenue by a reduction. If you go after the business and put in more energy to get the business that you had the year previous to reducing the rate so that the amount of energy in both cases is equal, the increase in the amount of consumption is due to your effort and not to the reduction in price. I believe I could find other experienced gas man who would agree with me.

Redirect examination by Mr. Rose:

In the face of a reduction in price the only means that the company has to maintain its net revenue is to hustle for new business. It cannot over-come the decrease in net revenue by any other means. At the time the decreases in price went into effect we started up a new business department in an endeavor to maintain the revenue. In 1901 we employed from two to four men. In 1904 we started out with a new-business department with six solicitors and with a man at the head and a clerk. They made a house to house canvass to ascertain what the consumers had on the premises, what they used, why they didn't use something else, and trying to get in additional equipment. They went to every house in town and kept a card record of it. The town was divided into territory or districts and each man knew how many people used only a range or light or both. We maintained a school and educated our solicitors and got reports from them daily and there was considerable expense involved in that. For a while we had them solicit on commission. We pay them on a salary and commission basis now. We have gotten a business worked up in this territory pretty well up to what can be done with the method of charging in vogue and which we have to follow. We have not been able to reach the industrial field on account of the flat rate meter charges.

Cross-examination by Mr. Stewart:

If we could reduce the charges to each consumer on a
78 rational method we could get a great deal of patronage we don't get now on the present system. By that I mean confining the expenses for different classes of consumers and not arbitrarily taking a flat rate per thousand feet. If we were to do business on that method and make a fair profit we would have to charge considerable more than an average of $1 per thousand feet. We would have to do that until the business was worked up. The present rate is a voluntary rate and there is no ordinance requiring us to charge a flat rate except the dollar gas ordinance involved in this suit. The

ordinance of 1899 allowed us to charge $1.35 net for fuel and a sliding scale on the light until they both got the same. The company voluntarily reduced that rate to $1.20 for both fuel and light, and kept under the ordinance all the time. For a while we didn't make good the loss occasioned by these reductions but we pushed the business until now it is growing and ultimately we got enough business to make up for the difference in loss in dollars and cents. This system of pushing the business is an up-to-date system and one that progressive and well-managed companies ought to use if they want to make the best out of their business. Everything else being equal the greater the volume of business the lesser rate required to maintain the net earnings and that is the reason we pushed for more business. After a reduction in the rate of ten or fifteen cents on any given amount you could increase the business enough to make — for the loss of revenue if you could get enough business but the question is, Where are you going to get it?

Redirect examination by Mr. Rose:

It is out of the question under the dollar rate to make up the shrinkage due to the loss. There would be no way, in my opinion, of maintaining the revenues up to the standard necessary to maintain the plant after a reduction to $1 in this city. That reduction would give just one-sixth more unprofitable consumers and make them just that much more unprofitable.

79 You take away also the one-sixth from the profitable consumers. It isn't enough that you would gain to make the difference because it isn't enough even then to get the industrial business. It is too much for the man to pay that wants the gas. It would not do to give the actual cost of the service to the small consumer. They are unprofitable.

Recross-examination by Mr. Stewart:

The result of such a reduction could be better told by trying it, of course, than by speculating on it. There are a great many companies furnishing gas at a dollar but it probably don't cost them as much to make it on account of the materials and local conditions. The materials in Des Moines or Sioux City would cost less than they do in Lincoln. I don't know anything about the price of oil at Sioux City. I don't believe we can get the gas coal as cheap as they do. Our price is $5.52. If they pay substantially the same for coal and oil the distribution would still have something to do with the cost. There might be more miles of mains. I think Sioux City has more consumers than we have.

HOMER HONEYWELL, recalled for further cross-examination, testified on behalf of the complainant as follows, pages 249 to 268, printed record.

Cross-examination by Mr. Stewart:

Exhibit 100 is a correct statement of the mains and services laid from 1902 to 1907, inclusive as far as I have been able to determine.

It was taken from the books and records of the company. Exhibit 100 offered and received in evidence.

This statement was taken off from the yearly reports as far back as 1902. I did not go back any farther. I did not spend very much time getting it up. I took the yearly reports and did not compare the statement. I think it is a full and true exhibit of what was done by the company with the exception of 1902. I have not got the number of feet for that year. Some of these reports are
80 in evidence. We have the report for the first six months of 1907. Exhibit 101 is the yearly report for the full twelve months of the year 1907, and is found from pages 9 to 27, inclusive. Exhibit 101 offered and received in evidence.

On page 10 of Exhibit 101 the item of bench repairs is $4,022.24, while for the previous year it was $1,976. The increase is because we were re-building some arches in the latter part of 1906 and started to use these benches in the fore-part of 1907. We re-built from the foundation three benches of 6's. They were built in the fall of 1906 and we started to use them in the latter part of December, 1906, or the first part of January, 1907. The total cost was about $6,600, and there was included in that the cost of iron work and retorts themselves. The hydraulic main, and another piece of hydraulic main, and everything that would go with the bench was also included. There might have been as much as $13,000 or $14,000 in the contingent bench repairs account. In charging off the cost of re-building these benches I would not charge it all up to one year. I aim to spread it over the period of the estimated life of the benches. I thought these new benches ought to last four years. If I remember rightly we thought they ought to last longer than the ordinary bench, and we aimed to spread the charge over that period. I cannot tell whether it was so entered on the books or not without looking them up. I do not remember. Every time you re-build a bench set you have got to have some new iron work—not all of it but some of it. I would hate to guess how long the iron work would last. The first iron work was put in there in 1890 and it was all new work in 1906. I don't remember whether there was a flat contract for the whole thing or whether the iron work was separate. The party who built the benches bought the iron. The life of a retort is about three years. The arches have a life of probably 6 or 7 years, something like that. You can probably put two fillings in. When we re-built an arch we used some of the material that was there and put it back in the arch.
81 The entry of repairs can be found in the accounts payable or general ledger. The entire account of reconstruction of these three benches has not been charged to operating expenses. We put it into a special account and aim to charge up so much for the manufacture of bench renewals, and it is charged over the estimated life of the benches. No part of it is charged to construction and it is all taken in time from the operating expenses. That has been the policy of the company except where we built new benches where there aren't any before. That would be charged to construction and would be an addition to the property. The general ledger for 1906 or 1907 would show how much has been charged

up to this time to operating expenses and the amount still left to be charged. The difference between the entries on page 25 of Exhibit C, being the report for the year ending December 31, 1906, on coke stock, the entry on the first line being coke on hand average value $18.60, and in the next line coke received during the month valued at $4.77 per ton is because the coke stock was short and the average price per ton went up. We charged more into the coke stock than what we put in there. It was an error in not charging it up. For instance, we have charged up so many tons of coke and we come to measure our pile and found that we did not have that much in coke and they ran the price up per ton. At the close of the year, on line 2327 it is invoiced at $9.87 per ton while during the year it is entered at a much lower figure. This is because we have evidently made some profit on our coke and have put the coke in there at about the highest figure and it brought the average price down. The $5.39 appearing in line 2324 for coke used during the year is the coke and the handling and expense that went in there. It does not have any reference to the market value of the coke. We credit coke in the pile at a certain figure and charge it to ourselves at the same figure plus expenses. The figure at which we charge it into the pile is more or less arbitrary. Last winter we got as high as $8.50 per ton delivered for the coke. That
82 was higher than it commonly runs. Ordinarily it is $7.50 or $8, and of course then there is another price for dealers at the yard. The cost of coke delivered up town varies depending on whether our men deliver or whether we get lodged and have to have some of the transfer people do the work. Where we have a transfer man it costs $1.50 per ton. Where we deliver ourselves I suppose it runs in the neighborhood of $1. The regular price is 50¢ per ton for delivery here in the city, but they are all well equipped for it. We don't hire a man by the month and they can get all the men they want evidently. When business is rushing they don't have to go to somebody that makes a specialty of hauling other stuff. I know no reason why it should cost twice as much to deliver coke as for coal but it does. Our books will show what we pay to outside people and also what it costs to deliver by our own team. On the tar stock we fix as high a price as we think we can get out of it. We don't sell very much. There has not been any demand or market for it lately. We get from the customers, ordinarily, $5 a bbl. including the barrel. The barrel holds about 50 or 53 gallons. The barrel itself is worth from $1 to $1.25. The surplus that we do not sell off we burn under our boilers as fuel to make steam. We put it in there at about the same heat value that we would put on steam coal. The tar is sold to the electric department and that department sells steam to the gas department. The electric department is the largest consumer of steam. If I did not say that in my former testimony I meant to.

Redirect examination by Mr. Rose:

Coke has greater bulk than coal and requires more room to store

in a wagon and a larger wagon and it requires more shoveling and more handling per ton. That in itself increases the cost of hauling.

83 Recross-examination by Mr. Stewart:

In 1905 the tar used was charged at 3.45¢ per gallon; in 1906 it was charged at 2¢ per gallon. There was not that much difference in the value of the tar as a steam making product in those years but I think there was some better market in 1905 than afterwards and we credited up our residuals at a higher figure than we had and reduced the credit of our residuals, and its value as a steam making product did not control it altogether. I don't remember that we used very much tar in 1905 for steam making purposes. We made more tar in 1906 than we did in 1905. In 1907 there were only 57,413 gallons made, while we sold 21,175 gallons, and used 93,553 gallons, a total of 114,738 gallons. The difference is due to probably what we had in the stock. We had everything stocked up, no doubt, and a big lot of tar on hand. Our accounts are made up partly on estimates. Those for residuals have to be partly estimated. In 1907 we made 9 gallons of tar per ton of coal carbonized. In 1906 and 1907 the value of the tar and residuals was deducted at the same figure. In 1906 we carbonized 7,579.75 tons of coal and at 9 gallons per ton that would make about 68,000 gallons of tar. We credit manufacturing that year with 68,848.1 gallons at 2¢ per gallon. We sold 21,000 gallons at 7.73¢ per gallon. We didn't credit it up to manufacturing at what we got for it because there is some expense in that, the handling and one thing and another. And those expenses are not included in the 2¢, but they are added up some place. Previous to possibly 1904 or 1905, somewhere along there, tar commenced to stock up and we had a lot of it and had to barrel it. We were crediting residuals at a high price, 5¢ a gallon, which was too high. We could not get that much out of it and we had to reduce that price which we had and we thought we would have to burn tar on the same basis as steam coal and we credited residuals up with what we thought it was worth to us, what we could get out of it in some way, shape, or manner.

84 Redirect examination by Mr. Rose:

I think 1905 was the first year we ever tried bur-ing tar. Prior to that there had been a market here for tar. Since then the market has been very slow. Prior to that time we stored some of the tar and sold some of it, and they made tar rope, and tar walks, and such things as that out of it, and tar roofing. When our capacity for storage was filled to over-flowing some of it ran away. I think some of it this last year ran away into the lake back of the west barrel. We have credited to the gas department all of the tar residuals that it is fairly entitled to have. In actual practice we found that we had been making excessive deductions from the manufacturing cost of the gas on account of the tar. We were crediting it at 5¢ and we had to change that to 2¢. We could not get 5¢ a

gallon for it, and in order to compensate for the excess credit we reduced the credit for the next year. When we sold tar it was at a higher rate than we had credited it to the manufacturing cost. That item is so distributed that the gas department gets the ultimate credit for what we actually got out of it. The tar stock would get credit for the profit and it would naturally reduce the price per gallon. During the year 1905 and early part of 1906 when we fixed the price at 2¢ per gallon we did not have any controversy with the city over rates. Our only motive in making that credit on account of the cost of the gas was to make an honest distribution between the gas department and the electric departments. It was not made with reference to any public exhibition or anything of that sort. The books and reports are in the same condition that they were at any time before this controversy arose. In my opinion, the adjustment and accounting between the two departments of gas and electric as shown on the books and reports is just and fair. We tried to keep in touch with the management of gas plants generally over the country and I associated with managers and met with them regularly. The tar account has been a
85 matter of worry to all managers and they have all wondered what to do with their tar. Previous to a couple of years ago there were no very satisfactory burners and they could not burn their tar. They tried to make it into tar paper and manufacture it into the paint and things of that kind. The biggest handlers of tar in the country are the Barrett Manufacturing Company. They send out a slip to every gas company the first of the year asking how much tar they have on hand, how much the estimated make is, and they have all of that data down pat. These people handle the coal tar product of the country. In 1906 or 1907 we got a bid from them of 2¢ a gallon for the tar laid down in St. Paul, Minn. There is no other market in the country for the quantity we handle here other than 2¢ a gallon. What we make over and above that is due to our skill in handling and by selling it in small lots to farmers. In former years there was a higher price than there is now. We sold a lot of tar to a local man here and sell to him yet. We could get more than 2¢ but we have not been able to in the last two years.

Recross-examination by Mr. Stewart:

The Barrett Manufacturing Company have offices scattered over the country. They have got one in Omaha. I think Chicago is their main office. In the coke account on page 25 of Exhibit 101 the value of the coke received or made during the year is shown to be $17,580.92. It is credited up as a residual as $20,537.73. Those figures come from 4,143.82 tons of coke at $5 a ton and 443.63 tons of breeze at $1. That does not figure out. There is a difference of about five or six hundred dollars. There were 7,098.57 tons of coal carbonized that year and it yielded 1,250 lbs. per ton of coal carbonized. That includes the breeze. 2,698.18 tons of this is charged to the water gas department at $5 a ton and we sold

and used 64,064.82 tons of coke and 626.25 tons of breeze. To tell how much was sold you would have to take the difference between what was used in the water house and water gas and make a subtraction. If we sold a thousand tons of coke at $8 and it cost
$1 a ton to deliver leaving us net $7 we would still credit
86 the coke as a residual at $5 a ton. There is some other
expense in there but we aim to credit it up at what it is worth. If we found out we could get $7 for it we would credit it up with that and charge ourselves with $7 for whatever we used. The value of the coke used does not, I would say, affect in any way the earnings of the gas department as a whole. We use breeze in the electric department but not any coke. We aim to charge the same price that we credit it up for so that it would not have any effect on the earnings of the gas department. The price of the tar disposed of to the electric department would affect the earnings of the gas department just as the price we sold gas at and the cash received from such sales would affect those earnings, and we aim to get just as high a price for our coke as possible in order to reduce the manufacturing cost. If we can make a big profit on our coke we would gradually raise up the price that we credited the residuals at so that a boom in the coke market or more money in the coke market would affect our manufacturing cost. The profit over and above the price credited is also credited later when we make the profit. If we credited as residual what we receive for the coke sold and made no charge against the water gas department for the coke used we would get the entire benefit of the residual in arriving at the cost of the mixed gas but the gas would not be in proportion. It would not be correct bookkeeping. Now we can tell just what our water gas costs are, separate and distinct from the coal gas. The only object in charging the water gas department with this coke is to ascertain what it actually costs us and in that way it increases the water gas cost and decreases the coal gas cost so that we are able to get a comparison of the costs of the two kinds of gas. It does not affect our earnings at all. In Exhibit 101, the item in line 2323, Expense of Coke, $2,902.13, comes from delivering, advertising, and everything connected with the coke expense, and it
87 would be added to the residual account. The item of coke
expense has neither been added nor deducted from the item on page 10 of Exhibit 101, coke residual, $20,537.73. That coke expense refers directly to the coke stock and not to the residual. It does not appear in the cost of the gas at all. It is a coke expense and not a gas expense.

Redirect examination by Mr. Rose:

The sales of the residuals of tar, coke, and breeze, are all credited properly and distributed to some account so that ultimately in the general distribution the proper accounts get credited, and in the final results it really makes no difference in the price of charging up the residual stock in advance of realizing anything on it. These things all compensate and clear up in the final account, and there is no credit lost. If you credit your residual at too low a figure as soon

as you find it out you credit them at a high figure. If you credit them too high you reduce the credit. The same thing occurs if you find the stock is credited for more than you have there. That has to be adjusted from the actual expense of handling it. There is no way that you can tell absolutely what you will realize from these residuals except by actual experience. There is no other way to keep an actual cost as near to what it is as is possible than to fix in entering the credit for the stock on hand and in advance of its disposition and sale than to fix in a measure an arbitrary credit for it. For instance, we have no coke market now in the summer time. If nobody gets any coal here in the summer we will boost the price of our coke. We are the fellows that have got the coke and we will boost the price and get the credit for it. We have to advertise in the newspapers and otherwise in order to get a market for our coke. If we did not advertise the consumers would naturally go to the coal dealers engaged in that line of business. There is no way that we can get to the market except by advertising and soliciting.

88 Recross-examination by Mr. Stewart:

The cost of advertising to sell coke is put in under coke stock expense. I do not know how much advertising we did in 1907. I don't know whether or not there is any advertising there. We do not carry the advertising all in one account. I can point on the books where these credits are properly allowed. It would make a difference in the costs of the mixed gas if we were to credit all the coke at $7 a ton instead of $5. It would lower the price of coal gas and increase the cost of the water gas but not in an equal proportion because we do not use all the coal in the water gas that is made. Some of it goes into stock. If we used the same amount in the water gas as we did in the coal gas it would not cut any figure. If we were to credit all the coke at $7 a ton it would reduce the cost of the manufacture of mixed gas but it would be only temporarily. When we finally sold the stock out and distributed the items of loss over what we had credited, it would finally work out right at the end and it would not make any difference in the final result, if we did not get $7 for the coke. We have to take account of the sales in actual practice, and in the final accounting it would work out just according to the experience in either case, and the only way to keep an accurate estimate in advance is to credit it up at what our usual experience indicates we would get out of the residual. If we sold half of our coke at $7 net a ton and used half in making water gas which had been credited up at $5 we would credit the residual with $7 and charge up what we used at $7. I do not believe we can show any profit in the coke. There is the expense and there is the price per ton and there is the stock at the close of the month. It is worth $5.49 and we have credited it up at $5, so we are pretty close. We started that account in at $9.87 a ton. That is what it cost us—handling and shortage and advertising. If we only get $5 from that we would not take that $4 away from the residual. We started with $5 as a basis. That is

what is credited up. I cannot show you anywhere in either
89 of these reports where there has been a loss charged to the residual account or gain credited because when we had a loss we tried to even it up in the coke stock itself without going back and changing the manufacturing report. The gross sum is credited in the coke stock *stock* account and is carried from year to year.

Q. But that doesn't really then give you any index as to what, if you segregate a single year of the gas business your coke account would not then fairly indicate what your residuals had been worth for that particular year for the reason that you have been carrying the gains and losses in your coke account, is that true?

A. Very nearly so; not absolutely correct; you have got to take some leeway, you cannot tell what your coke is going to be worth in the fall; we cannot tell what it is going to be worth this fall that *that* we are making now.

If we sold half of our coke in 1907 for $8.50 and used the balance in making water gas it would not be a fair showing for that year to simply deduct as a residual $5 a ton if the expense of delivering the coke would not equal the difference between $5 and $8.50. The way to get the correct value of the coke residual for 1907 would be to take the number of tons of coke sold, deduct from it the expense of handling and selling, and deduct that from the cost of the mixed gas. We could not wait until the end of the year to give the manufacturing department credit for the residual if we wanted to know what the cost was. If you had a good market your costs might be low, but if not they might be high. If we wait until the end of the year and after deducting the expense of handling and advertising and disposing of the coke after the sum that was left should be deducted from the total cost of the mixed gas, that would leave the net cost of the mixed gas.

HOMER HONEYWELL, recalled for further cross-examination, testified on behalf of the complainant as follows, pages 328 to 332, printed record:

Cross-examination by Mr. Stewart:

90 I have not looked up and ascertained what the item of 50¢ per ton for handling the coal consists of. I have not looked up the items of the coke expense.

Redirect examination by Mr. Rose:

In actual experience we have been obliged to pay higher than the schedule price of the coal in those contracts, at times as much as a dollar or more, in order to get our supply of coal. The cost of coal has been necessarily affected by the strikes and lock-outs in the coal producing districts. It has also been affected by the car shortage. We have failed, in the fall when grain is moving eastward, to get coal here, and we are not able at times to anticipate that. We aim to keep a supply on hand but you can not always do that. I have been down as low as one day's supply at the plant, and in actual operation

it is necessary at certain seasons of the year to keep a very large supply of stock on hand.

Recross-examination by Mr. Stewart:

I remember when Van Ness was here in 1906 he spent as high as $7.50 per ton for coal. It was the only thing we could get. We had to use Kannaw-a coal at considerable increased cost,—a poor kind of coal. That was early in the fall; we had to use a lot of it. I do not remember how many car-loads. That could be ascertained and determined from the vouchers.

Redirect examination by Mr. Rose:

The actual cost of the fuel is correctly stated in our report, and embraces the actual experience in the work of administering the affairs of the company.

Recross-examination by Mr. Stewart:

I do not remember whether or not there was any high priced coal used in 1905. I don't think we used any in 1907, but in 1906 we used some of the high priced coal. I do not remember what the price was. The provision in Exhibit 114 for furnishing gas
91 oil at 27/34 oil means 27/34 oil gravity. We do not want too heavy an oil and we would want a fairly light grade but not too light. 26 to 30 is usually called gas oil. I do not know how they get the high specific gravity in oil. They take kerosene, gasolene, and bensene out of the oil before it is suitable for use in making gas. They do that by some process of distillation. Crude oil would not be suitable to our purposes. They do use it but do not get as good results as they do from gas oil. There is quite a difference between the ordinary fuel oil and gas oil. I do not know what the difference is but the price quoted would convince you. I have no quotations on fuel oil. The legal expenses for 1906 and 1907 are very much higher because Stewart and Munger got a settlement against us for $1,500 in 1906 and personal injury suits are entered up as legal expenses. In 1907 we had some expenses on the suit.

Redirect examination by Mr. Rose:

In 1905 where the record shows a low average for coal I remember that we were using some low priced Kansas coal. The price started at $3.75 or something like that at the fore-part of the year and along toward summer the price was boosted, and it is also very rich in sulphur and needed purification. We had to use lime purification to take it out. We discontinued it as it was expensive, and there were complaints of odor at the faucets when it was used. It is not practicable to use this Kansas coal with our machinery and equipment and it is not low priced now. We have found it impracticable by actual experience. It is harmful to the machinery and equipment. It is very rich in sulphur and is poor stuff to use in the water gas set. The sulphur is carried over in it. You cannot get it out unless you have lime purification. It is no good for any practical purpose.

Recross-examination by Mr. Stewart:

Even tho the price is low it would not save us any money. The purification would run up so as to more than eat up the differ-
92 ence. I do not remember whether or not we had a contract. I am positive that we did not get any of that coal after February 1, 1905.

HOMER HONEYWELL, recalled for further cross-examination, testified on behalf of the complainant as follows, pages 340 to 341, printed record:

Cross-examination by Mr. Stewart:

Exhibit 129 is the itemized construction statement which Mr. Stewart asked me to prepare. It is taken from the books of the company. It is the itemized statement of Exhibit E.

Exhibit 129 offered and received in evidence.

Direct examination by Mr. Rose:

I do not have absolute and accurate data back as far as this construction runs. There is no way that I can check with absolute definiteness the cost to the company of the properties originally acquired and built, because there are so many different ways of keeping books. I do not know that this is fully adequate. I testified before that it was correct to the best of my knowledge and belief and would not swear whether it was correct or not. I do not vouch absolutely for its correctness. It may be too small or it may be a little too large.

HOMER HONEYWELL, recalled for further cross-examination, testified on behalf of the complainant as follows, pages 464 to 465, printed record:

Cross-examination by Mr. Stewart:

If I remember correctly there are $796,600 in bonds of the Lincoln Gas & Electric Light Co. now outstanding. Those are just the bonds. It does not include any bonds that are out as security for notes or any bonds issued by any other company, and does not include the $333,000 of the old Lincoln Gas & Electric Co. These bonds were issued from time to time. I do not remember how many were originally issued at the time the company was organized. I know nothing about the facts entered on page 11 of Exhibit 151 reciting that
93 the Lincoln Gas & Electric Light Co. purchased the property of the Lincoln Gas & Electric Company, and assumed and agreed to pay $655,000 par value of the Lincoln Gas & Electric Company's first consolidated mortgage 5% bonds issued under the company's mortgage of July 10, 1900. I know how many bonds are out now because I pay bond interest on them. The coupons are returning to me. I also have the book in my possession showing the issuance of bonds. If I had the ledger here I could tell you when they were issued. The item of $2,500 in March, 1907, in putting a Hinman drum in the station meter was a repair item and charged to

operating expense. That drum would last probably 15 or 16, possibly 20, years.

94 HARRY WARNER, being first duly sworn testified on behalf of the plaintiff as follows: Pages 170 to 173 printed record.

Direct examination by Mr. Rose:

I am Secretary and Treasurer of the Lincoln Gas & Electric Light Company and have been since December 24, 1906. I have direct charge of the different departments of the accounting department. The reports that have been offered in evidence, of the accounting department, have been made in whole or in part under my supervision. I have had additional experience in book keeping and we tried to make these reports from the books of the company correct, and to the best of my knowledge and belief, the entries from the books of the company made under the various administrations, show correctly the character of the transaction and history of the company, and Exhibit C and Exhibit D are correct summaries of the transactions reported therein. The classification of consumers as to the amounts of gas used, was made by the different men in the office and book keepers took the information from their books under my direction, and to the best of my information and knowledge the information compiled in this classification is correct. I am familiar with this classification which was produced by Mr. Honeywell. Exhibits C and D were prepared directly from the books of the company. Reports of this character showing these summaries are made each month and in addition a similar report is made each six months and yearly, and they represent the actual conditions of the company and were not made with any special reference to this law suit. They are in the same form they would have been made had there been no law suit or controversy.

95 Cross-examination by Mr. Stewart:

The item in Exhibit C appearing under line 1004 $22,566.96 was the value of the coke and breeze residu-m. It is a credit to the manufacturing expense and it is deducted from the total of the first three lines and on line 1009 the result $24,476.69 is shown, which is the net cost of the coal gas manufacturing material. On page 11 under line 1017 "General Supervision" $1,857.98 is shown the amount that was actually paid that month for supervision. The details of that item is not in this book. All of the items shown here for plant expenses were the actual expenses and money paid out for these items. Taxes are paid up each year and then apportioned so much each month, but of course an item like supervision, we know what that costs each month. I practically made this report myself from the books of the original entry. The oil account is not shown in this report because there is no place there for it, but I show the total amount used.

96 F. W. FRUEAUFF, being first duly sworn testified on behalf of the plaintiff as follows: Pages 201 to 235 printed record.

Direct examination by Mr. Rose:

I am second Vice President of the Lincoln Gas & Electric Light Company. My residence is in New York City. I am associated with Henry L. Doherty & Co. and our business is the owning and operating of electric and gas companies. I have been in the gas business a little over eight years largely in the accounting and financial department. I served first with the Denver Gas & Electric Company from its organization, first as Secretary and later as Vice President and general manager. I have been second Vice President of this company for the last two years and Vice President of the Pueblo Gas Co. and Lebanon Penn. Gas Company. My connection with this company has been advisory rather than supervisory. I make frequent visits to Lincoln and consult with Mr. Honeywell and always keep in touch with the business here through him.

I have been connected with the accounting department here and have made frequent examinations of the accounts and have acted as a sort of advisory financier. I am not a technical engineer. I am in touch with engineers everywhere, however, and consult with them in the drafting of the report which is now used. I have had something to do with the drafting of that form and worked with the engineers and accountants on it. I worked on them from the beginning to the end. I was one of the committee that made these up and I have assisted in compiling the printed rules for every item of expenses. I believe this system of accounting is the most complete in use by any gas or electric light company. We have compared it frequently with other companies. I have had a great deal to do with the making of contracts for the Denver company and have consulted with Mr. Honeywell about making contracts here and in other places. I have tried to keep posted on the price of machinery and supplies and to keep a complete record of what we are
97 paying for the supplies and different propositions. I have also tried to keep posted on the price of common and skilled labor. Whenever there is any change we are advised of it.

I have examined Exhibit 1 which has been produced in the hearing here. I have gone over the items of cost and expense to the best of my ability and have also offered it to other engineers and asked for criticisms on it. The figures shown in this Exhibit of replacement value of the company's manufacturing and distributing plant are practically correct. Exhibit A was prepared at my office in New York City. In coming out here and looking it over I discovered a mistake in one of the computations, not in the amount but in the computation. Since coming out here I have had it fixed and would like to withdraw it. I have the correct computation here and the corrected sheet. It is marked Exhibit A-1. These tables are an analysis of the business for the year 1906 showing the total number of consumers supplied and the amount of gas supplied to them separated in two classes, and apportioned against each is the amount of expense which each class should bear, and a deduction is drawn

from that showing the consumers who have paid a certain amount and the expenses necessary to secure that amount and the profit or loss secured from those consumers separated into classes. We first separate the consumers into classes and then the manufacturing cost to those consumers into classes. Then the distribution cost, the collection cost and the general cost, and then the total of the cost. Then we have apportioned the distribution costs occasioned by the consumers and then what we believed was a reasonable return on the fixed investment and profit, and then we have shown the actual returns and what rate we would have had on our money as the result of the operation for the year 1906. The mistake in the first table was in the general expenses through an error in the office. The general expenses were apportioned in this table on a per thousand basis, when they should have been divided among the consumers. In that way it has thrown out the balance of the computations and we will have to change the figures.

98 The classifications in Exhibit B are embodied in Exhibit A-1. Exhibit B verifies the primary extension that is carried out in Exhibit A-1, so far as the receipts are concerned. In this business we have three general classes of expenses. For expenses that are directly proportional to the amount of gas that is made, such as the amount of oil and coal used, the amount of the retort house repairs and expenses, that increases and decreases directly as the amount of gas made increases or decreases. Then we have expenses that are proportional to the number of consumers or meters in service, such expenses as the reading of the meters, the collection of accounts, the making out of bills, the repairs to the services and items of that sort, that increase or decrease as the number of consumers increase or decrease and these expenses are in no way effected by the amount of gas made or sold to these consumers. And then we have such fixed expenses as are occasioned by the demand and size of installation required to do the business, such fixed expenses as executive salaries taxes and fixed expenses of superintendence, etc. These are neither fixed by the amount of gas sold nor directly by the number of consumers supplied. They are proportioned by the demand made on the station. In making up this table I have separated those expenses which are proportional to the amount of gas made and charged, and charged that against the class of consumers who have used that quantity. We have apportioned those expenses that are apportioned to the number of consumers, to those consumers and putting these together we have the expense of supplying that group of consumers, and having the income from that same group of consumers I know whether or not that same group of consumers has been profitable or unprofitable. For instance, the first group represents those consumers who have used less than 1,000 cubic feet per year. In 1906 there were 101 of these. They were sold 64,400 cubic feet and they paid $72.48. The cost of supplying these consumers was $700.21 which makes a loss on these 101 consumers of $627.73 without allowing for

99 any interest on depreciation. Part of the depreciation and interest should be apportioned to the amount of investment

which those consumers require as consumers and the amount of investment they require as users of gas. I have worked that out and the additional sum which they require and the additional cost over and above the cost mentioned on those consumers is $334.95. The total amount lost on the consumers that use less than 1,000 feet of gas during the year, including interest and depreciation, amounts to $1,510.52 which is $14.96 per meter. This computation is correct. It conforms to the classifications used in our daily system of accounting and is taken from our monthly report. The table shows the same information for each class of consumers. The profit line does not come until after you have supplied 94 22/100% of the consumers at a loss. There were 6,110 consumers using 153,202,600 cubic feet and they paid $182,843.12. The cost of operation only was $127,432.44 making a profit from operation only of $56,410.68 or $9.229 per consumer. The cost, including interest and depreciation was $238,873.67 making a loss of $55,030.55 or a loss of $9.01 per consumer, after deducting interest and depreciation. The depreciation figured in this table is on a basis of 5% on replacement value of the physical property, not including real estate. It is figured on the sum of $622,000.00. This sum is exclusive of the value of real estate, cost of organization, franchises or the procuring of funds. It includes the working capital. The rate of interest used in this tabulation was 8% on a total investment of $1,000,000.00 which I regard as the fair value of the company's property including its good will, organization, franchises and physical property. I believe it a low estimate for the gas department.

I am also experienced in electrical works. Under the same circumstances I do not think the use of gas for lighting is attended with any greater risk to health or property than the use of electricity. To my knowledge there is no occupation tax imposed upon the gross receipts of any electric light companies, nor is there in this city
100 established in the electric light department any flat meter rate. The traction company competes with this company in the electric service. They have made most any kind of a rate and have done most anything to get the business regardless of conditions. There is no uniformity in their methods. Their competition in the electric business has taken away from us practically all of the desirable gas lighting business. They have made rates to the long hour users that made them prefer the electricity to gas. As a matter of fact we have been able to hold on to only the short hour business. The small consumers and the unprofitable ones stay on our books. On the present patronage, on a basis of a dollar rate, the gas department could not derive enough revenue to pay the actual operating expenses, and set aside enough for the real depreciation of the plant and returns on its money. At the rate of $1.20 collected in 1906 there was available after paying the operating expenses, the sum of $56,410.00 to apply on depreciation computed at 5% on $622,000.00 and to pay return on an investment of $1,000,000.00. After deducting the depreciation it left a return of 2½% on the $1,000,000.00 investment. The total cost per thousand feet in 1906 was 82 68/100 cents, the manufacturing cost was 47 89.100¢; the distribution cost

12 77/100¢ collection costs were 4 35/100¢; general expenses including taxes 76 67/100¢.

During the past few years the taxes have been increasing and also the standard quality of the gas has been increased which affects the cost of the manufacture. We are required to make 18 candle power gas with 625 heat units. We have been required to operate under that standard throughout the year and that has increased the cost. Prior to this standard there was no standard. We made what we believed to be a reasonable quality. The market on labor and materials has also been increasing and the price- of coal and oil have been advanced. The price of gas to the consumer has not been increased to make up for these increased burdens, but on the contrary it has been decreased. If we could sell, on an average of 40% more gas to our present consumers, we could sell gas at $1.00 per
101 thousand. If we had to increase our number of consumers and investment as our sales were increased we would almost have to double our sales to sell gas at $1.00.

I have some knowledge of financing gas companies of this character and am acquainted with the basis of earnings that are required by bond purchasers and brokers to place gas securities at par in the market. In a plant with the character here in Lincoln at this time, there would have to be an earning of 8% or 9% on bonds offered in the market in order to place its bonds on the market at par on the rate of 5% or 6%. Ordinarily they would have to show an earning of about 7%. In floating a 5% security or bond on the basis of $1,000,000.00 on a plant of this character, the company would have to show earnings of 10% or better on the same sum, because bond purchasers want to see that the earning power of the plant is sufficient to assure them of their interest and unless the earnings are double the rate of interest, they don't feel that they have that assurance. The earnings must be double the bond interest, because the depreciation must come out of that at some time in the future, so that when the time comes when they have to spend the depreciation fund and they haven't that fund and the property is destroyed, they want to know that the earnings are being set aside to create a sufficient fund to take care of the depreciation when it does come. The item of depreciation is a very important one and is taken into account by all operators of gas companies and determines the gas securities. The depreciation is a fund that must be accumulated, not alone to take care of the decay of the property, but also to take care of the inevitable inadequacy of the equipment. It is plain that our works are very close to the point of being inadequate and to get an additional amount of business we have to make additional investment to take care of the new business and we have to make provision for that future time or we couldn't earn our interest. The same way with the mains leading out of our works into the streets. They must be taken up and larger ones put in. They are largely worthless, whether they have been in a long time or a short
102 time. Then there is a third element. A portion of the equipment becomes obsolete. For example, the Springer Water Gas Set. It has been replaced by something up to date. A specific

example of inadequacy is in the case of our gas holder. We have taken a big chance in having a larger holder, because the demand or consumption being so great that we can not manufacture enough to keep a supply ahead. In one hour they draw out more than we can make. They are out of gas and we are out of service. When that holder was built, it was very much larger than was required. It will soon have to be replaced through decay and we will have to put in a much larger one. It is worn out through decay and through smallness also. There is no way that an engineer can figure to avoid displacement of material from this cause. If he figures too small he will be criticised at once for not having allowed sufficient capacity to do the present business. If he looks too far ahead he incurs an expense and interest that owners naturally object to. They don't want a greater dead investment.

In the western states it is hard for the engineer to know how big a town he has to provide for twenty years ahead. The best he can do is to make a reasonable estimate of the probable growth and as soon as you reach that point you have to enlarge again, always having something ahead of what they need. There is no known way of anticipating the demand upon any particular plant. From my experience I know that the items of depreciation must be allowed over and above the outlay for ordinary repairs and maintenance. The repairs and maintenance do not have any future. In setting aside for depreciation we endeavor to take care of the future. Repairs keep our equipment where it should be, while the depreciation is laying aside a sum for the future. In the actual business of the company here in Lincoln, the item of depreciation has not been charged to operation expenses. My honest belief is there should be something in excess of 6% on the physical investment for depreciation, but in making up our estimate here we put it in at 5%. In a growing town like Lincoln, I believe you must figure that our plant
103 from inadequacy has to be practically rebuilt and enlarged in not to exceed fifteen years from the date it was put in. A good part of the mains will not last to exceed fifteen years. I also understand that the soil here is not desirable for cast iron pipes.

At the present time there is no market for the company's 5% bonds. We have endeavored to market some of them still in the Treasury for the purpose of making improvements which we are now making and we couldn't get offers that we felt justified in selling for. They offered around 70 to 75 and it wouldn't warrant the company in selling at that price and rather than put out the securities at that price we offered the issuance of 7% notes, believing that possibly a little later on local conditions would be more favorable and money conditions might be more favorable when we could get them sold at a reasonable figure. We have been able to sell a part of these 7% notes at a discount but haven't been able to sell the balance of the notes secured by the bonds, two bonds being deposited for each note. 7½% to 8% is the lowest rate of interest any company can procure capital for an investment in an enterprise of this kind. In case the bonds are floated for 40 years or less, at the rate of 5% something better than 20% is ordinarily required to place the bonds

in procuring the money. A perpetual franchise in a town of this size is regarded of some value on the market. Unfortunately it is not customary at this time, any place in this country, to give perpetual franchises. A perpetual franchise in the city of Lincoln would have an earning power of $75,000.00 to $100,000.00. It would be a very decided advantage to the community to give such a franchise, because they can cheapen the rate. With such a franchise there is a good opportunity with securities outstanding for a long time and the company not required to take them up at the end of 25 or 30 years, to reduce the rate, as it would not have to be so great to bring a return on the money. I regard the gas business as a very hazardous business. It is in common with electric light business, of a so-called public utility. We are required to supply any
and all consumers that may apply and it is very different
104 from a merchant in that respect. We can't choose the people
to do business with and in doing that we take more or less hazard in our dealings with them. We put a gas service into practically every one's home and take the chances of their thorough understanding of its operation. You may have an explosion. It may be due to a defect on the part of the company, or it may be due to inexperience on the part of the consumer and we are held either legally or morally responsible for it, which is an element of danger. Then we are subjected to regulation by the state or city authorities, which makes it hazardous.

In this present litigation we feel that we are now being put to an expense through the passage of this ordinance, that is working a great hardship on us, knowing the conditions as we know them. It destroys the belief of the security holders in our securities and that is another hazard you have to meet. A company of this character requires working credits in addition to the capital investment in the manufacturing and distributing plant, not only in cash but in materials and in equipment, before it can do any business. After the gas works is built, before we can operate, it must have a stock of gas making materials. It must also have some appliances to meet any new orders either in the extension of the services or putting in stoves or setting meters. It must have cash in the bank to meet bills presented for which we may get a return later on. It must also have money ahead to meet the pay roll, to pay the employees before we received any payment back from the consumers. Practically all the business done in one month is paid for in advance of receiving any payment for it. The average term of credit extended to consumers is something like 40 or 45 days. The meters are read from the 25th to the end of the month. The bills are payable from the 1st to the 6th of the next month. Assuming that a meter was read on the 25th of one month and the bill was not paid until the 6th of the next month, the term of credit would be from 30 to 40 days. I believe that $60,000.00 was the reasonable working capital of this plant.

Many companies I find on investigation, carried more than
105 that in working capital. The conditions here are unfavorable to the manufacture of gas at a low cost, largely due to the fact that we are a long distance from the supply of gas coal

which comes from Pennsylvania and the freight on it is a tremendous item. The cost of oil also is higher than it is in many cities. The price of labor is as high as it is in many cities and the cost of living is supposed to be high. The cost of pipe for our purposes here is also high, due to it being a considerable distance from the foundry. From my knowledge of this plant I think this is a reasonably efficient plant in the economy of manufacture and distribution. We have watched that very closely and make our economies as low as we can get them and maintain a good service. The more gas you can sell per mile of mains, the less is the cost of distribution and the less the investment in the distribution system. This reduces the charges.

In Lincoln the number of services per mile isn't as great as in Denver, besides the length of the individual service is greater, due to the width of streets and walks. The company here runs its services to the lot lines at its own cost. There was a time when we ran the service to the meter in the house. The company has a considerable investment in services that run clear into the house. By analysis of our accounts here in Lincoln, we found that 99% of all our consumers require an investment in a uniform five light meter, which means that they have a demand not to exceed fifty feet per consumer per hour so that all of our cost for distribution investment and for plant investment is not regulated by the amount of gas made. It must be apportioned uniformly over all the gas consumers. That is, we have very few large consumers who make any demand upon us larger than the others. Practically all of our consumers are small consumers, so that we carry a large fixed cost with them per consumer, while the gas used per consumer is a small amount. The fixed cost for them don't increase or decrease as the amount of gas used increases or decreases. If the company could sell additional gas to these consumers the average cost would be reduced,
106 while if the company continues to take on only small consumers the expenses increase as the income increases. The flat meter rate makes us carry many small consumers who lose us money, and we can't make a reduction to the large consumer to attract that class of business and the other firms selling light or fuel, with whom we compete can, by selling them at a lower price, get the business. We can make a rate which will first bring us our fixed cost and then a reasonable price on such cost as the amount they use, that can attract this business competing with the other firms selling light or fuel.

There is no way that we can take on this business except by offering lower rates. If we will sell this gas at 60¢ per thousand then say to the small consumer that we could sell it to him at $1.20 a thousand, it would not be equitable or legal. The meter charge of 25¢ per month is not equal to the expenses of maintaining the service and reading the meter, making out the bill and collecting it and does not allow any sum whatever for interest or depreciation. For a consumer demanding a five light meter and the equivalent connections, we ought not to have less than $15.00 per year, to cover interest, taxation and the fixed expenses outside of any gas that he

has used and the service can not be for any less sum. The gas business of the company must compete with coal dealers, current dealers, oil and gasoline. I do not think that they are subject to any occupation tax on their gross receipts. The gas business is subjected to the additional hazard due to the variation or the likelihood of increase in the cost of materials, oil, coal and labor. The price on these may be advanced while we are compelled to sell gas at a given rate per thousand feet. The ordinary merchant, if his materials cost him more money, he in turn advances his selling price. The likelihood of hard times or stringency is another thing. The investment in a city is fixed and the money is there. In the case of a merchant if he finds he isn't going to have as good
107 a year, he don't keep as much money in his business. The gas company's is there and must yield a fixed rate of interest and can not be decreased as the times may change. Also the fact that a percentage of our income is paid out as an occupation tax, while others we compete with don't, is also a hardship on us. In our cost we must include something that will cover this percentage which we are required to turn back into the city. Another thing which works a hardship on us is the likelihood of a population center change in a city. We might put in our large mains in a part of the city, while the city grows in another direction, and the people leave these streets and move into another part of the city. We must then put in mains and services in a new district, while the old mains lie idle.

In every city you will find a dead section, a section that was once a residence section, that is now covered with railroad yards and wholesale establishments, while the gas company's money is still in the ground and it has had to double its investment. The likelihood of competition is another element. If a natural gas district should be opened up near Lincoln, we would either have to compromise with the owners of those fields and buy gas from them and try to work up a business in time that would pay interest on our capital or go into a war with them and possibly lose our investment. Another gas company might come in here and compel us to make terms with them and sell gas at a price that would not earn a return on our money. In many cases our gas mains are laid to conform to a present grade of the street. Later on a section is laid out and graded or the grade changed and we are compelled to take up and re-lay our mains. That must be an increase in our investment without any additional returns from our consumers using off that main. We are always subject to liability for accidents occurring while men are at work on the streets. A passer by may fall into a ditch or be overcome by gas while we are making connections. We have all those hazards to take into consideration. Unfair taxation is one of the hazards we have to look out for. In many cases
108 we feel that we are taxed out of proportion to our investment, in looking at it from the standard of physical value, earning power or receipts.

To regulate all our services is another element of hazard we have had to meet here in Lincoln. We formerly had the standard of gas

that is practiced throughout the country. New regulations were made, for instance, increasing our cost and decreasing our revenue. We are subject to that at any time. Every year we are called upon to make investment in extensions of our mains and services, into growing sections of the city. This requires a constant addition of capital, whether the money returns are high or low. As our returns are practically uniform we have an element of uncertainty as to whether those things are paying or not. We have been at times subject to criticism from newspapers, which has made our investment hazardous. The street railway system in the same city may not properly take care of its currents and this will subject us to a considerable amount of electrolysis, which will leak into the mains and services. That is something that we may never know to what extent it may come about. The fact that a good part of our work in the distributing system is done by piece meal adds to our cost. If we knew how large Lincoln was going to be we could lay out all the mains and services on one street at one time and it would decrease the cost of laying the mains. Where we lay out a block at one time, 100 feet at another, 200 feet at another, it makes the cost run up. Then we are always subjected to what you might call the caprice of the public, in which one form of light or fuel is more popular at one time than another and it may leave us with an idle investment on our hands. Some years ago the bent flame gas burner was supplanted by the electric light and later on the engineers perfected the Wellsback mantle, and we have since recovered a good part of that business. Other forms are coming on and we see a tendency which way the lighting will go.

109 Cross-examination by Mr. Stewart:

A franchise is bound to have a value, even though we are in a city like Lincoln where we are compelled to do business under adverse circumstances. Altogether our property has cost us $600,000.00, when without the franchise it would be worthless. The value of the franchise also depends upon the earning capacity of the plant. Under the present rate we earned 2½% on our investment which I do not consider very good business. I do not consider the franchise worth $100,000.00 and I would not give that for the chance of making 2½% on my money, but in getting it I would have a chance of making more than that or I wouldn't buy. In time the business could be worked up even under such adverse conditions as are found here in Lincoln. It could be worked up if we could get normal conditions. I would put a value of $75,000.00 or $100,000.00 on it as it now is. Whether there is a high or low rate of return, the franchise has some value. It wouldn't be a big price and I don't think it would be hard to sell, even though we could only make 2½%. The business here is not very well developed. We have not touched the industrial field. The fuel field has been developed but the lighting field has decreased. In my opinion two-thirds of the output is for fuel. The value of the franchise depends largely upon the future of the business. The property did

better here in 1905 than it did in 1906. In 1905 the gas cost us on an average of 73.4¢ per thousand. The manufacturing cost was 41.8¢ as against 49.89 in 1906. The increase was due to the higher cost of materials and the increase of the standard. The distributing cost increased in 1906 1.8¢ over 1905. I do not understand that there is any uniformity in the charges of this city for electric energy for lighting purposes. It has been a case of bargaining in most cases. It is whatever you can get for the service. You make what terms you can with each individual consumer, especially the large ones. This is because we have to meet the competition of other companies. I think this is undesirable. It would be
110 desirable to be able to make a rate to the gas consumer in proportion to his demand, because we could give him what he wants at a better price, but it would be a short-sighted policy to make rates and bargains to each individual profitable consumer without regard to what is charged to other profitable consumers. Under like conditions there ought to be uniformity of rates. In the classification of consumers the cost of the gas to the consumer who takes less than one thousand feet, is arrived at by taking the manufacturing cost of the gas and apportioning to him the part that he uses. If it cost 50¢ per thousand to make the gas and he used but 500 feet, the consumer in that class would be charged with 25¢ for the manufacturing cost. Then in addition he is apportioned his part of the fixed expenses. We have 6,110 consumers and it costs a given amount to read the meters, make out the bills, collect them, etc. and he is apportioned the same percent of that expense as the consumer who uses 100,000 cubic feet, because they all require practically the same investment for that. 99% of the consumers require the same size of service connections and meters. It is not fair to the man who takes one thousand feet, to contribute the same amount to supervision and officers' salaries that the man who takes 100,000 feet contributes. It would be with 50,000 feet. In truth the small consumers make more of that expense of salaries than the large ones. The manufacturing expense is apportioned to the amount made. The man who uses 50,000 cubic feet takes his gas through the same size connections and requires no more investment than the man who takes 1,000 cubic feet and it is right that the small consumers should pay as much of the distribution expenses as the large consumer. The dividing line comes when the demand upon us is increased. As long as all of the consumers are making the same demand, these expenses are apportioned the same. The unaccounted for gas in 1906 amounted to about 8¢ per thousand feet. This tabulation is based on the business of 1906. The manufacturing cost of gas that year was 47.89¢ per thousand feet. To consumers using in excess of 50,000 feet the operating cost exclusive of interest and depreciation, was 57.3¢. The 8¢ for unac-
111 counted for gas is a portion of the fixed expenses. The 8¢ for unaccounted for gas would bring the manufacturing cost up to 55.89¢ per thousand. That would include the cost at the plant and the gas lost. This would make a difference of about 1½¢ which is the proportion which the large consumer would pay for

the other distributing expenses. On 500,000 feet it would be $75.00. The average total operating cost for all is 82 68/100¢ per thousand. This is made up of the collection expenses, general expenses, distribution expenses and does not include leakage and unaccounted for gas. The small consumers should not pay any larger percentage of the leakage than the large consumers. The leakage is practically fixed by the demand, but the consumer who takes 1,000 feet of gas is charged a greater percentage on leakage in proportion to the amount of gas sold, while the balance of the expense is in proportion to the capacity or demand. We have a per cent of leakage the same as we have a per cent of the manufacturing expenses per thousand sold.

The item of general expenses is apportioned to the number of consumers, on the assumption that the demand of each consumer is the same, but there is a difference of one per cent on the large consumers. The man who uses a few thousand cubic feet is as expensive to the company as the consumer who uses 50,000 or 100,000 cubic feet, so long as both are supplied through a five light meter. When a larger meter is used for the larger consumer, the smaller consumer is not so expensive. A five light meter will run 438,000 cubic feet a year, if it is run continuously. If a man using 100,000 feet used that for one hour of a day we would have to make an investment of a given amount. If he used that in a total of ten hours, we would have sold the same in each case, but in one case we would have had the expense of mains, service, moving the plant, etc. The fact that one man uses 100,000 feet in one hour and the other man uses 100,000 feet in ten hours, doesn't mean that the tax on us is the same. It depends upon how much we have to invest to sell each man. There are very few that take
from 100,000 to 400,000 feet. That is what we call a desir-
112 able load factor. If the consumers require a greater capacity, they should be charged in proportion. I have not figured that out here, because they are less than 1%. The same rule would obtain in a less degree as to the consumer that takes 50,000 or 100,000 cubic feet per annum, if the demand was greater than the usual demand. The demand would not be greater if they simply took more gas. One consumer might have twice as great a demand as another, although both used 100,000 feet. In a case of the newspapers, the consumption isn't such a great demand, but it is a constant one. As a general proposition, a small consumer don't tax the plant and the capacity like the larger one and the rate has to be settled on the general proposition. We would not think of asking that the small consumer pay more money after he has made his investment in range, pipe and fixtures, but this tabulation which I have made shows that a re-adjustment is necessary and it ought to be taken into consideration. I wouldn't recommend that the cost be crowded on other consumers, but this is a condition that we are up against in starting out on straight meter rates. The tabulation is to show the inaccuracy of the present plan.

In putting the present rate into effect, we followed the past practice instead of using good judgment with the real conditions. When

we reduced our rate the last time, we made the unprofitable consumers more unprofitable to enable the people who wanted a large amount of gas to get it at a price where they were able to use it. You might reduce the price to the large consumer and not to the small one and confine it to that, but a straight reduction on the gas rate would not let us offer a reduction to all. There is a question whether you couldn't come in and say I will pay 80¢ per thousand, the same as the Starr or the Journal Company, but if you were to come in and pay us an amount to take care of these fixed expenses, then we could give the reduced rate. I do not think there ought to be a minimum charge, but a charge depending upon the fixed expenses. It is a charge entirely outside of any gas consumed. It is a constant charge taking care of a constant expense. It is based on the fact that we have an investment there that we are
113 entitled to receive an income on and are entitled to have a fund to keep it in repair and maintain it even though they take very little gas. As long as they are using it we are entitled to pay for those items of income on the investment. We now have on our books consumers who cost us $2.00 for a thousand feet of gas and they pay us $1.20 which makes a loss of 80¢. If we should reduce our rate to $1.00 per thousand then the loss on those consumers would be $1.80 per thousand. That is just what we did do, although this matter of the change of rates has been advocated here for some time. On the usual demand the investment in the service meter and connections, not including the investment in house connections for ranges, is about $26.50. That is for lighting alone. For fuel it would be more. On that we are entitled to 7% or 8% in addition to the 5% depreciation. We do not contend that we can put all our consumers on an exact equality, but we hope to approach equity. We always make more money out of some consumers than others, and always have to carry certain unprofitable consumers, and the regulation of rates ought to be so as to leave as few unprofitable consumers as possible. We never expect to eliminate all of them. It would be impossible to do that, even though we had absolute control of the business. In doing so you could put yourself in such an unfavorable light in the community that it would be harmful to the business. If we were to say that they should pay $2.00 per month, for what they use, some would pay it, but it would drive much business away from us.

If we could get a right to absolute equity that is what we ought to have. Depreciation is a fund to take care of replacement of the plant when the time comes that it practically all goes to pieces and has to be replaced. By laying something away we take care of the day when we have to rebuild the plant. This company has never adopted that form in a definite way. On the other hand such funds as they had in excess of paying interest on outstanding securities has been re-invested in the plant and has not been taken out.
114 Those re-investments have not been charged to operating expenses.

We have a certain amount of bonds out for investments made in the property. We have certain other property which is represented



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by what our books show as over and above operating expenses and interest. That is, if we are putting in a machine this year and have $10,000.00 in excess of paying the bond interest, instead of selling bonds to get that $10,000.00 that money has gone back into the plant in the money in excess of the bond interest and had gone back into additions so that a replacement would show the property on which no bonds are outstanding. I understand that there has been very little of charging to the construction or capital account, the additional value of a new part which is replacing an old part, over and above the value of the old part. In a short time there will have to be a great deal of it. The mains from the works up town will have to be replaced by larger mains. In Denver we have to do it but we are not charging that out of the operating expenses. We are taking that out of reserve. It is due to inadequacy and in repairs. We have never provided in our books any depreciation fund in connection with this plant, but we have been putting back into the property whatever was left after paying the bond interest. Where a new machine is put in, not to take the place of another but as an addition, it would go into the property account as an asset and an addition. Where a new machine is put in to take the place of a similar machine, the cost would have to come out of this reserve. Up to this time those items have been taken care of by the operating expense account, but there has been nothing of that kind done that I know of, except a few small lines of mains. The refilling of the benches is a running expense and is always taken out of the operating expenses. Up to this time there has not been very much of what I would call depreciation proper in this plant. Depreciation proper comes all at once after you have gone a good many years. That would be true of a plant particularly and also of the mains if they have had any trouble from electrolysis. However, inadequacy in the mains is the main cause of depreciation. Any inade-
115 quacy is something that comes in big chunks. If we could not get adequate pressure that would come all at once. If there was an inadequacy in one block that wouldn't be a very big item, but it might extend for several blocks. There probably would never come a time when we would have to replace all of our mains at the same time. From the history of the business the company usually, when it finds any inadequacy, simply abandons it and builds new works rather than put in new machinery in the old works. Such a thing could happen through inadequacy in a plant which has been kept as efficiently as this one has. It would be necessary in case of inadequacy to discard all of the present plant, but it would be better to put up entirely new works and operate an all new plant, rather than operate the old or run two plants.

We will soon have to increase our capacity in the works, if we put in another water gas machine. We will have to put it in on other ground as it is best for us to get a sufficiently large one, in this one building, because greater efficiency can be maintained by using one big machine. If the small machine is efficient and an un-to-date machine, we will hold it idle and keep it for reserve. We must have something for reserve all the time. We practically have

nothing for reserve now. Our works are nearly inadequate. In Denver we have bought ground to build entirely new works, believing that we are now up to capacity and we are getting a new site because we can operate one plant cheaper than we can operate two. As far as I know the running expenses have all gone into the operating cost at this date, but there has practically been no replacement either because of decay or inadequancy. I am speaking only from the time I have been familiar with it, since 1901. It was an old plant when we got it, and had been in operation for ten years. It had been reconstructed about 1890 or 1891. I don't think they took up the old mains at that time. There were very few mains. The city was smaller and required less. The oil here is cheaper than in Denver, but it is higher than it is in the east. The companies at Cincinnati, Milwaukee and Des Moines were paying practically 3¢ per gallon for oil. We paid last year 4 1/10¢. I
116 do not know anything about the price of oil in Sioux City or Des Moines. The companies at Sioux City and Des Moines are owned by the same people that own the Omaha company. At the time our gas here was $1.20 they were charging $1.30 and $1.05 in Sioux City and Des Moines. When we were charging $1.30 in Des Moines they were charging $1.20 in Omaha. With like owners the charge in different cities depends upon the cost of manufacturing and distributing. The people I am with figure only a reasonable return and they voluntarily make reductions when they find their income is running over a reasonable return. I don't know whether that is the reason they reduced it here or not. If the demand is large enough to have larger mains to supply numerous large consumers than to supply numerous small consumers, the amount of hourly demand fixes the size of the main. The demand in a residence district comes at about the same hours, and the mains that supply large residence consumers will have to be larger than those used to supply small residence consumers. It don't make any difference whether we are supplying gas to one consumer or to one hundred, it depends upon the amount you make. Of course a larger demand requires a larger investment.

FRANK W. FRUEAUFF, recalled, testified on behalf of the plaintiff on rebuttal as follows, pages 450 to 464, printed record:

Direct examination by Mr. Rose:

In 1901 I was secretary of the Denver Gas & Electric Company and I did some general auditing work for the various McMillian companies. The entries on page 191 to 194 inclusive of Exhibit 140, the Journal of the Lincoln Gas & Electric Company, are in my handwriting, and they are the closing entries of the Lincoln Gas & Electric Company. I was directed to come here and under the direction of Mr. Doherty, to close up the affairs of the Lincoln Gas & Electric Company and open the affairs of the Lincoln Gas & Electric Light
117 Company, in my capacity as Auditor, and those are the final entries of the Lincoln Gas & Electric Company, and include the business of that company up to the close of November,

1901. They had sold and turned over their assets and liabilities to the new company.

The records following this are the records of the Lincoln Gas & Electric Light Company, beginning as if it were a new Journal in another book. At that time we debated whether or not it would be better to purchase a new Journal and commence a new record for the Lincoln Gas & Electric Light Company, and concluded that in as much as a very small part of this book had been used, we could very well use this Journal for the new company, so we opened up the new company in the same Journal, although in a sense it is an entirely different book. The opening entry of the Lincoln Gas & Electric Light Company comes at page 201. That is also in my handwriting, running over to page 203. The opening entries there include all of the business for the month of December of that year. We took over the affairs as they stood at the close of November and commenced on the first of December and this record contains a continuous record in point of time from the close of the affairs of the old company to the opening of the new. They can be verified by the examination of the entries, where one is closed, and it shows that the accounts were properly transferred from the old to the new company. In the change from one to the other we did not suppress any of the business. There is a continuous record. There was nothing to suppress. I do not know why there are some leaves out. I have no recollection of it. Those pages were either omitted or missing. I don't know. I do know that we proposed using the old book rather than purchasing a new one. There is a continuous record which can be verified by tracing the various balances as they are brought over. There was nothing suppressed. The record is in the exact condition that I left it after checking it up and making the closing and opening entries. I have kept in pretty close touch with the contracting of supplies for gas companies as Secretary and manager of the Denver Electric & Gas Company. I have been very closely in touch with what they have purchased.

118 In the past year I have been more directly associated with the New York office and I have kept in pretty close touch with the purchase of all supplies for the properties in which they were interested and supervised and approved contracts and aided in getting favorable markets, and I was actively engaged in that part of the work. That is one advantage that we think we have in our joint work, that is, we can buy at the best advantage and in quantities and in doing so get some benefit. Mr. Malone was employed in this case at my request. I asked him to come to Lincoln and get the data, together and worked with him in preparing the estimate he afterwards submitted. I did that as Vice President of this company. In estimating the value of cast iron and wrought iron pipe, I informed myself as to the market value at that time. We requested a bid in writing from the agent of the United States Cast Iron Pipe & Foundry Company, which is the largest manufacturer of cast iron pipe. We asked him to quote his prices on the various sizes delivered in Lincoln and we used that as a basis for our estimate and it was a good faith estimate. I then knew the market value of cast iron pipe of

the different sizes and I have here the original bids which we received at that time. Exhibit 150 is the bid of the agent of the United States Cast Iron Pipe & Foundry Company. We were large users of this product. We were able to purchase it at as close a figure as other dealers. We believed we were able to get as good a price as anyone purchasing that material in the quantities in which we bought it. We bought a very large order from that firm last year. The prices there are the prices that we or any contractor would have been obliged to pay at that time. That was the best price we could get. We purchased from him last year because his price was lower than any quotations we could get. Four inch pipe delivered in Lincoln last August was of the reasonable market value of $39.85 per ton. Six, eight and ten inch cast iron pipe $38.85 per ton. Twelve, fourteen and sixteen inch cast iron pipe $38.60. Eighteen and
119 twenty inch cast iron pipe $38.35 per ton. Standard specials are the connections and off takes from the pipes that are used in running, like the T's and crosses and various pieces that join one pipe to another. The reasonable price of those connections and T's in Lincoln was $65.10 per ton.

Exhibit 150 is offered and received in evidence.

That Exhibit is in the hand writing of Duncan Bond. He is the Denver agent of the United States Cast Iron Pipe & Foundry Company. In my opinion the operation of a combined water and coal gas plant in Lincoln, is more economical than to operate just a water gas plant, taking the experience of the best years, as a guide. The combined system of coal and water gas, all things considered, is the most efficient and economical for this particular point, because of the fluctuation of the price of either coal gas or water gas materials, it is well to have either one or the other to fall back upon. It is well to be able to substitute one system of gas making for the other, as the occasion requires. Due to the regulations regarding the candle power and heat units, it is well to be able to have both systems to secure the best results economically. The operation of a coal gas plant tends towards economy regarding the water gas plant. One prominent figure is the manufacture of coke. The coke made in our coal gas plant furnishes fuel to use in our water gas machine. If we didn't have the coal gas plant we would have to buy the coke outside at a higher price. We would have to have it whether we made it or not. There is no alternative for water gas machines. You could not use Anthracite successfully as the tremendous cost makes it prohibitive. You can not use any coal of a lower grade as a generator fuel for the water gas.

As Auditor and as Manager of the Denver plant, I have had experience in comparing statistics with relation to the manufacture and cost of the distribution of gas. In the Denver plant we have a very complete system of showing the cost of various items running back for a number of years. In the New York office we have the same record of various companies in this respect. We have
120 the improved machinery that has been devised as aids to making rapid and accurate mathematical calculations. One machine that we use very frequently is what is known as the

Thatcher calculator, which enables us to divide as rapidly as we can put the figures down. We use that to get the per thousand cost of the various items or the per unit cost. Then we have what is known as the Hollerith tabulating machine, which enables us to classify our customers into kind of customers, quantity used and districts in which it was used, etc. We have kept up our compilations and statistics constantly for a number of years. I do not think the statistics for a period of a year are a reliable guide. You ought to use the data for a number of years. You can not use as an absolute guide the statistics in any particular locality. The statistics for a number of years are much more valuable than the statistics for one year. The greater number of years the more closely do you get reliable information.

A theoretical prognosis of the probable business of this company for 1908 would not be as reliable in determining whether a one dollar rate could have been maintained by this company beginning with January 1, 1907, as either the actual experience for the year 1906 or 1907. The prognosis of a year to follow is not as accurate as the practical experience of the past years. In my opinion there will not be any added saving from residuals in the currect year, and I do not think there is any merit in assuming that there would be any saving. I would not predict that there would be. I do not think there will be any saving upon the item of legal expenses in the current year, when it is concluded. I would predict that our legal expenses will be more instead of less. I do not think there will be any economy in the manufacture of coal or water gas, on account of the reduced expenses for obtaining new business, and I do not believe it would be practicable or tend to the general economy of the manufacturing and distributing, to reduce the ratio of expenses incurred for obtaining new business. Where the reduced schedule of prices is arbitrarily put into effect, the only way to make
121 up the net revenues of the company, is by increasing the sales, and it is not practicable in such a contingency for the company to continue business without increasing the ratio of expense for the item of new business. A reduction of those would bring little or no new business to the company. There must be carried on a new business campaign conducted to increase the sales materially. This would be an added expenses such as would bring with it an increase in sales. There is no way known in the practical operation of such plants, by which the company can get any advantage out of the reduced rate, except by advertising generously and employing solicitors and canvassers. The capacity of the water gas making apparatus could not be increased without an increase in the invested capital. You would have to have additional equipment and that would mean the investment of additional funds and would add to the interest charges of the company.

Since the testimony was taken by the plaintiff last September, the company has invested additional funds here, at a cost of something in excess of 7% for the money. It has purchased new equipment and has laid additional mains, put in additional meters and put in additional water gas apparatus and has incurred the cost

of these. The storage capacity of a plant is not governed by any set rule. It depends largely upon local conditions. It varies with each plant, as to the quantity of holder capacity they have. It does not in any wise tend to economy, where a four inch main has become insufficient, to reinforce the main in that particular line by putting in another one at its side. As a rule they take out the smaller main and put in a larger one. There is more economy in operating one main than in operating two. As a small main becomes inadequate, it is better to take out the small one and put in a large pipe and use the small pipe in some other locality. To run two mains would double the number of joints in a given distance and increase the likelihood of leakage and opportunities for leakage. In the distribution of the expenses of the two departments of the com-
122 pany, such as the expense of collection and management, and items of that sort, we have favored here the gas department at the expense of the electric department. For instance, in the matter of our clerical expenses and office expenses, we have apportioned them on a basis that favored the gas department and harmed the electrical. Those expenses ought to be divided more according to the number of customers supplied than at present. The volume of clerical work follows very closely the number of services or meters. If that plan had been adopted and followed here, the portions chargeable to the gas department would have been greater than the two-thirds which we have allowed them and the electrical proportion would have been less. My recollection is that we divided it about half and half, while we have almost twice as many gas customers as electric. They have not been divided here in proportion to the number of consumers of each class supplied and it ought to be more closely apportioned. The gas department has more than twice as many consumers.

In 1908 a return of $1.00 per thousand feet of gas would not have yielded any return to the invested capital of this company using fair and economical management, because the supposed various savings in operation suggested by witnesses are not justified and could not be realized if the experience of the past is examined and without those savings we would have a serious deficit. The rate of one dollar per thousand cubic feet would not yield a profit of 23¢ to 26¢ per thousand, over and above the expenses of manufacture, distribution and maintenance. From the actual experience of the company in 1907, had the one dollar rate been in effect, in my opinion the company would have been bankrupt. It would not have been able to have paid its just operating expenses. I supervised the accounts to a certain degree at this time, and am acquainted in a general way with the disbursements of its funds. There were 179,366,000 cubic feet of gas sold in 1907. A reduction of 20¢ per thousand would have made a reduction in the revenue of $35,873.20 and if the one dollar rating had been in effect that year, the
123 2½% occupation tax on the gross receipts would have been $4,480.15, and the aggregate of these two items is $40,353.35. If the company was called upon to pay that tax at this time for 1907 and refund this excess in rate to the consumers, it could not continue

business. It couldn't do it and have any earnings of any sort to devote to payments on its invested capital.

Cross-examination by Mr. Stewart:

At the time I made the entries in Exhibit 140 I was Secretary of the Denver Gas & Electric Company and was also doing auditing work for other companies when they sent me out in that capacity. Mr. Doherty was also interested in the Denver company. The Lincoln Gas & Electric Light Company at that time was the Lincoln Gas & Electric Company. The individuals who made the purchase were Mr. Doherty and Mr. McMillian. They represented other people, who I don't know. My employment was by them. I am now Vice President of the Lincoln Gas & Electric Light Company and have been for two or three years. That has been my only employment with that company except on special work like this. I secured the information for the opening entries of the Lincoln Gas & Electric Light Company from Mr. Doherty or from the books of the previous company. The reports from this company are sent in to our New York office and the data is compiled from them and as President of the local company I make it a point to examine these reports as they come in and comment and criticise them. The company does not keep any books in the New York office outside of the copies of these monthly reports. I believe the stock books are kept in Emerson, McMillian & Company's office, who are transfer agents of the company. They are not in the office of Doherty & Company. My memory about the outstanding stocks and bonds of this company is a little hazy. There are $2,225,000.00 of stock outstanding, $333,000.00 of 6% first mortgage bonds, and about $700,000.00 general 5% mortgage bonds. I secured that information at the time I opened the books, either from the records of the old com-
124 pany or I was given that same information by somebody else. I think the old company's stocks and bonds were taken up, bought in or exchanged for securities of the new company. I do not think that they were left outstanding. I would want to consult the books before I answer that definitely. The Lincoln Gas & Electric Company's bonds were taken up and the Lincoln Gas & Electric Light Company's bonds issued, but the old Lincoln Gas bonds could not be taken up. Those remained outstanding. I think there was $333,000.00 of them and the property was bought subject to them. The old holder surrendered $655,000.00 of the old company's bonds and turned in $77,000.00 in cash and they received for it $723,100.00 of the new company's bonds. I don't know the individuals who surrendered these bonds and did not know at the time I made the entry. As I recall it I got my information from the directors' meeting held at that time in which the proper resolutions authorizing it were passed. I did not see them surrendered. Mr. McMillian and his associates represented these holders. Who they were I don't know. The purchasers of the old company were represented by Mr. McMillian. I have seen a list of the stockholders in the present company. I do not know who owns the bonds of this

company except I occasionally run across people who say they have some of them. I do not know what the purchasers paid for the old company except as I have given it there. They assumed the assets and liabilities of the old company and turned back the old securities and received the new ones. I would not say they turned theirs over or if someone else turned them in. I do not know. I would not say they were exchanged by the individual holders, from one security to the other. Even though I am Vice President, I do not know who holds these bonds. We have no direct interest in them. The money to pay the coupons is deposited with the fiscal agent in New York and the coupons are presented by banks, trust companies or individuals. We have no record showing who those people
125 are and have no way of knowing. I have none of the bonds. I do not know about the other officers. I know the other officers are stockholders, but whether they are bond holders I do not know. I know that Mr. Doherty owns the company's note for money advanced to it to the amount of $20,000.00. That is shown on the books. There are something over $700,000.00 of bonds outstanding now. I don't know the exact number.

126 GEORGE KNOTT, being first duly sworn, testified on behalf of the defendant as follows: Pages 268 to 273 printed record.

Direct examination by Mr. Stewart:

I reside in Lincoln, Nebraska and have since 1892. At the present I am assessor. I used to be in the grocery business. My store was located at 1st and L streets. I sold out three years ago this summer. I had been there sixteen or seventeen years. That is the next block west of the gas company's plant. I assess in the second ward from M to F and from 11th street west. This territory includes the gas company and I assess real estate in that section of the city and am acquainted with the value of lots in that part of the town and I am acquainted with the block of ground where the gas company's plant is located. The lot values in that locality range from $250.00 to $400.00. The corners of course are worth a little more. The inside lots of the gas company's blocks are worth $250.00 and the corners are worth $400.00. I am Deputy County Assessor and have assessed in that part of the city for thirteen years.

Cross-examination by Mr. Rose:

This block has all of the railroad facilities that it needs. I think it has a track right in the center of it right through the block and it has some east of it. There is one track that runs right through the middle of the block so that they can unload their coal either way. I can not think of any sales at the present time of real estate with trackage facilities, for store house or ware house purposes along the B. and M. railroad track there. There may have been sales of lots in that vicinity for as high as $2,000.00 with trackage facilities. I don't know. I don't know where it would

be. There are no lots down there in that locality with trackage facilities that can be obtained for $400.00. I do not know of any lot between the gas plant and the Burlington station, with track-
127 age facilities that can be approached for $400.00. I do not know that there are any lots that have trackage facilities in that neighborhood within two or three blocks. The railroad is right east of the gas company's plant and between the tracks there are no lots and there are none for sale. There have been no purchasers of lots adjoining the gas company's lots in the last three years. The lots which I have assessed at $250.00 are used for dwelling houses or any other purpose that you want to use them for. I would make no difference between a dwelling house lot and a trackage lot in that vicinity and in making this value I don't take into account at all the fact that the gas company's lots have railroad and switching facilities which enables the lots to be used for commercial purposes, and in my estimation that would not cut any figure in the value. I ran a grocery store down there. It is my own business how large a room I had, and I refuse to state whether I had the grocery store in my private residence and also how large a store I had. It was a small store. The building was 18 by 24 and the stock ran from $800.00 to $1,500.00. I have no occupation now except as county assessor and that occupies my time for three months or more. The rest of the time I get a job as bailiff in the District Court. I have bought and sold real estate in the last two years. I sold that property down there three years ago for $1,050.00. It was 75 feet and it had about $2,500.00 worth of improvements on it. It has not increased in value in the last three years. Real estate generally has increased but down there it has really gone down. It was worth more than $250.00 a lot before the gas company was there. I was there before the gas company moved down there. They moved down about 1891 or 1892, if I am not mistaken.

128 THOMAS H. PRATT, being first duly sworn testified on behalf of the defendant as follows: Pages 273 to 276 printed record.

Direct examination by Mr. Stewart:

I am city Clerk of the city of Lincoln and have been since April, 1899, and as such Clerk I have custody of the ordinances passed by the Mayor and Council of the City of Lincoln. Exhibit 102 is a certified copy of one of the ordinances on file in my office. Exhibit 102 offered and received in evidence. Exhibit 103 offered and received in evidence. I have examined the records in my office and have ascertained that there is no other ordinance passed by the city of Lincoln regulating the price of gas, between this ordinance dated October 9, 1899, and the ordinance set out in the complainant's petition, dated November, 1906. There is nothing pending but those two ordinances. That is the one dollar gas ordinance. The only one now pending. Whether there was one

passed and repealed or not, I am not sure. I will look it up and if there has been any other passed, I will produce it.

Cross-examination by Mr. Rose:

Ordinances are introduced in the Council from time to time in quite a number. The subject of gas rates has been one of rather continuous agitation in the Council itself and in committees and has been a subject of frequent conferences between the gas company and the city. The reduction of the rate by the gas company from the maximum of $1.50 prescribed in the 1899 ordinance to $1.20, was made by the gas company without coercion and authority of the city ordinance. There was an ordinance introduced and it was referred to the committee. Mr. Dunn was a member of that committee. He stated that the company ought to be required to reduce the gas to $1.20 and said that the company had agreed to reduce it to that price and the matter was dropped. There was no written report made by that committee. There was an oral report made by Mr. Dunn in open Council. I was present
129 when it was made, but I don't think it was made a part of the minutes. He just made a statement.

Redirect examination by Mr. Stewart:

I don't know when that was done, but I think I can find out.

Recross-examination by Mr. Rose:

Price to this incident, there were two different rates, one for light and one for fuel. After that there was just one rate.

Redirect examination by Mr. Stewart:

I do not know when this one dollar gas ordinance was introduced. Other ordinances were introduced prior to that regulating the price of gas. I don't know positively but the records will show.

130 Ed. R. Bing, being first duly sworn testified on behalf of the defendant as follows: Pages 276 to 298 printed record.

Direct examination by Mr. Stewart:

I reside in the city of Lincoln and I am assistant city engineer and am in charge of the paving. I have been a civil engineer about seventeen years. I have been with the city about that length of time. I have done sewer work and paving. By sewer work I mean digging trenches and laying sewer pipe. For the last six years my work has been principally paving. During that time I have had experience in the matter of digging and laying sewer pipe and taking up and putting back paving over sewer pipe and gas pipe and I think I am familiar with that class of work. There is considerable difference in laying these mains and sewer pipe. You use a different kind of construction altogether. In gas and

water pipes you use iron pipe and lead joints and in sewer pipe the joints are just filled with cement. I am familiar with the cost of the gas pipe and the value of it only to the extent that I have looked it up recently. I have investigated that question a little. I know what the cost of labor is in this vicinity for the work of laying mains and sewer pipe and I have made figures on the value and cost of replacing mains and service pipe of the Lincoln Gas Company in this city. My estimate is Exhibit 104. I figured gas pipe at $33.00 a ton. That is about the market price at the present time. Everything over four inch pipe is cast iron pipe. I figured the two inch pipe per foot. At the present time the cost is $11.60 per hundred feet, which is the market price. Exhibit 104 shows the number of lineal feet of the different sizes of pipe, miles and tons and shows the cost of two inch pipe per foot and of the cast iron pipe per ton. This Exhibit shows the various items that would go into rebuilding the mains and services of the Lincoln Gas Company from present prices and from what I can gather and I would say that it can be done for that money. It totals
131 $241,427.29. This *This* includes the cost of taking up and replacing the pavement over the mains and services in paved streets. That item separately is $59,894.80. From my knowledge and experience in this class of work, I would say that the figures I have given here would replace the mains and services as shown on that sheet. Exhibit 105 shows the weight of the different size cast iron pipe and pounds of lead per joint on the different sized pipe and the cost of equipment per service and contains the figures that I used in making my computations in Exhibit 104. Exhibit 105 offered and received in evidence. The figures that I have used are the correct figures and the fair and reasonable market value.

Cross-examination by Mr. Rose:

I have never worked in the construction of gas plants and have never worked in the construction and placing of one service at a time. It would make a difference in the cost of services where they are put in on special orders from time to time and where they are constructed all at once. Where they are put in piece by piece as ordered it is the most expensive. That would involve the gathering together of supplies and a special trip made by the men and a team and time to and from the work. My entire experience in civil engineering has been in the service of the city of Lincoln. In a sense I worked for a while at bridgework for Sheeley and O'shea. That was just a short time. I was out of the city's employ for possibly one year. We were constructing just pile bridges. There is a great deal of difference between that sort of work and the engineering in a gas company and I do not think that would particularly qualify me for estimating the cost of the construction of the gas works. There is also a great difference between the construction of bridge work and gas works. I have also kept a pretty close record of the cost of digging, back-filling and all of the items of cost in laying sewer pipe and we keep a correct record. We do not keep any record of the

cost of water that we use in floating. That is merely drawn
132 from the water department free, and neither do we keep any record of the permits paid. The city does not have to take out permits to do its own work. To do a job of private plumbing requires a permit. They don't require permits in dirt streets. I did not estimate anything here for permits or water. I did not figure the lead joints. I have never had any experience in laying pipe with lead joints. I allowed in a general way here the cost of a competent engineer for superintending this work while it was going on but I did not make any special item of it. It is covered though in the cost. The cost of the four inch pipe we figures at 14¢ the running foot, on twenty inch pipe 40¢. The price is figured at $33.00 per ton, both sizes. It can all be bought at the same price. I did not know that the cost per ton of a larger cast iron pipe was greater than a smaller cast iron pipe. It is not according to the quotations we had. I had quotations from current dealers who handle such pipes. The quotations I refer to are from the Municipal Journal, and there is a quotation of $33.00 per ton cast iron pipe.

I did not allow any sums for accidents or liability insurance. That is an element. I don't think I omitted it. I did not make any allowance for that one item, but we put the price of construction at such a figure that it will cover that. I figure 58 1/3¢ per running foot for the cost of replacing asphalt pavement over four inch pipe. It costs money and requires considerable labor to cut through asphalt pavement and you also have to go through the bed of concrete, binder and asphaltum, and when the opening is made the pavement has to be replaced with new concrete, new binder and new dressing and the dirt below has to be tamped or flooded. It could be both. At the present time, under the guarantee that now exists on asphalt pavement here, the contractor is compelled to put back this kind of pavement wherever water or gas goes at the same price per yard that he gets for the original work. He is compelled to do this under the city ordinances. That does not hold good if the guarantee has run out. The cost of cutting the pavement would be added. I have just figured
the cost to the city of this asphalt pavement. I do not see
133 any reason why I should not. I do not know at the present time how many of the asphalt guarantees have run out. There is one district in the city of two blocks that the guarantee has run out.

So far as I know the Green River Asphalt Company is solvent. The city has a cash retainer of some kind for a guarantee on the O street pavement, but I do not think that company could be compelled to perform its contract to replace openings on that pavement. I do not think they can get service on them. I do not know whether it is insolvent and bankrupt or not. The asphalt pavement on 11th street was finished in December 1898 and the ten year guarantee runs out December 1908. Ten years is the highest term that has ever been given as a guarantee. A five year guarantee is the lowest term. That covers two blocks on 12th and one on N; the balance is all ten year stuff. Everything that has been put in up to N is under the ten year guarantee. I do not take into consideration the conditions

under which the opening of asphalt pavement is permitted by ordinance. I think the gas company has filed a bond with the city Clerk to take up and replace all the different classes of pavement. I don't know about asphalt. They probably pay the contractor his price for replacing that. I can not say in that one respect. They have a bond to take up and replace in as good condition as it was and the bond covers damages in case of accident, the gas company to hold the city harmless.

Notwithstanding these conditions, I just allowed and figured the same sum per year for replacing the pavements that the city had to pay for the original pavement. I figured on a basis of going right in and taking that out and putting this construction in, putting the pavement back in first class shape and completing the job. I think the company could do it as cheap as the original price. That is my judgment under our guarantees here. It would be impossible to replace the area removed by a ditch at the same cost the entire street was paved for. All of my figures are based upon an average in a general way. As a matter of fact the cost of digging a trench for a 20 inch pipe is much greater. You have to dig a wider trench. The
134 cost of digging a trench for a 20 inch pipe would probably be double the cost for a four inch pipe. I took an average on the ditch for all classes of pipe.

You can lay most any pipe up to about twelve inch pipe, outside of your bell, in a 22 inch ditch. There is no 20 inch pipe under asphaltum. I do not think there is any sixteen inch pipe nor any twelve inch. The schedule there will tell that. I believe you can lay a twelve inch pipe in a 22 inch ditch outside of the bell. They generally dig around the bell so they can calk or lead, etc. A 22 inch trench will cover a ten inch pipe nicely. There are 45/100 of a mile of ten inch pipe under asphaltum and a little over one-half a mile of eight inch. For laying of an eight inch pipe I would not open the asphaltum at the top any wider than twenty inches, which is wider than eighteen inches. It would be a question of judgment. We could open it eighteen inches and lay the pipe there or we could open it twenty. That is usually up to the superintendent or for-man. A ten inch pipe could be laid in a 22 inch ditch. That would be about right. I figure on an opening of 12 inches for a service pipe. In ordinary practice if they don't bore, the opening for a service pipe is made eighteen inches wide. If we were opening up asphaltum I don't believe it ought to be opened any wider than twelve inches to keep down the cost. I estimated an opening of twelve inches for all services except brick. In dirt streets we would probably take out about eighteen inches and in brick streets we would take out about the same. For the laying of any sort of main under the brick pavement, we would have to have about a twenty-four inch opening. The workman could not make the connections in a twelve inch ditch. They might do that but they would block it out to get room to work. That would require a litile extra work there to make the additional opening wider. In the service pipes I am figuring only to the lot line. The average length of service pipe is 50 feet. I do not go beyond the lot line, and we did not allow anything for the cost of

permits and did not figure anything for carrying the service
135 from the lot line to the inside of the house, nor did I allow anything for meter connections.

I think the gas company at one time constructed these service lines to the inside of the house and made the connections with the meters. I am not sure of what they are doing now. I was not asked to figure that far in. If that is a proper item to be allowed I have made no estimate upon it. The item of $3.35 for labor is the labor for one service. It consists of the labor costs of the services, an average of 50 feet in length on dirt streets. I am not in shape to give you the different items that make up this total of labor. I went into the details at the time I made up the schedule but I do not have them here. I made no inquiry as to what the actual cost of the labor was in those cases to this company or to any other company. I based it on prices we pay men for ditch work. In addition to the men who dig the trenches the pipe-fitters' labor would be figured in making this service. He generally gets about 25¢ an hour. In bridge work ten hours per day is common practice. I believe the law provides for eight hours. The average tradesmen here runs from eight to nine and ten hours per day in common practice. I don't know that I know of any tradesmen that work to exceed eight hours per day for a day's work. Eight hours ordinarily constitute a day's work of all kinds in Lincoln.

We figured $9.00 as the whole cost of a single service. There is no labor involved in this item of $3.35 outside of the gas fitter and the trench digger. It costs something to transport the material and distribute it but I get an allowance for that. The drayage for a single service I figure at 50¢, that is, where you are putting them in right along in a street. I did not figure on going out and spotting one in here and then going out to another part of town. I figured this as a joint business. I figured it as a straight proposition, completed all at one time. For an eight hour day I can hire a trench digger at $1.75 per day. Most anyone that is digging a sewer trench or any class of digging can hire efficient men at that price. In a great many cases the price of common labor is $2.00 a day for
136 eight hours in Lincoln. That has been the general and prevailing price, but I do not believe it is at the present time. A fair digger would open up 100 feet of 2½ trench easily in a day. The width of such a trench would be about sixteen or eighteen inches. This would average about 12½ feet an hour. This is not paved streets. It is in dirt streets. I used this same $3.35 in the paved streets, but I figured the cost of the paving separately. 2½ feet was the depth that we figured the services below the ground. The main trenches varied and I figured on about a 3½ foot ditch. At the point where the tap was made, the service trench would have to be as deep as the main trench. I figured it on an average. I am not in the gas business and I would not want to say that I know exactly what would be required for trenches for this pipe, but we figured the services on an average depth of 2½ feet. I would not figure the depth of the service trench at the lot line at 1½ feet. It is possible that we figured the service trenches on a three foot basis in depth.

We figured it up, I know that. I would not swear whether we figured at 3½ or 2½. Make it either one you please and we will go ahead that way, or make it three feet. I do not believe now that 2½ feet would be a sufficient average depth in a great many cases. I will admit that that depth would run the services very close to the ground at the house, but I will stand pat on that anyway. I think that is the basis we figured on and I will stay by it. If I made an error on that I would expect it to be taken account of, but the difference would not be much in the cost. In freezing weather it would make a difference in the temperature of the gas. In this climate a gas pipe ought to be buried at least two feet at all points. For certain safety it ought to be lower than that. While 2½ feet is pretty safe, 2½ feet would be the average of safety in practical engineering. We have short spells of very severe weather in this climate. In my construction work I have never dug a ditch 2½ feet deep and only 12 inches where men are expected to work. It is possible to be done, but it is not practicable or sufficient in ordinary construction work.

137 Sixteen inches is plenty wide for that depth for small pipe. I only allowed the cost of a twelve inch ditch for services in cutting through asphalt.

On exhibit 105 I allowed twelve inches for services under asphaltum and cedar blocks, brick eighteen inches. I have seen trenches 2½ feet deep constructed for this sort of work, but I would say that would not be a proper way to open up a ditch. I have never laid any gas pipe. I have done considerable sewer work and considerable ditch work. For the sewer work we used vitrified tile pipe. I superintended the work and did the engineering and ran the men and attended to the pipe laying and the building of the man holes and the job complete. We usually did that work by sections. The digging would run all the way from five to fourteen and fifteen feet deep. Of course it makes a good deal of difference. The deeper the trench, the more proportionately it will cost. The dirt has to be raised higher and the efficiency of the laborer, who is in a cramped place is necessarily lessened. Some of these mains in this city are down pretty far in places. I could not say whether any of them are down twelve and fourteen feet or not. I did not allow anything for large mains at any such depth. I know in a general way the condition of the soil which the mains from the works up town traverse. I did not figure that it was necessary to dig the ditches low enough so the pipe would rest beneath the influence of surface water. I did not know whether gas mains were down that deep in the bottom at the plant. I have not endeavored in this work to make my figures as favorable to the city's cause as I conscientiously could. I believe I have made errors against the city's interest in this figuring, for instance, I think a great many of the services are put in without the taking up of a foot of street and undoubtedly it cheapens the cost under a lot of this pavement. I am endeavoring here to figure the replacement cost against the gas company's engineers' figures.

You could put in new services without opening the streets by boring. You would have to go down at each end and to connect,

but you would not have to take up the entire distance of an
138 asphaltum street. You would have to make a manhole or something first anyhow. You would have to have room to make your taps at the main and you would have to be prepared at the other side to make your connection through and you would have to have a place for the auger. I know they do that in the streets here in Lincoln. The gas company seems to do it successfully. They do it at least. They put in a service down on my own lot. They crossed under a thirty foot pavement and never took up a shovelful. The gas company did that with their own men. The service did not come from the church and run down a trench outside of the pavement. I believe I am pretty well posted about that. They crossed under the pavement, 30 feet wide, without taking up a yard of paving. I was right there on the ground at the time. David Saul was the foreman on that work. That was done in August or September last year. The church is there on my side of the street too. If they came from the church they would not be required to go under the pavement. I know positively that they did not connect my service up from the church service. There was no intention to err either way. The object, so far as I was concerned, was to be as fair in this matter as I knew. On every item in this replacement I can not vouch for my ability in making a practical estimate here. If I were to figure this over again, after this cross examination, in the interest of fairness, I would put those services a little lower in the ground and increase the cost.

Redirect examination by Mr. Stewart:

In digging of a trench, six inches deeper would not add very much of an item in dollars, to the cost of digging. Making the additional allowance, I think these figures would cover the cost of new construction to the present time. Last year labor was $2.00 per day for an eight hour day instead of $1.75 as it is now. Back ten or twelve years ago you could get first class labor for $1.50 per day for eight
hours. For the past six years you would have to pay all the
139 way from $1.75 to $2.25 for digging. The city pays for common labor $1.75 for eight hours a day, which is the same labor that is required to do this class of digging. The alleys of the city are not as generally paved as the streets. The alleys are principally paved in the heart of the city in the business section and generally through the city the alleys are not paved.

140 J. M. DIFFENBAUGH, being first duly sworn testified on behalf of the defendant as follows: Pages 298 to 324 printed record.

Direct examination by Mr. Stewart:

I live in Lincoln and have lived there for about 22 years. My present occupation is contracting and building sewers in this city. I have been in that business for six or seven months. Previous to that I was water commissioner in this city for three years. Prior

to that I was an employee in the water department. My work in the water department was mostly construction of mains and involved the digging of ditches and laying of cast iron mains. I do not know that this work differs in any way from the laying of gas mains, except that with the gas pipe you have to lay to drip. The work would be the same so far as the laying of the pipe and the labor is concerned. I was in that work about 20 years. I used to employ the labor for this construction work and the city generally bought the materials. The materials were under my supervision. I am acquainted at the present time with the price of such labor that is required for the digging of ditches and laying water mains and I am in a general way acquainted with the market value of the gas mains and the materials that enter into the construction of gas mains and services in this city. I have made an estimate and can state the reasonable cost in value of the labor and material that would be required to replace the gas mains and services of the Lincoln Gas & Electric Light Company in this city. Exhibit 106 is my estimate. It is a correct estimate and shows the reasonable cost.

Exhibit 106 is offered in evidence.

On the four inch pipe I base the actual cost of the material and labor at 52¢ per running foot to complete the job. I figure that pipe at 19 pounds to the foot and $33.00 per ton, for four inch cast iron pipe. For the two inch wrought iron pipe, I figure 21 cents a running foot for the laying of the pipe, exclusive of the paving.

The price of the pipe is 11 6/10¢ per running foot. That is
141 the market value quoted to me at this time. I got the quotations from the Western Supply Company, wholesale dealers in plumbers supplies and pipe. That is what it is worth in the market here and what is quoted to me. I figured cartage $500.00 for the drayage and hauling of this two inch pipe; the extras that there would be fitting along the line, etc., I figured at $1,000.00, and the labor at 9¢ per running foot, that is, for digging the trench, back filling and laying the pipe. That would be for a fifteen to an eighteen inch trench 3½ feet deep for the mains. That would cover the cost of laying the two inch pipe. On the four inch pipe I figure all of the pipe of course on the basis of $33.00 per ton. It can be bought today for a little less. I figured the lead at 5¢. I am informed today it can be bought for 4¢ per pound. I figured the cartage at 50¢ per ton. That covers all of the pipe. I figured 3¢ for extras, something that generally goes in. We might not use it, but for instance, there might be a drip or something like that to go into the mains. That makes 3¢ extra per foot. I am not familiar with where they are located and I could not tell, but there might be something special to put in, in that line. On the six inch pipe I figured 2¢ more for laying. They are a little heavier to handle. In all other respects it would be the same. On the eight inch pipe I figured the labor at eighteen cents on account of it being a little heavier to handle the pipe. On the ten inch pipe I figured 22¢ for the labor; on the twelve inch pipe 25¢; on the sixteen inch pipe 35¢; on the twenty inch pipe 40¢. Of course for the twenty inch pipe or any pipe over six inches, can be bought for probably $1.00

less than the smaller size pipe, but I figured on the basis of the smaller pipe, that is, $33.00 per ton. Pipe varies so much it is hard to keep track of it. From my experience in laying pipt I would say that these figures I have given would be adequate to cover the cost of reconstruction today. Sometimes the cost is more and sometimes it is less.

142 I have been familiar with the price of labor and material for the past 20 years. I can not recall them now. The cost has varied considerable, from $18.00 to $40.00 per ton. The cost of labor has varied probably in the same proportion. The cost of labor has never been higher than it was this last year. It was extraordinarily high. I don't know how deep on the average, the gas company lays its mains. Some of them are very shallow and some of them are deep, but perhaps they would average three feet. I should judge wherever we ran across them in the line of the work we have done, and we run across them frequently in laying water mains and sewer pipe, the depth of their services varies considerably too. It is hard to tell how deep they average, but I would say about three feet.

I can get all the labor I want for 20¢ an hour, and you can get it too for 17¢ an hour. Last fall the ruling price was from 20¢ to 25¢. Prior to that time the price for diggers was from 12½¢ to 15¢ and 17½¢. I don't know that the work of making the joints requires any special skill only screwing the pipe together. These connections in gas mains are made similar to the connections in water mains. The pipe for both water and gas mains are joined with lead joints. They are laid, yarned and calked for them to pour the lead in and that causes the joint. The services I estimate at $9.00 a piece. I figured services 50 feet in length of 1¼ inch pipe at 7¼¢ per foot. I figured the gas cock at 78¢ and the stop box at 72¢. I believe they quoted me that and the labor. I allow $3.00 for the labor, 50¢ for the cartage, 37¢ for extras. You want a nipple and L when you make the connection and a tap most generally on a two inch pipe. I made an estimate on extras on a two inch pipe for that much. From my knowledge and experience of the reasonable value of these items I would say that this is sufficient to cover the cost.

I have made an estimate of the cost of taking up and replacing paving. For the service I figured a ditch three feet deep. I am not acquainted with the depth that the gas company lays its service pipe in this city, but I do not think it would average more than 2½ feet.

143 I do not know exactly what depth they use. I have examined them and seen them while we were doing construction work and I do not think they would average over 2½ feet. On the mains under the wooden blocks I figure 33¢. That is the average for a main two inches up to ten inches. I figured 11,300 lineal feet under wooden blocks. I don't know of any wooden blocks in this city now. I figured 72 services under the wooden blocks at 22¢. These figures include the taking up of the blocks, provided they were there and replacing them and also taking up the concrete and replacing it. On the wooden blocks pavement I figured on opening a ditch

12 inches at the top and 18 inches, for the mains. You can work in a 12 inch ditch, provided you do not go down any deeper than you do for a service. On the two course brick I figured 6¢ per foot with extra labor and figured on replacing the same material. When you take the pavement out it helps on the digging. There is nearly a foot that you do not have to excavate, and in consideration of that and the fact that the materials would be replaced, I figured that 6¢ per lineal foot would be a reasonable price and on services under two course brick I figured the same. On the asphalt I figured 58 1/3¢ per foot for 49,100 lineal feet of mains. I figured on a trench 18 inches and labor and material makes up that cost. I do not figure on saving any of this material. That has to be replaced with new material. Neither have I made any allowance there for boring. On the 17,080 lineal feet of services under asphaltum, I figured at 38¢ a foot. I figured on opening a trench on this asphalt about 12 inches wide for the shallow ditch that we have to put in. You might have to make it a little wider if you had to dig a deeper ditch, especially at the point where you make the connection. I have had actual experience in this work of taking up pavement and laying it back, in connection with the waterworks and sewers and my figures are taken from my actual experience. Taking it as a whole I think these figures are the reasonable cost for doing all of this work. I have allowed nothing for profits but superintending can be done under this estimate.

144 I have averaged all of the work and aimed to put in enough to cover the superintending. In the services you might save considerable by boring, if you bore five feet on each service, if you had the trench open six or eight feet, the condition would tell you what to do and in that way you would save all of the paving and all of the trenching. My figures are based on actually taking up all of the pavement and replacing it over the mains and services. My observation has been that water pipe in Lincoln is affected in some places by electrolysis, especially along the car tracks and along and around the power house. There has not been any considerable amount of pipe affected that way during my twenty years of experience. The only difference in that respect between water mains and gas mains is that the water mains are coated with a composition of asphalt dope and the gas mains are not unless specially ordered. It has been several years since I saw mains affected by electrolysis. They have helped that by bonding some of the mains down by the power house. To make a connection they tie a wire around the main and run it back to the power plant. I have not seen any mains affected that way lately, but I have within the last three or four or five years. They bonded them possibly ten years ago. I have forgotten how long ago it was they first noticed the trouble. I have never taken any mains out on that account. It was not so bad that we had to. We made connections at the very dangerous points, at the power house, and I believe some of the gas mains and water mains are bonded now. I have not seen any bad effects from electrolysis of recent years at any place except near the power house. We have traced through to it but they have

laid lots of it to where the services gave out frequently. They have laid electrolysis to the giving out of the water services frequently. The alkali soil, I have observed, has a detrimental effect on the water services. We found that in places they only last a few years and in other places they last a good many years. I have not observed any effect on the mains.

145 Cross-examination by Mr. Rose:

The tapper in the water department is the man who makes taps to turn off and on the water in a general way. I commenced in the water department as a laborer and worked up. I was a laborer until about 1891. I received from $1.75 to $2.00 per day. I became a tapper I think in 1898. Between 1891 and 1898 I was foreman of the construction and received $65.00 per month. As tapper I received $70.00 per month. During that time I worked under the supervision of the water commissioner. Most of the time until recent years the water commissioner has been appointed by the Mayor. The water commissioners whom I served under were Mr. Lyman, Mr. Bullock, Mr. Percival, Mr. Byers, and Mr. Tyler. The highest wages I ever received in the water department up to the time I was elected water commissioner, were $75.00 per month. I never was an accountant or an engineer and have never had any extended experience along those lines. I made the calculations shown on Exhibit 106 and they are the best calculations I can make. If I had the contract to do this work perhaps I could extend these items more accurately than they appear, but I speak for the accuracy of these items. The item of $142,866.54 on this Exhibit is a correct addition of the items in the column above, perhaps it will vary some, something like a few cents. We are all liable to make mistakes. I did not spend a great deal of time on this table. I compiled it myself. I have not had any engineering education. I used to think I had a good common school education, but I have not had any technical education in these things. I became water commissioner in 1904 and retired in May, 1907. During that time I think we constructed more than two miles of main, but I would not say that it was more than five miles. The number of men we had in that department varied at different times. Mr. Traxell was the accountant in the office at that time. Since retiring from the water commissioner's office I have been doing contract work. The largest contract that I ever undertook
146 was possibly about $1,500.00. That was building a sanitary sewer. It was done under the supervision of the city of Lincoln and I made my contract with it. It was located over in the sixth ward. We had to cross the pavement on Sumner street and 25th and on the alley between 24th and 25th on Sumner street. They were asphalt. The city charged me up for replacing the asphaltum and I closed the concrete pavement. I kept an accurate account of the labor employed in cutting across the streets. In crossing the pavement at 25th and Sumner I had one man to cut the asphaltum. He cut through the asphaltum, the binder and

the concrete. I think the concrete was four inches and I believe the binder was 2 inches and the asphaltum 2 inches, making in all about ten inches, but I am not positive. He opened it with a pick and an axe. He used the axe to cut the line through the asphalt, the top dressing and he used the pick on the binder and in the concrete. It took just three hours to cut a hole through, eight feet long by two feet wide. We did not cut clear across the street. He cut two holes in the pavement and tunneled the balance and I paid him 25¢ an hour for the time that it took to cut through the paving down to the dirt. I took notes at the time and from actual memory I noted that at the time. I will recall the name of the man in a little while, probably, that I paid 25¢ an hour for doing this work in three hours.

I have had eight contracts with the city of Lincoln and in addition I have sewer and water contracts in east Lincoln and southeast Lincoln. One was for L. J. Dunn, another for Mr. Orr. Mr. Dunn's was water to his private residence. Mr. Orr's was sewer. Mr. Orr's contract was less than $100.00. This is the extent of my experience in contracting. I don't remember how far I ran the sewer for Mr. Orr. I ran from the house down to the alley and down the alley for perhaps 200 or 300 feet. In the last six months I have been a somewhat extensive employer of labor. Sometimes I had a dozen and sometimes as many an thirty men. I can not tell you how many they would average. In our
147 business we take up and lay off men as we need them. My work is not continuous. Mr. Bing assisted me in making out the tabulation on the asphaltum. We went over it after it had been made out, and compared with each other the cost of services and the labor. I did not change my estimates any. I do not know whether we correspond or not. I estimated $3.00 for labor for a trench three feet deep.

During the giving of my testimony I had a memorandum of the details that I pulled out and used. I was present here during all of Mr. Bing's testimony. In my employment here no price was stated and nothing said about it. Mr. Stewart asked me to do it. I expect to receive something for it, but nothing was said about the price. On two inch pipe, gas cocks and stop boxes and one and one-fourth inch pipe I got quotations from the Western Supply Company. I got a higher quotation from them on the four inch pipe which I declined to use, because I could buy it cheaper. The quotations on four inch cast iron pipe are considerably higher than they were in 1905 and 1906. Six inch cast iron pipe can not be purchased in Lincoln today for less than $40.00 a ton. I am not posted in Lincoln, but I am posted on the factory prices plus the freight. I am not an electrician but I have read considerable of the action of electricity upon cast iron and wrought iron pipe, but not far enough to be an expert on it. I have read a good many scientific papers. I can not tell you now what they were. It would be worth considerable money to a man who could devise a method to prevent against electrolysis. I do not know of any way to entirely prevent it. I do not know whether or not

there have been any extensive lines of gas mains that were necessarily taken up on account of electrolysis, by the gas company here. Water pipe as it is manufactured, is dipped in a solution. That was not done to protect the pipe from electrolysis. It was done long before they ever knew anything about electrolysis. The solution protects the pipe from the soil. The coating is not an electricity conductor, but so far as I know it does not afford
148 a sort of an insulation. The water pipes are laid to carry water and the water pipes of the city are filled with water most of the time. Water is a conductor of electricity. Gas pipes instead of carrying water carry gas. I don't know whether gas is a good conductor of electricity or not and I don't know whether the gas or water mains are most liable to electrolysis or be affected by it. I do not know whether the experience with water mains furnishes any criterion at all for gas mains, in that respect I don't pretend to know.

My price of $33.00 a ton for cast iron pipe was secured out of the Municipal and Engineering News. I have several quotations. They give q*h*otations every week. That is a journal devoted to the interests of the municipal ownership on all subjects. It is published in New York, I forget who is the publisher. The rate I quoted on four inch pipe is the same they quoted on twenty inch pipe. I think twenty inch pipe is $2.00 less, but I gave a price of $33.00 per ton for all sizes to make it safe and I gave the gas company the benefit of the doubt. I think that I can get four inch cast iron pipe delivered in Lincoln today for $33.00. The price fluctuates considerably but I could have done that in the last six months. I could have had it from the United States Cast Iron Pipe Company and the American Pipe Company of Birmingham, Alabama, and I can produce quotations from that company within the last six months. I had the quotations the other day, but I don't know what I have done with them. The car rate from Birmingham here used to be $5.10 per ton. That is what we always paid when we bought our pipe and I added that to the quotations and still kept within the $33.00. I think the quotation is as low as $24.00 for twenty inch pipe. $26.00 was the highest with one dollar extra for gas pipe. I would not use the quotations of the Western Supply Company on cast iron pipe, because I think I can buy it as cheap as they can. When I am in business I buy where I can buy it cheapest. They ought to know where to buy as low as I can. They are in the business and I think I can get the market quotations as low as they can on cast iron pipe with my stand-
149 ing and knowledge as a contractor. I deal at present quite extensively with the Western Supply Co. I asked them the price and they took two or three days to look it up. They also quoted me the cast iron. I do not now remember the name of the man who cut the asphaltum on the 24th and Sumner in three hours.

Redirect examination by Mr. Stewart:

His name is Frank Watson. I found electrolysis on the city water mains around the power house mostly. There seems to be

a misunderstanding and of course I can't tell when that took place, but you can find indications of it at any time, and can now.

Recross-examination by Mr. Rose:

Electrolysis will pit cast iron pipe, where it leaves the main and make a hole in it. It forms a crust and under the crust you will find it pitted. I don't know whether electricity eats or decomposes the iron. I am not an expert although I know they claim that where we find the pipes pitted that electrolysis does it.

Redirect examination by Mr. Stewart:

Exhibits 107 and 108 are quotations of the gas pipes taken from the Municipal Journal and Engineering News, a trade journal, devoted to municipal and private contracts that they can get trace of. I think I have the papers that these quotations were clipped from. I will bring them here if I can find them. One is dated April 12th, and the other is a week previous, 1908. I think it is a reliable journal circulated among contractors and trades people. Exhibit 107 and Exhibit 108 offered and received in evidence.

Recross-examination by Mr. Rose:

I do not know where Frank Watson is now. He worked for me considerably last winter. I can not tell when I last saw him, but I think it was along the fore part of April of this year.
150 I think he is a married man, but I don't know where he lived at that time, but I think they lived in Lincoln. This municipal journal does not, that I know of, deal in pipe or receive and fill orders for pipe. I do not know what the financial responsibility is. If I were ordering pipe I would not order it from this journal. We have no guarantee at all that they would make their quotations good. This journal is published in the Flat Iron Building, New York City. I can not tell you what the rate of pipe per ton is from New York City to Lincoln. This journal is published weekly. It is devoted mostly in the interests of the contractors and of municipal ownership and everything pertaining to municipal affairs. If I were to make a contract I would investigate the quotations a little further by inquiring of the foundry but I think they are very reliable. The United States Cast Iron Pipe & Foundry Company is the largest dealer in cast iron pipe in this country. I- has its headquarters in New York City and has a foundry at Birmingham. They have a string of foundries all over the country. The quotations of that company at the foundry, with the tariff rates added to Lincoln would give the correct price and give the price that a contractor at any particular time would be obliged to pay, unless he took a large supply, then he could probably get it for less, but you could get a quotation on a large supply.

If Mr. Malone made his figures on that basis, I think it would be right. Frank Watson was just a laborer. I think last year he worked for the Beatrice Creamery Company. That is my impression.

Redirect examination by Mr. Stewart:

I have followed the quotations of cast iron pipe in this trade journal and have found them reliable. This shows the quotations at Birmingham and I figured on that plus the freight. The freight from Birmingham here was $5.10. That is what we used to pay.

151 LOUIS JENSEN, being first duly sworn, testified on behalf of the defendant as follows: Pages 324 to 328 printed record.

Direct examination by Mr. Stewart:

I reside in Lincoln, Nebraska, and have lived here since 1878. I am a building contractor and have been engaged in that business in this city since 1884. I do the complete work from the excavation up, stone work, brick work and all the branches of building. The qualifications of the witness as a builder of brick and stone structures is admitted. I have examined the buildings of the Lincoln Gas & Electric Light Company in this city with a view to making an estimate of replacing them. I did that yesterday. I am prepared now and can give an estimate of the replacement value of these buildings and of the labor and material that enters into their reconstruction. In company with Mr. James Tyler Sr. the water commissioner and architect, we measured the present buildings and found the present value of all the buildings is $39,934.00. One building was $10,395.00. The center building was $15,047.00. The west building we estimated at $6,550.00 and the two story part of the west building $1,092.00. A coal shed $2,000.00, an oil house $500.00, an electric motor house, it was a small house on the northeast at $650.00, two chimneys, one steel and one brick, $3,700.00. We found that the east building had depreciated 25% making its present value $77,961.00; the center building had depreciated 30% making its present value $10,532.97; the west building was depreciated 30% making its present value $4,585.00; the two story addition there was no depreciation. The coal shed had depreciated 50% making its present value $1,000.00; the oil house had depreciated 40% making its present value $300.00; the electric motor house had depreciated 20% making its present value $520.00; the chimneys had depreciated 15% making their present value $3,145.00. The total present value was $28,970.97. In the first figures which I gave as the replacement value I included in them the contractor's profit and I would be willing to take a contract to replace them at those figures.

152 Cross-examination by Mr. Rose:

You could not very well take a contract to replace them in their present shape. Some of them are about fallen down and you could not construct them the way they are. Some of them are pretty shaky. They have depreciated so much they are cracked in many places and they do not seem to have been kept up very well. It looks to me as though some of them will require the cost of replac-

ing them at an early date. The roof seemed to be all right. It seemed to be the walls. They were lightly constructed nine inch walls and there is a kind of a soft foundation down there. I presume they have settled and cracked. That was the main thing. I do not know how deep the footings are. We could not tell from the house. Some of them projected up above the ground. I have had no experience in excavating in that particular locality and I do not know how deep the footings are for a big chimney. On figuring on a contract of approximately $40,000.00 involving as many buildings as there are there, I would go more into details. I estimated one of those buildings and found that the cost would be about $8,000.00. We put it at $10,000.00. Mr. Tyler was there with me and we consulted with regard to the cost at the present time and so we put it a little higher. In other words he put it at 6¢ per cubic foot. That class of buildings are sometimes estimated at from seven to sixteen cents per cubic foot and he rather thought that this class of buildings should be estimated at about six cents and so I yielded and set that price on it. I ran out and estimated the materials in the various walls and the cost of the labor per thousand feet of brick and the like of that on the first building. I designated that No. 1 and I found the estimated cost of that would be about $8,000.00. We put it at $10,395.00 on account of putting it at 6¢ per cubic foot. I estimated the material used because that was the hardest thing to get out and found what it would cost. That was the item of $2,000.00. Aside from those two items I did not attempt to go into it all in detail, the time I had would not permit me to
153 run out the details and to reduce the work to details so I could figure with absolute accuracy. All of the buildings being of the same nature we based it on this 6¢ per cubic foot. The buildings are not all identical. They are a little different. We did not estimate the receptacles for tar that are excavated into the ground. We just estimated the buildings. I could replace the two parts of the west building for $7,642.00 which is the sum of my estimate on the two parts. The west building is just a large room. I- has a west wall then the north and south walls, then a flat roof on posts. The $1,000.00 building was new. That was 20 by 29 and 29 feet high. That is including the basement. There are very few brick in it. There is only three nine inch walls. Last year when brick masons were scarce I paid 67¢. The highest wages were 67½¢. The scale is about 55¢ this year.

Redirect examination by Mr. Stewart:

The scale was the same last year but we had to raise it because of the scarcity of brick layers. The coal shed is in the worst condition.

154 H. S. WIGGINS, being first duly sworn, testified on behalf of the defendant as follows: Pages 333 to 340 printed record.

Direct examination by Mr. Stewart:

I live in Lincoln and have lived there for the last nine or ten years. I am a public accountant and have been engaged in that

business in Lincoln during all of this time. Prior to that time I was a railroad accountant. I have been in that business altogether between twenty and twenty-five years. I have examined the books and accounts of the Lincoln Gas & Electric Light Company, plaintiff in this case. I have done that in the last three or four weeks. Any tabulations that I have made of the receipts and expenses of the gas company, have been made from the books known as the yearly gas account. I have also examined in this connection, what is known as the accountant's table, with ledgers that show the segregation of the expenses. The gas report for the years 1902 to 1907 inclusive, will be needed. I have made an analysis of these accounts and comparative statements. I have them with me. Exhibit 117 shows the expenses or the cost of material and expenses of making coal gas for the years 1905, 1906 and 1907. Exhibit 118 shows the cost of material and expenses of making water gas for the same years. Exhibit 119 shows the cost of the mixed gas on the basis of the amount sold, for the same years. Exhibit 120 is my recapitulation of the gas made, the gas sold and the gas used by the company and the gas unaccounted for, for the years 1902 to 1907 inclusive. Exhibit 121 is comparative ratios showing the comparison in various items of cost and expenses for the years 1905, 1906 and 1907 with the results for the year- 1906 and 1907 being compared wtih the results for the year 1905. Exhibit 122 is a comparative statement of gas sales, expenses and net earnings for the years 1902 to 1907 inclusive, showing sales, price per thousand and net earnings. Exhibit 123 is a summary of the twelve months for the year ending December 21, 1902 of the expenses of the gas department, also a summary of the earnings. Exhibit 124 is a report by
155 months for the year 1903 also a summary in the back of the book for the entire twelve months. Exhibit 125 is a report of expenses and earnings of the gas department by months for the year 1904 also a summary in the back part for the entire twelve months. Exhibit 126 is a report of the earnings and expenses of the gas department for the twelve months of the year 1905. The summary for the year 1905 is in a separate statement. Exhibit 127 is a summary of the earnings and expenses of the gas department for the year 1905. Exhibit 128 is the report of the earnings and expenses of the gas department for the twelve months of 1906. That does not include the summary. That is mentioned in another Exhibit. Exhibit 101 is a statement of the earnings and expenses of the gas department by months for the year 1907, also a summary in the back for the entire year. Exhibit- 117 to 122 inclusive are compiled by me exactly as they appear in the books of the gas company, which have been identified as Exhibits 123 to 128 inclusive and Exhibit 101.

Exhibits 117 to 122 inclusive offered and received in evidence.

All of them are taken directly from the books except Exhibit 121 which is my own compilation based on these reports. They are correct calculations to the best of my knowledge and belief. From the original vouchers and invoices the company paid the Pittsburgh Coal Co. in 1906 for Yououghery coal, $5.40. In 1907 the average

price paid was $5.46 ⅔ per ton. In 1906 some of the coal cost $5.70, $5.75 and $5.85. Part of the time the regular contract price was $5.375 and part $5.20. The average price paid at Lincoln that year was $5.40 on the cars. That didn't include the cost of unloading it. I have not computed this cost on the cost of unloading and handling per ton.

Cross-examination by Mr. Rose:

I omitted the expenses for making coal gas in the years 1902, 1903 and 1904 in Exhibit 117 for the purpose of simplifying the matter and avoided covering such a long period of time. In the summaries in Exhibits 122 and 123 I included those years because the cost of gas was different and it was decided to show the amount the gas sold for, for a longer period of time than we cared to go into
156 in the Exhibit. We did not think we could make a point by this item in those years and carry that item and omit the same years in the other general summaries, because they could not serve the city. The reason was to show the effect on the net earnings of the reduction in price from the year 1902 down until it reached the rate of $1.20. I do not think, so far as any point goes, that the expenses of 1902, 1903 and 1904 would be very material. The fact that the cost of manufacturing and delivering during those years was decreased, would in a measure compel a reduction in price, and the schedules as to the station cost of manufacturing and delivering gas to the holder would be interesting date, but I don't know what bearing it would have on the analysis of the reduction as compared against the net profits on the business for different years. I do not know so I can not tell you. The decrease in the cost of manufacturing and delivering the gas itself to the holder, might be so great as to entirely compensate the reduction in charge.

These schedules were included in Exhibits 119 and 122 and excluded from the others for those years because it was not desirable to encumber the records of the Exhibits with a great mass of figures. In excluding the items for those years I did not take into account the fact that the station cost of gas had decreased. That element did not enter into it. I did some work on this last October and at intervals since I have applied to the company for access to its books and records and I have been given full access, consistent with convenience of the company in administering its own business and I have checked out and approved in a measure the accounts of the company. From my examination of the books I would say that the methods of accounting employed by the company seem to be fairly accurate and conscientious. Such mistakes as I found were such as I might expect to find in any set of books. I found nothing to indicate any effort during any of those years of a manipulation of the books or anything of that sort. So far as my examination goes I would say that the company has attempted at least, to keep an honest and fair record of its business transactions and after
157 checking them out I would feel justified from relying upon the general summaries, in exhibiting the business in a summarized form.

On the third sheet of Exhibit 119 I have shown the distribution expenses and collection expenses of the mixed gas. I did not take anything into account for interest on the investment. I followed the method of accounting used by the company and I did not take anything into account for the item of depreciation. The company in its system of accounting does not enter up these items as a part of the distribution expenses. I think it would be good accounting to apportion what is regarded as a reasonable rate on the necessary investment, partly to the cost of manufacturing and partly to the cost of distribution, in order to get the ultimate results. Whether or not a certain portion of the item of depreciation should also be charged to the cost of manufacturing and another portion to the cost of distribution, is a matter resting largely in the discretion of the management. The company does make a charge of $1,000.00 a month for depreciation under the head of reconstruction reserves. That is on both the electric and gas plants. Now as to whether that should be charged partly to manufacturing and partly to distribution and to the elements of expenses is simply a matter of detail. It is not a matter I would pretend to answer authoritatively. As an accountant I think this reconstruction reserve and the charge for depreciation would amount to one and the same thing. I did not make any inquiry as to that. The reconstruction reserve account amounts to about $7,000.00 a year on the gas plant.

Redirect examination by Mr. Stewart:

The company began to charge off this $1,000.00 per month for reconstruction in January 1906 and has continued it up to this time. Of the electric department, the gross earnings for the year 1904 were $77,958.90. Total expenses $52,911.26. Net earnings $25,047.64.

158 For 1905 the gross earnings were $91,052.62; Expenses $57,467.42. Net earnings $33,585.20. For 1906 the gross earnings were $116,565.25; expenses $77,677.88, net earnings $38,587.35. For 1907 gross earnings were $136,439.55, expenses $96,646.31, net earnings $39,793.34. I have the construction account of this company identified as Exhibit E at the former hearing.

H. S. Wiggins, recalled for further examination testified on behalf of the defendant as follows: Pages 341 to 353 printed record.

Direct examination by Mr. Stewart:

I checked this construction account through the books of the company from the beginning. It was originally started 1872 to 1873. This states 1873, but I think the first work was done in 1872. It was usually headed in the various books that were kept as "Gas Construction." The initial cost of the plant as shown by these books was $53,700.00. It was paid in stock of the company, and was the contract price. I found a duplication in it. The entire construction payment for the year 1900 was also included in the statement of construction for 1901, making a difference of $22,538.00. That dupli-

cation was in Mr. Honeywell's statement. In it also there is an item for the year 1892 commission on 333 bonds sold, $16,397.53. Expenses on bond $1,618.31. The year shown on page 11 referring to the labor account as I recall it, shows that there was a little labor appearing in the gas manufacturing department and the labor that appears to be charged to construction account seems excessively heavy. I found for instance, items of $705.00, $289.00, $541.00, $304.00, $1,308.00, $176.00, $483.00, $156.00 and $498.00 appearing as I recall, weekly wages to men and the way they were carried through the books. I failed to find where much labor was charged to manufacturing or expenses and there is a very large charge for construction made during that period. Also at frequent intervals in this construction account there were charges of attorneys' fees.

159 Also on page 26 I found a charge of La Clade Fire Brick Company of $3,215.00 and another of $513.38 which seemed to be charged for cupola brick in the construction of benches. I have no means of knowing whether that was rebuilding benches or original installation of benches and on page 37 for the year 1899 I find an entry of La Clade Fire Brick Manufacturing Company $865.80 for two benches of 6's. I could not say whether it was rebuilding the benches or original installation of benches. This construction account was running through the various ledgers. They are not in evidence and have not been identified here. I have examined the books of the company in regard to the stock issue on December 31, 1892. That is found in journal B page 161 December 31, 1892, and shows an entry of capital stock issued $500,000.00 and the books do not show that anything was received for that stock. And in 1897 the books show an additional issue of stock of $450,000.00 and a bond dividend of $165,000.00. According to the books the company did not receive any consideration for that issue of stock and bonds. It is charged against profit and loss in Journal B page 410.

Cross-examination by Mr. Rose:

There were some other expenses aside from the naked contract price of the original construction and these outside expenses would run up the construction account from 1873 to the figure that Mr. Honeywell gave. I ascertained this duplication for the years 1901 and 1902 by checking over the books. As I recall it they had changed from one set of books to another and in changing they brought forward the entire amount paid for the construction in the previous year so that at the end of the year 1901 the amount of the construction represented two years' business on the back books and the amount on the books represented two years' expenditure and Mr. Honeywell very naturally followed the items and had taken off the previous year item by item. The examination of the books will disclose what the error was and it is a very natural error. I

160 would not say that the commission on the sale of bonds used for construction was not properly charged to construction expenses. The other expenses of the bond for lithographing and attorneys' fees and getting up the abstract of the corporation, would be properly chargeable to the construction account, but would have no

bearing whatever on the replacement value or anything of that kind. I understand that replacement value means what would replace it if you had the money to pay for it. I can not say positively that the manufacturing cost and labor in 1888 was carried into the construction account, but I saw some indications from the general value of the account, that indicated that that might have been done. The reasonable charges for attorneys' fees for drawing contracts and taking care of the contractor's suit and things like that would be a proper charge on the construction account, and those things might be incidental to the construction of a plant of this size, and would probably be considered the same as the cost of the physical properties, especially if the incidental expenses were incurred on an account incident to construction. These contingencies do arise, enter into and form a part of the cost of the physical properties.

The item of the La Clade Fire Brick Company for $3,215.00 on page 26 of Mr. Honeywell's report for fire brick, I think was the contract price for benches as I recall, and I would not say but that that was additional benches constructed under contract. Lot 79 might have been acquired by the company as late as 1890. I don't know when they acquired Block 83 which the Lincoln Electric Light Company formerly owned. I do not know whether they acquired some additional properties in the vicinity of the gas plant, to prevent being crowded and for storage room and future expansion. The item of $200.00 for taxes charged to construction is the only item of taxes in the construction account. If the company had purchased a lot and used it in its construction work that was subject to a tax lien of $200.00 and had they discharged that tax lien that item might very properly enter into the construction account. I have not examined the details to see whether or not there was an item of that kind and I would say, in respect to these old matters back in
161 1898, 1899 and 1890 that I didn't think Mr. Honeywell or anyone else connected with the company, has any very definite knowledge as to what those items were for. I have not seen anything to indicate but what the charges were proper enough. From all of these items that you have run over here, I find no charge in the construction account, but what appears on the fact of the record to be legitimate, especially the more important items. There were some items of payment to Mr. Van Ripen and Mr. Mullen and to others that I could not understand, that would be charged to construction but I could not say that they were wrong and there is no one here that can offer any explanation except just what is shown on the books. The original vouchers might show, if we could get back to that. I cannot give you the exact date the company acquired the old electric light company.

The books that I have examined include the books of the original Lincoln Gas Company and the gas company as amended in 1900 and the Lincoln Gas & Electric Company, the predecessor of this company. The transactions with respect to the entries of stock were the transactions of the company which the present company has succe-ded. The last issue of stock and bonds, $15,000.00, was in the nature of a stock dividend. The others just seemed to have been

additional issue of stock without any apparent reason. I could not say positively whether these two items $500,000.00 and $450,000.00 represent the total stock issued in the entire history of the old Lincoln Gas Company. It is not made clear on the books that the $500,000.00 stock issued in 1902 was paid to the former owners for the original stock, which was retired. If that is the case I could not say and do not know. There is no extension of that character noted on the books. I have examined back as far as 1892 up to the time the Lincoln Gas & Electric Company sold to Wood & Havemeyer and the total outstanding stock issue at that time was $950,000.00 and no more. I would not say that this issue of $500,000.00 in 1892 represents all the money at that time invested in the company.

162 It represented more than there had been put into the company. There is in the books no record of retirement of old stock contemporaneously with the issuance of the half million of stock. There might be in the minutes of the company somewhere, but I don't find any such entry on the back books. I have not examined to ascertain whether the issuance of $450,000.00 was authorized. When I gave the item of expense for the electrical department in 1904 I had access only to the electric light books for the space of one evening and did not go into the details of those expenses. I did not go into it far enough to ascertain whether the electric department's proportionate share of the bond interest was included in that. I don't think that it was. I think they followed the same method through all of the years that they did in the gas department. What I gave as the net earnings is just what the company gave, but I do not think they include bond interest. I could not say positively. They do not include any sum for depreciation.

Redirect examination by Mr. Stewart:

Exhibit 130 Journal B is the book containing the stock and bond entries which I have referred to. Page 410 of Exhibit 130 Journal B, beginning at "Undivided Profits" and continuing to the bottom of the page, is offered and received in evidence. I have examined the books of the gas company and its antecedents and up to June 1890 there was no cash contributed by the owners. I do not find that there was anything paid in. The original plant was paid for by a stock and bond issue up to June 1890. The books showing the amount of stock issued up to that time, to be $175,000.00. Of that amount $53,700.00 was issued for construction, but I do not find that there was any cash paid in. The books run right along up to that time regularly.

Redirect examination by Mr. Rose:

Beginning in 1890 the old plant was reconstructed and afterwards the Electric Light department added.

Redirect examination by Mr. Stewart:

163 Subsequent to June 1890 there has been added up to the present time $709,196.50 to the entire electric and gas plant.

In June 1890 there was an additional stock issue of $25,000.00. That was paid in notes and I think the notes were paid for. In September 1890 there was an additional issue of $12,100.00 which was paid in cash. In October 1890 there was an additional issue of $63,-344.00 which was paid for in cash and in notes and I take it that these notes were paid for. In 1891 and 1892 6% bonds were sold in the amount of $333,000.00. They received that amount less $16,-397.00, commissions and expenses. In 1901 there were $67,000.00 worth of Treasury bonds sold at a discount of 25% for which they received cash. In 1901 there was stock sold for $900.00. In 1902 and 1903 the holders of the Lincoln Gas & Electric Light Company 5% consolidated and 5% mortgage bonds, paid in $77,000.00 in cash. In 1901 and 1902 there were sold 5% consolidated bonds, in the Lincoln Gas & Electric Light Company, in the amount of $64,-000.00 which was the par value. In 1904 and 1905 the company borrowed on 6% notes $100,000.00 and eventually took up those notes and issued stock in payment of them. I guess the transaction took place a little earlier than that. It was at about that time. In 1907 the company borrowed $39,000.00 on two year collateral notes. Those notes are still outstanding. I have not traced in any way to know what became of it. I noticed in one case that the books state that $40,000.00 worth of bonds were issued or given out for the payment of interest coupons. I do not know what use was made of the remainder. I did not make any attempt to trace it. Those entries are found in cash book and Exhibit 131, Journal marked Exhibit 132 and ledger marked Exhibit 133, series A covering from March 1872 to June 1890. In cash book marked Exhibit 134 and journal marked Exhibit 135 and ledger marked Exhibit 136, being series B covering from June 1890 to December 31, 1897, series C, being cash book marked Exhibit 137, Journal marked Exhibit 138 and ledger marked Exhibit 139 and runs from January 1, 1898, to September 29, 1900. In Journal marked Exhibit 140 running from
164 October 1, 1900, to date, ledger marked Exhibit 141, running from October 1, 1900, to November 30, 1901, ledger marked Exhibit 142 No. 2, running from December 9, 1901, to December 31, 1905, and ledger marked 143 No. 3 running from January 1, 1906, to date. The outstanding accounts payable at the end of the year 1906 were about $35,000.00 and in 1907 about $50,000.00 and they run that throughout the year so far as I know.

Recross-examination by Mr. Rose:

That merely represents the unpaid accounts on that particular date and has no reference to the amount expended during the year. It showed that the company was using credit of $35,000.00 at the close of the year 1906 and $50,000.00 at the close of the year 1907. That is in addition to what was paid for equipment and machinery. These bills represent the amount that had been charged into the account. It is the material account or expense account or the stock account and had not been paid for. It did not represent all of the stock on hand, but it represented the unpaid portion of stock on hand. The ledger account for June 1890 shows outstanding stock

issued of $200,000.00. That, with the additional issue of $500,000.00 in 1892 and $450,000.00 in 1897 would make a total stock outstanding, if it was outstanding, of $1,150,000.00. In examining the books I did not pay so very much attention to the stock outstanding. At the close of 1892 the books showed $1,000,000.00 total stock outstanding; of that $50,000.00 was Treasury stock and had never been issued. The issue of $200,000.00 prior to June 1892 is not accounted for in the entry of $500,000.00 of that date, and in some way it is dropped out. It must have been retired in some way, but the books do not definitely show how. I think there is a recapitulation of the different summaries showing how much was actually paid out by the corporation in the construction of its plant up to June 1890. I don't mean to imply that the sum of $175,000.00 was all of the money expended by the company from its organi-
165 zation to June 1890 for the purpose of its construction. The construction in the earlier years was charged against revenue. That is, it was paid for out of earnings and was charged off every year and the surplus earnings of the company during those earlier years was used to improve the plant; and the surplus earnings since 1890 that have not been applied to bond interest, have been used entirely in bettering the plant. As I recall it now, up to 1887 all construction charges were written off yearly and went against the earnings and were paid for out of profits. Since that date I don't say there has been any direct charge of construction against revenue. There has been no stock dividend since May 1900.

The proceeds of $40,000.00 on bonds that were used to take up maturing and defaulted coupons, indicates that this resulted from the fact that earnings of the company had been necessarily used in bettering the company's property, is a conclusion that I am not sure that I can draw. From 1900 up to the present time, the books show a considerable sum charged to the construction account. The items that have gone into the Treasury aggregate about $760,000.00 subsequent to June 1890, representing the total receipts from the sources mentioned by me, including both electric and gas departments. Any surplus off of bond interest and operating and maintenance expenses since 1900 has not been paid out in dividends and they could not do otherwise than remain with the company and I think that it shows a natural deduction that they were absorbed in the betterment of the plant and showing the plant to have increased in value by the amount of surplus.

166 H. S. WIGGINS, recalled for further examination, testified on behalf of the defendant as follows, pages 445 to 450, printed record:

Direct examination by Mr. Stewart:

In my examination of the books I noticed in one place in one of the journals where there had been some leaves taken out. I think it was Journal D or C. I made a note of it on the margin of the book. I don't exactly recall the date. I can tell by looking at the book.

The bench repairs during the year 1907 amounted to something like $9,000.00 and that is what is charged into the accounts called contingent bench repairs. The reason it is charged into that account instead of bench repairs proper is so that it can be spread over a term of years supposed to represent the life of the repairs made. In 1907 the amount charged out for bench repairs was $4,022.24 which was very largely in excess of the years 1905 and 1906. A great portion of it is still standing in the contingent bench repair account. During 1907 from April on they usually charged about $361.00 a month. That commenced with the time the extensive improvements were made and that improvement then amounted to about $9,000.00. That indicated that it would all be charged out in about twenty-five months. I found no adequate reason for the marked increase in the cost of the manufacture of coal gas, starting from 1904 at 40¢ 1906 54¢ and 1907 62¢ per M. cu. ft. I have not been able to find any reason for the marked increase in the cost of the retort labor something over 3¢ per thousand cubic feet from 1905 to 1907, as shown on Exhibit 117. The retort house labor as I understand it and am informed, consists principally of wages paid to stokers. I found the rate of pay to stokers had not materially increased from 1905 to 1906 and had not at all increased from 1906 to 1907. This is as far as my observations of the pay roll goes.

167 I have not from my examination of the books and records of the company, been able to examine and verify and determine the integrity of the pay roll and identify the parties receiving the pay.

Cross-examination by Mr. Rose:

That was not due to the fault of the company, but to lack of time; nor was it due to any lack of facilities of the company, and I was not asked by Mr. Stewart to do that. I did not go over that ground. To make an audit of the books covered in my work would require months and I only had weeks.

The cost of the retort house labor was higher per thousand cubic feet in 1907 than it was in 1906 and in 1906 it was higher than it was in 1905. It was mentioned at one time that there had been a strike down there and some of the men from the office had gone down and tried to shovel the coal into the retorts. Mr. Honeywell told me recently that they had not been able to get experienced stokers and that they had put in machinery for putting in the fuel and that the men that were in that class of work remained with them right along month after month. In fact, I found the same names running right through for a long period of time. How long the strike lasted I did not inquire. But whatever would be the immediate cause of employing more labor to do this work, would not be exhibited on the face of the books. I suppose it would be regulated by the amount of gas made, that is, the proportion of the increase in labor would be. In order to reconcile this increase and find an efficient excuse we would have to resort to information outside of the general books. If it was actually shown that more was actually spent for the retort house labor, that would be of itself sufficient to

raise the cost of coal gas in the holder. You could not discover the cause merely on the face of the books without resorting to collateral information, such as analysing the pay roll to see how many men were employed, etc. I would hardly admit that the fact that I did not find the explanation on the books, would be wholly un-
168 important. I made an analysis this far, I went through the distribution of expenditure and checked the items month after month, and I would notice at times a very considerable increase in cost.

The books in which the pages are missing are now before me and those pages are pages 194 to 199. The entry on page 194 is the closing entry of the books of the former company. It is in the handwriting apparently of an auditor and is a different handwriting from the handwriting of the bookkeeper who previously kept the books. It closed on November 30, 1901. The first entry following that is on page 201 and the opening remark there is dated December 19, 1901, and is in the handwriting of the same person who made the closing entry. The entry on December 19, 1901, is the transfer entry opening the new book. That transfer is of date December 13th. The different items in those entries give reference to the ledger pages on which the accounts are found. The cash item is supposed to be at page one of the ledger. I could not say whether this was a continuous record or not. I have not checked over to see whether the opening entry is a correct transfer to correspond with the closing entry of the old company. A checking would probably disclose that and whether it is a continuous record. It is a matter of practice with me to make a notation of any missing leaves, in any book of account, and I made this just in the ordinary course. I do not believe I went into it close enough to find whether there was any significance to it. I assumed that the leaves were not taken out of there without reason, but book-keepers often take a leaf out because they make an error. It is bad practice. The bookkeeper can tell you about that better than I can.

169 EDWARD W. BEMIS, being first duly sworn, testified on behalf of the defendant as follows, pages 352 to 420, printed record:

Direct examination by Mr. Stewart:

I reside and have resided in Cleveland, Ohio, for the last seven years and during that time have been superintendent of the waterworks. From 1889 to 1899 I had been teaching in the department of economy and history at Vanderbilt University, Chicago University, and the State Agricultural College of Kansas, and from that time until I went to Cleveland, I was engaged in general statistical work partly for the State of Illinois and partly for the United States government, doing some research work. It was largely in the line of gas and problems kindred to gas itself, street railways, and electric lighting to some extent. I have studied the problem of gas quite a good deal since 1890, when I made some special studies on the subject and published them. Between a waterworks and the gas

business there is a good deal of analogy in the distribution system. The mains are laid very much the same way, only deeper in the soil. They are very much the same kind of mains. The services are somewhat smaller. In Cleveland they use the meters almost universally and have something — 65,000 meters in use. The system is considerably analogous to the metering of gas, and the general distribution system and the collection of bills, the relation of the company to the customers, etc., is something similar to that of gas. I have had special experience in investigating the matter of manufacture and distribution of gas.

I have been employed by a good many cities in cases like this and have appeared before the State Commission of Public Utilities of New York many times, and likewise a good many times before the state gas commission, and legislature, and state and federal courts to some extent, as a witness. I was one of the committee of five of the National Civic Federation that made a special study
170 of private and municipal gas works, waterworks, street railways, here and in Great Britain two years ago, and I was one of the committee that wrote the final report or series of reports. There were several published.

I was connected with the investigation of the gas plant in the District of Columbia, but I made less investigation there than in most places. I went down there recently to appear before the Congressional committee on the subject connected with the gas company and its prices in Washington. I have done more work a good deal in many other cities than I have in Washington. I have done a large amount of work in the city of New York, a good deal in Boston, Syracuse, Buffalo, Saginaw, Cedar Rapids, Ia., and Montreal, and a good many other cities. That work consisted in a study of the amounts of the accounts of the companies and an analysis of their costs and a general attempt to find out the reasonable costs of manufacture and distribution of gas. In these investigations I have familiarized myself to a reasonable degree with the process of the manufacture of gas, and the labor and material entering into it. Of course, I have never been connected with gas works in a practical way but I have been through a great many and I was obliged to know a good deal about the work in order to understand the cost and accounting system, and to a considerable degree I am familiar with the make-up of a gas plant, and I have made a study of the life of the various apparatuses and the constituent parts of the property of a gas plant. I visited the gas plant here for a short time and read most of the testimony and heard some of it, and I have had submitted to me the analysis of the accounts as prepared by Mr. Wiggins, and I have studied and examined the reports of the gas company which they get out annually. The reports show a material difference before and after the adoption of what is called the quality ordinance in March, 1906. I examined the reports for 1905, 1906 and 1907. The books show the average candle power for mixed gas for 1905 and 1906. They do now show the B. T. U. for 1905. Therefore the per-
171 cent that I have had to rely on is the candle power but that, to my mind, is a sufficient total. The B. T. U. varies largely

with the candle power. The books show that the average candle power of the mixed gas in 1905 was 17.015 candle power. In 1906 it was 18.08 candle power. The difference of a candle power will make about 20 heat units.

The best authority for this, I would say, I do not know whether he is any better than some others on this point, but there is a recent handbook for gas engineers by Latta who quotes Prof. B. Lewes, of London on page 161: "A difference of candle power in water gas will make 20 points difference in heat units. Beginning with 15 candle power yielding 547 gross, B. T. U.; 16 candle power, 567 B. T. U.; 17 candle, 587 B. T. U.; 20 candles, 647 B. T. U. With coal gas you have a higher B. T. U. 15 candle, 610 B. T. U.; 16 candle, 625 B. T. U.; 17 candle, 647 B. T. U. But in each case the difference of a candle power makes a difference of about 20 B. T. U. of heat units." That made a difference of 1⅔ candle which is the difference between 17 and 15 and 18.08 candles in the mixed gas, and will make a little over 30 in the heat units, about 33, perhaps. It will be about ⅓ of a gallon of oil or about 1½¢ per thousand cubic feet, at the price they are paying for fuel. I have investigated the life of the various classes of property that enter into the construction of a gas plant.

I have made a large number of inquiries and a study of the history of different parts of plants that were in use and have studied the literature upon the subject. A great deal has been written on that subject in the last five years in the engineering journals and textbooks. One can divide a gas plant for this purpose quite conveniently into five classes or divisions. First, the land, which has no depreciation, second the working capital which consists of supplies on hand that are quickly used up and cash, third, mains, fourth, buildings, and holders, and fifth, the rest of the plant outside of the benches and tools which are renewed year by year out of the repair account. The mains have the longest life. There is
172 practically no limit to the life of the mains so far as engineering knowledge can determine. There are two conditions which affect the life of a main. One is some ususual degree of electrolysis or destruction from the alkali or salt in the soil, and second from the mains becoming inadequate in size from the growth of the business, requiring a very much larger main. Without those two causes present there is no particular reason why a main should not last 500 years. The wear and tear is practically nothing and the same is true of water mains. There is not much difference between the two in that respect. They are made of the same material. The gas mains in a city of this character would be affected by the alkali or salt in the soil if they were largely present. I have heard no testimony indicating that that was the case. On the water main there has been some evidence as to trouble with electrolysis near the power house, and yet I have heard nothing relating to it anywhere else to any degree and I have read the testimony of the company's witnesses on the subject, too. As to mains becoming inadequate, there is some force in that but not through most of the system. It is only in a few sections where mains have to be re-enforced.

Usually they are not taken up but a main is put in on the other side of the street.

For example, in our 700 miles of main in Cleveland which is more than any other gas company in the United States with three or four exceptions, we very rarely take them up and replace them, and the same thing is true with gas mains, there and all over the country. I consider 75 years as the reasonable life for mains though there can be considerable said in favor of 50 years, but that would certainly to be the minimum and in my opinion 75 years would be a reasonable life unless there are extreme local conditions. I class buildings and holders together. They have a life, aside from inadequacy, of over 50 years but on account of inadequacy owing to the development of the business requiring larger holders and different and larger buildings I have usually taken 40 years, but I think
in a growing town in a city no larger than this the displace-
173 ment is more rapid than in a larger and older city and I consider 30 years would be reasonable here. I group the rest of the plant, the meters and services and all of the manufacturing plant, the works and other equipment together. Some of it has a longer life than others but 20 years I consider a fair allowance. In 1907 the company gives the cost of the coal gas in the holder at 62.9¢ and water gas at 39.51¢. In 1906 the company gives the coal gas at 54.26¢ and the water gas at 41.95¢. In 1905 the company gives the coal gas at 40.77¢ and the water gas at 40.95¢. The chief reason for the manufacture of coal gas when water gas can be manufactured so much cheaper that I can see is the lack of adequate holder capacity so that they could rely wholly on their water gas set, but that would apply only in the winter season. During three-fourths of the year I would suppose that they should make a very much larger quantity of water gas relatively than they do now but if they give up their coal gas entirely that would compel them to buy generating fuel for the water gas. Yet they could make considerably less coal gas without doing that if they sold some coke.

Mr. Honeywell said that if they bought their generating fuel they would have to pay from $1.50 to $1.85 a ton more for it than when they obtained it from the coal gas. That would increase the cost of generating the water gas about 4¢ per thousand feet for 1907. At that time the average price of the mixed gas in the holders was 48.08¢, while the water gas was 39.51¢. If no coal gas had been made then 39.51¢ would be increased by this extra payment for coke to about 43.4¢ and there still would be a saving of about 4.6¢ or 4.7¢ per thousand cubic feet. There might have to be a cent's more worth of oil added to keep the B. T. U. up to standard but there still would be, I think, a saving of 4¢. I would not necessarily say that coal gas could be entirely dispensed with in the middle of the winter unless they had more holder capacity, but by making it less than they do now in most years they could, I think, save 3¢ or 4¢. They
have one holder that is 50,000 capacity, and the other is of
174 200,000 capacity. With a combined coal and water gas plant they should have a capacity of about two-thirds of the maximum day's output. One day's output is about 850,000 feet or was

last December, so they ought to have a holder capacity of about five or six hundred thousand feet.

I think an extra 500,000 foot holder would not be too much in addition to what they have got now but even without that I believe they could make less coal gas than they do now and more water gas and therefore cheaper. 12 gallons per ton of coal carbonized is the normal amount of tar residual. I believe 8 gallons is what they get here, and about 1,250 or 1,300 lbs. of coke should be produced per ton of coal carbonized. That is about the normal amount. Also all larger works and even works of this size obtain ammonia residual and some are beginning to save the carbon. The normal amount of leakage or unaccounted-for gas is about 5%. About 150,000 feet per mile of main is the average of companies of this size in Massachusetts. That is about one-half of what they have here. One very common cause of this leakage is high pressure, the mains not being sufficiently re-enforced to take care of the growth of the town. They put on very high pressure at certain hours which has its effect on the leakage of the mains and on the burners on the leakage, and, of course, another occasion is the lack of sufficient attention to the main barring for leaks, etc. Barring is running a bar down to discover where the gas is leaking up. The abnormal leakage when it is due to pressure is remedied by having high pressure mains or large mains going out to supplement the distribution system at the outer rim, and also by paying more attention to repairs and the condition of the mains if it is due to that. There are none of these high pressure mains or supporting mains in this plant. They are quite common in plants at the present time. The leakage in the State of Massachusetts is not different in regard to the low amount than in other cities that I had occasion to study, but it is easier to quote because that
175 is the only state in the country that requires, and has for 20 years, a sworn return and these returns are published each year in the annual reports and these Massachusetts cities and the English companies are the only places you can go for public sworn information on such points. Any other information I would get would come from my observation in connection with the individual cases and plants where I might happen to see the books, and I have investigated this question. Excessive pressure causes blowing of the gas expecially if it is fluctuating. A burner will be adjusted to a pressure of, say 3 inches, and if the pressure goes up at certain hours to five or six inches the burner will blow if it is not turned down. A great many do not bother to go near the burner or they may have to go near it frequently. Pressure fluctuates frequently. That is the indirect result of the mains being too small. The main being small in order to have any pressure at all at certain hours when a good deal of gas is being used, it has to be sent from the works at a very high pressure and then the pressure can be reduced at other hours.

In a properly equipped gas plant the minimum pressure is 1½ in. to the maximum of 4 in. Sometimes it is allowed to run up to 5 in. but that is considered to be rather poor practice. I

have studied the effect on the earnings of an increase of the output of plants of the size similar to this in Lincoln. I have studied the effect in every company in Massachusetts in the last 20 years where I had an opportunity in the files of the gas commission to study it. In the matter of depreciation the first thing to determine is the average life of each particular class of equipment. If the mains were taken at 75 years then 1/75 of their value might be said to disappear each year, yet the mains are nearly as useful right through until near the end of the 75 years, when they will have to be discarded for inadequacy so that the expense of meeting this depreciation that will come in the form of renewing the mains is not felt until the end of the time. We assume ordinary repairs
176 to be met as is usual in all gas companies from year to year, and I am now talking about the ultimate renewals due to the depreciation which cannot be taken care of by ordinary repairs.

The expense of such renewals comes at the end of the life. The problem, therefore, is how to secure the money for renewing the mains at the time they have to be renewed. I cannot conceive of a fairer method than the sinking fund method of determining what sum yearly must be set aside so as to equal the principal or value of the main at an agreed rate of interest in the sinking fund, say four or five per cent, at the end of the life of the main. Suppose some piece of property has a 40 years' life. You may say that 1/40 of the value of it disappears every year. If, however, you ask the gas consumer to pay 1/40 of the value of that piece of property back to the company every year the company has an opportunity to invest that in its plant at more than sinking fund rates or in the savings bank, at the worst, and loan it out at sinking fund rates, and even at 4% interest its full value paid in 40 annual installments would make at the end of that time 2½ times the principal. That is, if you had a building worth $100,000 and you assume that it had a 40 years' life, and therefore loses $2,500 a year, and the gas consumers pay $2,500 a year to the company, the consumers will pay apparently $100,000 by the end of the 40 years. The company will have $250,000 to show for it. It seems to me that if the company gets $100,000 at the time it needs it when the buildings need renewal at the end of the 40 years. It has been recouped for all its loss and $1,000 a year instead of $2,500 a year in a 4% sinking fund will make $100,000 at the end of 40 years. The difference is that the consumers keep the profit of the investment instead of the company. Therefore it seems to me that the sinking fund method is the proper way to finance depreciation. Taking Mr. Malone's valuation the first thing to do in determining the proper amount of depreciation is to divide into classes the properties which have different average lives. This I have done. I have excluded the real estate entirely. This
177 leaves $543,072.72. The mains in dirt streets and in paved streets are given by the company at $220,605. The buildings are given at $37,286, and the holders with the tanks are given at $33,675, making a total of $70,961 for the buildings and holders. The balance of the investment I have grouped together in a class

by itself which covers the manufacturing plant, the meters and services, and everything not included in the mains, buildings, and holders. This balance is $251,506.72.

Now, I applied 75 years of life to the mains, 30 years to the buildings and holders, and 20 years to the rest. The amount necessary to put away annually on a sinking fund basis at 5% to replace the mains in 75 years is only $287.79. 5%, I think, is a proper sinking fund charge in this part of the United States where interest is a little higher. In New York I should take 4%. It is necessary to set aside $1,071.51 a year for 30 years on a sinking fund basis at 5% to replace the buildings, and holders, and it is necessary to set aside $7,595.51 annually for 20 years on a sinking fund basis to replace the balance of the property, a total required for the replacement of the three classes of property, of $8,953.81, which, on the basis of 179,366 ft. of sales in 1907 is about 5¢ per thousand feet. It does not vary .01¢ from that. If the mains be given a 50 years' life instead of a life of 75 years it will add $500.50 a year to the amount necessary to be set aside yearly for the replacement of the mains, or .43¢ per thousand cubic feet of gas sold last year, making a total of 5.43¢ per thousand feet. This is on the company's showing or claim of value. In computing this depreciation I gave the company the benefit of the value of paving over the mains which was included in the company's valuation. I did not include their allowance of about 10% for engineering and interest. Neither have I included the cost of obtaining the money. Allowing them depreciation on the 10% for engineering and contingent expense would bring the whole depreciation up to about 6¢ per thou-

sand cubic feet. On Mr. Deffenbaugh's valuation of the
178 mains at $243,000.00 aside from paving with a life of 75
years, it would require $185.90 to replace them. For $20,000 for the value of the buildings after allowing for depreciation and allowing $15,300 for the holders and tanks which is $60 per thousand cubic feet of capacity, which is high considering their age and condition, makes a total of $35,300, which, with a 30 year life, would require 1.51% to be set aside annually for depreciation. Allowing for the balance of the property at $211,893, and excluding the paving and land, would require $6,399.17 to be set aside annually to replace it. This makes the total depreciation on that basis, of $7,118.10 yearly, or 3.97¢, or practically 4¢, per thousand cubic feet on the output for 1907. Allowing 50 years as the life of the mains in this computation and everything else remaining the same, it would add .28¢ per thousand cubic feet and make the total depreciation 4.25¢ per thousand cubic feet of sales in 1907.

One of the holders, capacity 205,000 feet, is about 18 years old, and it is valued at $168.53 per thousand feet capacity, and the other, capacity 50,000 feet, is over 20 years old, and that has been valued at $187.50 per thousand feet capacity including the tank. Now these holders have depreciated more than one-half. That is, more than one-half the 30 years I have allowed them has expired. Two-thirds of their life and fully half their value has gone, and I have allowed them $60 a thousand feet of capacity, which I con-

sider a liberal allowance. The value of the holders and the cost of construction run, according to size, from $60 to $75 a thousand feet for a five million foot holder, up to $200 per thousand feet for the 50,000 foot holders. It varies somewhat with the part of the country and with the prevailing prices for iron but a 500,000 foot holder could generally be erected for $125 per thousand feet capacity, and a 200,000 foot holder, for about $150. In the past we have erected them for less than that when iron was cheaper. With regard to the mains, the estimate of Mr. Deffenbaugh of $243,000 which I used, appears to be higher than what it
179 cost the company. The last three annual reports, for 1905, 1906, and 1907, show first in regard to their 2-inch mains that in 1905 they cost them 23.6¢ a foot, including labor and material. In 1905 this cost was 19.3¢ a foot, and in 1907, 21.2¢ a foot, and I took the 21.2¢ and applied it to the entire length of 2-inch pipe. With regard to the 4-inch pipe, in 1905 the cost was 27.8¢ per foot for labor and material; in 1906 it was 51.2¢. I took 51.2¢ as the basis. With regard to the 6-inch pipe, the only pipe they laid was in 1906, when it cost them 68.2¢, and I have used that figure for all of their 6-inch pipe. With regard to the 8-inch pipe, the only pipe they have laid in the last three years was in 1905, when it cost them 88.3¢, and I have used that for the entire main. The price of iron pipe this year is lower than it has been for several years all over the country. I have no figures for the 10-inch, 12-inch, 16-inch, and 20-inch pipe, but there is very little of it.

The price for the 2-inch, 4-inch, 6-inch, and 8-inch is remarkably close, almost within 10% of the figures given by the company under oath in a case a few weeks ago so I have taken for the larger size the Cedar Rapids figures, that the company itself gave. This was, for the 10-inch pipe, $1.13½ a foot; I have taken here $1.20. For the 12-inch the Cedar Rapids price was $1.45; I have taken it here at $1.50. For the 16-inch the Cedar Rapids price was $2.07; I have taken it here, $2.15. For the 20-inch they did not have any at Cedar Rapids, but I have taken $3 as a rather high approximation. Applying these results to the entire system the total is $127,269.80 as compared to Mr. Deffenbaugh's valuation of $143,000. I have had experience in the matter of laying mains and know the cost, but I have not placed definite figures on water mains to the situation here because they are laid so much deeper. We lay our mains 6 ft. from the top of the ground and the services the same depth to protect them from frost. These are deeper than most water companies lay and I have thought it much more correct to take the company's own figures for gas pipe. As to the
180 services, in 1907 they report a net cost of $8.55 after deducting some receipts from consumers for part of the service. An average for all laid in 1906 they gave in their report, $8.27 and in 1905 it is $12.06. They did not receive so much from consumers that year. Some years they receive — some consumers a larger amount than in other years.

As to the efficiency of the company's plant here, they appear to

have a coal gas plant and I have learned since my testimony yesterday that they are putting up a 7 ft. 6 in. water gas set which will so largely increase their capacity that it will render possibly unnecessary the extra holder I spoke of and will allow a larger amount of water gas compared with coal gas. With respect to the mains the system is in very poor shape as illustrated by this fact: out of 338,594 feet of main, 220,705 ft. is 2-inch, which is 65.2% of the total. I don't think I have ever come across a company that has so large an amount of 2-inch main, in percent. I have gone through the entire 60 companies in Massachusetts on that point as given in their last annual report and I do not think there is one that has as high as 50% of 2-inch mains. The whole tendency of the gas business is to discard their 2-inch mains. They are written off in many places as having very little value on account of the size. They have become inadequate to a considerable degree and it requires such a high pressure to force the gas through them, and keep up the pressure in a city, especially at certain hours of the day. This high pressure increases the leakage, and also the dissatisfaction among consumers on account of the unequal and high pressure causing blowing, which increases the gas bills without a corresponding increase of light and heat. When the pressure is high and the burners are not turned down and adjusted to it, the gas will go through without giving its full illuminating or heating value. It will register in the meter just the same but does not give the benefit to the consumer. Such a high pressure may be almost a necessity, however.

181 When I was speaking of the life of 75 years on mains I assumed mains of the ordinary size. I think this 2-inch pipe has practically lost four-fifths of the value already on account of inadequacy. It is with reference to the 4-inch, 6-inch, 8-inch, and upward sizes that the longer life is predicated on. These smaller mains have been discarded long ago by most companies and they are not being put in very much now at all except in alleys in a few neighborhoods that do not use much gas. With respect to the efficiency of operation and management of the company as shown by the reports here, I have observed in the coal gas plant some increase of cost which I cannot explain. In the last two years, for example, the retort house labor has increased from $5.25 per thousand feet in 1905 to $8.18 per thousand feet in 1907, or nearly 60%. The wages of the stokers in 1905 were $2 and $2.25 a day and today they are all $2.25. They have not increased over 10%. Mr. Wiggins told me about the wages.

The failure to save all of the tar, being a yield of only 8 gallons instead of 12 gallons to a ton of coal, and the failure to save ammonia is evidence of lack of facilities at the plant or something else, which would be remedied, I think, in most companies. Even if the tar is of little value for heating purposes it is better to save it for that than to let it run to waste. There are some other items in the matter of charges that do not relate that I know of to management. The normal leakage is from five to six per cent, and the leakage of this company last year was 11.84%. It was as low as 6.84 in 1903, and

has been rising until it reached, in 1906, 16.56, then it fell to 11.84 in 1907. 3¢ a thousand feet is usually considered the proper expenditure for promotion of new business. It has been much more here but it has doubtless produced good results in developing new business. Last year it was 7.47 but I would not expect that in the future it would exceed 3¢. A reduction in price of gas would render unnecessary the expenditure of so large a sum for extension
182 of the business. That is to be taken strongly into account. The reduction in price, itself, will advertise the business and induce a considerable increase of sales of the gas as a substitute for coal.

The working capital is given here at $59,146.88. By the testimony of Mr. Wiggins it was shown that the company was owing about $50,000 in accounts payable, I assume for supplies and materials, which is a credit enjoyed by the company and to that extent is a balance or set-off of the working capital to the extent to which the company gets capital free of charge from those from whom it buys supplies, and to that extent it should be set off from the supplies on hand, and the working capital. I don't know whether or not this $50,000 accounts payable applies to the plant as a whole but if it does, two-thirds of it would apply to the gas department, or about $33,000.

I have also noted that the amount of the coke stock on hand at the end of 1907 was much higher than it was in June, 1906, or June, 1905. Starting with the amount the company gives as its operation cost, starting with the receipts of the company in 1907 from the gas when the price was $1.20, the books show that the net receipts were $1.2031 after deducting losses from bad debts, adding the amount received from those who had paid the minimum charge but did not use the full amount of gas, and after adding the forfeited discounts, if the price were reduced to $1, the price including the forfeited discounts, etc., and deducting the losses on the bad debts, it would be at the same result of $1.31 and taking off 2.5 cents which I understand is a new tax that has been lately imposed it would be reduced to 97.81¢. The company claims operating costs in 1907 as 79.12 and there would be a margin of 18.69¢. To this should be added the saving from first, promotion, 4.5¢, second, a reduction of unaccounted-for gas by 40¢, still leaving about 7¢ which is higher than I have considered reasonable. That would be a reduction of 2¢. Third, I notice that the legal expenses in 1907 were 1.2¢ per thousand feet sold, or a half-cent higher than the average of the previous four years, which were, in 1903, .74¢; in 1904, .71¢; in
183 1905, .45¢; in 1906, .49¢. I believe I added in 1902 which was 1.01¢ and found the average of all five years was about ½¢ lower than the 1.2¢ in 1907. I assumed that the normal expense would be indicated by the average of those five years and considered a probable saving in the future of ½¢, which would mean a total deduction from promotion, leakage, and legal expenses of 7¢.

There are questions of the residuals which I have looked into a little but unfortunately it was not possible for the company to give me the data until late last evening and I have not had *had* the full

time I had hoped for, but I did discover on hasty examination the following on that. In 1907 the company sold 21,175 gallons of tar for $1,404.44 or at the rate of 6.13¢ a gallon. They used in the various parts of the work 93,353 gallons which they credit at only $1,900.99, or 2.03¢ per gallon. The entire expense of handling the tar whether sold or used was $617.89, or .54¢ a gallon for all the tar used or sold, or about 2½¢ a gallon if that is concentrated on the tar sold. If it is concentrated on the tar sold then they netted from that 4.19¢ per gallon. The net sales of tar were $886.55, and the value of the tar used at the works was 2¢ a gallon or $1,909.99, which makes $2,787.54 credit for the value of residuals. They have credited for the value of residuals from the tar, only $1,248.26. In other words, the company appears to have received from the tar sold less the expense of handling plus the tar used for making steam in the electric department, even at only 2¢ a gallon, $1,539.28 more than the coal gas department or the gas department in general was credited with receiving, which is about 1¢ per thousand feet of all the gas made. It cannot be accounted for by any large difference between the tar used and sold and the tar made for there is not any large difference. The tar made during the year was 108,263 gallons, and the tar used or sold was 114,728 gallons, a very slight difference or only 6%, which cannot account for this discrepancy. In other words, by charging the whole thing to stock as they do in making such an arbitrary charge for residuals they make the cost of
184 gas last year about ¾¢ higher than it should be as I read the books, based on the tar account. With regard to the coke residuals, I find that in 1907 they obtained for the coke sold, and the breeze, $6,492.70. All of the expense taking care of the coke whether sold or kept at the works is $2,902.13, leaving the net profit on the coke sold and concentrating all the expense on that, which, of course, ought not to be done, $3,590.64. The value of the coke used by the company in its water gas and electric departments and elsewhere is given at $18,755.02 or a total profit from the coke of $22,345.66, but the company credits itself on the coke residuals at only $20,537.73. The difference is $1,807.93, or about 1¢ per thousand feet of gas sold, so there is 1¾¢. This appears to be borne out by the records and books on such a hasty examination as I was able to make after getting the report. If I add that in it makes 8.75¢ per thousand feet of possible profit.

I have omitted from this summary the item of the retort house labor. That increased in 1907 nearly 3¢ per thousand feet of coal gas made over 1905, which would be an increase of about 1½¢ if distributed over both coal and water gas. If we take as a basis the reasonableness of the 1905 figures plus 10% increase in the stokers's wages, it would make the margin of profit 28.69¢ with gas at $1. From this must be deducted an allowance for depreciation which as I estimated this morning was 4¢ according to my estimate of value on a 75 year life on mains, to 6¢ with the company's allowance for valuation and 50 year life of mains, so that it would leave a margin of profit from 24.69 to 22.69 per thousand cubic feet after allowing for depreciation. The total interest and dividends paid out by the 11

Massachusetts companies having over 75,000,000 of sales, exclusive of Boston, was 23¢ per M feet last year. This plant has a much lower capital structural value than many plants because of the greater amount of 2-inch pipe, the very small amount of holder capacity, and the age, and large proportion of water gas plant, which is much cheaper to install than coal gas. From all of these causes
184½ the plant here has a lower structural value per thousand feet than many eastern companies. A structural value of one-half million dollars would be only $2.50 per thousand feet of sales and even $600,000 would only be about $3 per thousand feet of sales, assuming the sales to be next year 200,000,000 at rough figures. 7% of $3 is only 21¢, and 7% of $2.50 is only 17½¢ per thousand feet, and margin of profit would be correspondingly lower than at the rate of 6% or 5%. I use 7% on the theory that rates are a little higher here than in Iowa or in the east where I have always used 6%. $8,000 a year is approximately the figure that I have allowed for depreciation. $7,000 is the figure on my estimate and it would be about $10,000 on the company's valuation.

Reconstruction reserve is considered as synonymous with depreciation. It is maintained to meet the same thing. The contingency of increasing the reconstruction reserve on account of earth-quakes, and cyclones can hardly be considered within the bounds of reasonable calculation as they are so extraordinary. The contingency of the discovery of natural gas if it exists at all is exceedingly remote. According to the edition of Brown's Directory, a sort of official compilation of all gas companies in the United States, there is not a single natural gas company in Nebraska. According to the construction account, more than half of the plant was put in prior to 1893, and the average life of the entire plant must be fully 20 years. Now if we assume the depreciation of the company's business at 5% a year straight depreciation, without a sinking fund basis, then it would have practically no value at all today. But on a 20 year life with my theory of a sinking fund the plant would be worth a little over one-half or about one-half of its original cost. I did not include in my computation of valuations, piping for gas ranges on the theory that that was part of past promotion and gratuitous service and not the property of the gas company today. The pavement I excluded on the ground that the company had not paid anything for it. However, neither of these items were excluded on
184¾ the estimate made on the basis of the company's valuation.

Cross-examination by Mr. Rose:

The handbook I referred to is published by a man named Latta in New York City. I do not remember his initials. I do not know how old a man he is. I do not know what experience he has had as a construction engineer and manager of gas works. The quotation I gave from him was from a very prominent chemist. I do not know a thing about him or his earnings. I have not intended and have not quoted him as an authority. I intended to give it as a quotation from Prof. Lewes and I assumed that Latta's quotation was correct. I do not know that there is an absolutely fixed relation be-

tween the candle power and the heating power. I listened to some testimony by a professor at the University of Michigan in the Saginaw gas recently on the history of some tests made at a particular plant and I took some notes but I do not have them with me. I inquired for what tests the city had here but they have not been handed to me. I think they were over-looked. There is an approximate relation between the candle power and the heat unit of gas but it is not absolute. I do not understand that there is not even an approximate relation, that the variations are so great that we must admit that there is no practical application between the two. This is true if you confine it to coal gas or water gas but, of course, the ratio is different in the two gases and the proportion of the mixture would make a different relation. My principal investigations on the subject of gas has been in the line of acquiring statistics. As a statistician I prefer to go back as far as possible and I asked for the results here of four or five years and I have had access to such as Mr. Wiggins was able to prepare. My suggested economizing of costs here was based on the year 1907. 1904 was as favorable a year for water gas and much more favorable for coal gas. In my testimony I gave the items for the years 1907, 1906, and 1905, and then I suggested that for the future a saving could be made by generating more water gas, basing my figures on the year 1907.

185 Between 1905 and 1907 there was only a difference of 1.4¢ in water gas. The last year has more weight. In my computation of what might be saved by the company manufacturing water gas I took as the base rate for water gas, 39.51, station costs, and for coal gas, 62.9¢, which are the figures of 1907, and had I applied the same test of the experience of the company in 1905, I would have found on the same identical analysis that the cost of the water gas exclusively would have been greater than the cost of the mixed gas. It would have increased the cost of the mixed gas that year of 40.77¢ for coal gas and 40.95¢ for water gas if I had used the water gas exclusively, and I would not have had the benefit of economy and residuals from coke, but if I had used 1905 exclusively for coal and water gas, I would have started on 33.07¢ instead of 79.12¢.

In 1905 the total cost was nearly 6% less than 1907, for the mixed gas, so I was taking the last year which was more favorable to the company than if I had taken 1905. I think there was a reason in 9105 for its being so low and a reason why, therefore, it wouldn't have been fair to take it. The same loss of economy in fuel and residual that I analyzed and exhibited in 1907 if applied to 1905 would have made the result of the manufacture of all water gas show an increased cost over what the actual experience was from the use of coal and water gas, but it would still have been less than in 1907. Assuming the prices of fuel, coal, and oil to be what the company had paid in actual experience and later paid for 1907 under those same conditions the manufacture of exclusive water gas would have been increased about 4½¢ if it had not been for the manufacture of coal gas which was mixed with it. This is because of the increased price of coke of $1.85 which amounts to

about three and a fraction cents a thousand feet, oil about a cent per thousand feet, making a total of about 4½¢. It was around 4¢. That same economy derived from the manufacture of coal gas alone as applied to the net comparative cost at the station of coal and water gas in 1905 if eliminated, would have made the water gas that year cost much more than the combined cost of the
186 mixed gas but I had a reason for rejecting 1905 that I thought was fair to the company. Whether the actual experience showed the station cost to be high or low the same elements would affect the cost of the water gas at the station in order to bring the efficiency of the gas up to the standard required.

Coal gas in 1905 was a different proposition to 1907, and this cannot be ignored in any comparison. The whole question was the coal—the coal used in 1905. I understood that poor coal that had some sulphur in it was used in 1905, and they couldn't continue using it. Now if that was wrong then it would have been, perhaps, fairer to use 1905. Coal gas rose from a cost of 40.77¢ in 1905 to 54.26¢ in 1906, and to 62.9¢ in 1907. I know that it would not be fair to take any one year and form a conclusion from that year. Prices of oil and coal will fluctuate and that is why I tried to use all of these years but I did not use them in giving my probable results in the line of economy for manufacturing a greater proportion of water gas because I thought that water gas had to be compared with coal gas under existing conditions of coal. At the same time conditions of one year may be reversed the next. I was not arguing that the coal gas plant should be scrapped but it ought not to be used during the present prices. It would be a good thing to keep both plants ready for use and I would not criticise the company for keeping both in this locality. A 500,000 foot holder installed and erected here in Lincoln would cost in the neighborhood of $50,000. That would not include the land.

I arrived here to attend this trial Wednesday morning, and I have attended the hearings persistently. To a slight degree I have assisted the city attorney and made suggestions. I had read much of the testimony previously taken before I came. Aside from reading the testimony in this case and the various exhibits which I had at home I had only been in Lincoln once before and that was only a little pleasure trip. I do not remember any business. I was here four or five hours perhaps. I drove a little bit around town, but I did not see much of it.
187 That was eight or nine years ago. I haven't looked up the population of Lincoln at all in the past years. Knowing nothing about the population and conditions in 1872 it would be very hard to say what would be the reasonable requirements and future needs of the public in a plant of this kind. An engineer could not very well tell what the future development of the town might be. In 1890 when it was reconstructed an engineer could not go into the field of prophecy and ascertain the particular size of the equipment for the future needs of the city. He could do it better than in 1873 on account of the past history of the town.

Having had the experience of the town in the past it would be more of a guide. I am not acquainted with the state of development of this city now as compared with what it was in 1890, and I haven't looked up the relative values of property. Those things would be important in judging the prudence of the engineer in building this property. An engineer would want that data. I would not want to judge the intellectual capacity of the engineer who laid the plant out at that time without knowing these facts. Hind-sight is better than foresight. I do not recognize or question the rights in any investment where they put their money into any sort of business. It may develop or it may go down. I don't know that there is an absolute right in the matter. They saw a going town and they put their money in. If in 1870 Lincoln was a city of 1,000 inhabitants and the entire consumption of gas demanded then was about 65,000 a year I would not think under those circumstances an engineering project that provided for a plant for the needs of a city of 50,000 people in the future would be justified. A much larger allowance must be made for depreciation in a town of 5,000 or 1,000 growing up to a town of 40,000 than afterwards. Inadequacy develops more rapidly. I took an average of Brockton, Charleston, East Boston, Haverhill, Malden, New Bedford, Newton, and Salem for leakage. Those were the towns that had over 100,000,000 feet of sales and under 300,000,000 feet in the year ending June 30, 1907. The towns that had dividends and interest of 23¢ were every 188 town having sales over 75,000,000, except Boston.

In Brockton they have 87½ miles of main and sales of 129,732,800 feet. In Charleston, they have 55½ miles of main and the sales are 210,163,264 feet; in East Boston they have 29 4/5 miles of main and the sales are 159,975,000 feet; in Haverhill, 54¾ miles of main and sales of 182,359,100 feet; in Malden they have 149½ miles of main and sales of 218,222,870 feet. Malden has a leakage of 12.07¢ which is the highest of all. New Bedford has 81 4/5 miles of main and 229,652,295 feet of sales; Newton has 126 miles of main and 188,242,500 feet of sales. The leakage in Newton is 4.31. Salem has 55¾ miles of main with 118,327,800 feet of sales. All of the gas plants in Massachusetts dated with Boston somewhere about 1820, and the others followed along. The majority of them, I do not think came until after 1840. Just how soon after that they came, I could not say. I don't know as I ever saw the figures. The plants in these towns were probably all installed between 1840 and 1860. It might have been a little later in one or two. A good many of these towns such as Salem and New Bedford were formed under the authority of the British government before the independence.

Haverhill and Brockton are manufacturing towns and probably have been prominent about 30 or 40 years. I do not know what the ratio of the increase of population has been in the last 35 years in these towns. Many of these towns have the traditionally New England elms with the wide lawns between the curbs and the house. Newton is pre-eminently of that character and Charleston is a little of that character. I think some of these towns have as great a width

from house line to house line or even from curb to curb as they have here. I have driven in both Newton and Lincoln and I would say that Newton has as wide streets as Lincoln. I have been in many others but not recently and I do not recall about them. It is very hard to say how many of these towns are laid out checker-board fashion, the regular platted streets intersecting giving 300 feet blocks in the clear with an alley intervening out of that, and all of
189 them have streets that average in excess of 100 feet. I could not say whether or — any of them are platted that way. There perhaps is not a town in Massachusetts where that condition exists in just that form. There may not be any town among those which have been mentioned that has such a great proportionate area within its corporate limits in public highways or streets as in Lincoln. I do not know positively.

The first 15 or 20 years of the life of a plant is of very great importance in determining what the reasonable rate of depreciation is. I should say after 20 years in a town the company would have a pretty reliable experience to go on. I do not know anything about the conditions in Wichita, Kans. I would not undertake to say whether or not a company can anticipate the future requirements as late as 1890 of Wichita. I do not know within what period the demand from southeast Lincoln has been added to the plant here. I do not know when the demand in north Lincoln in Belmont or Yulanda place was taken off of this plant, nor do I know about that section of the town being moved away bodily. Nor do I know anything about the history of the southeast part of Lincoln. These conditions would affect the past depreciation. They would also affect the present structural value of the property if there are a lot of mains in abandoned streets. If a main that might have been reasonably adequate as far as an engineer could have seen in 1890 became wholly inadequate by reason of the extension of the town in those directions that would affect the depreciation. In considering the future it is necessary for the engineer to know local conditions and the past. Of course, we always have the experience of the company.

In deciding the present value of the property any mistakes that were not intentional but any failure to adjust the plant to the needs of the city and its growth will affect the amount that you will have to write off today in getting the present structural value, and that has caused in the past the writing off of more depreciation
190 than if such failure to anticipate the future had not existed. There is need here of increased capital for larger mains or high pressure mains, and so far as increased mains are necessary to reduce the leakage it will be necessary to make an allowance for interest and income upon the additional investment, and so far as the increased facilities at the station what are now being installed, that means there will be additional invested capital to be compensated for, and, testifying eight or nine months after Mr. Malone testified, one ought to add in the investment made since that time, in applying the present conditions. I took into account the fact

that the city of Lincoln is in part located in the salt basin and that the plant itself is located on the Salt Creek bottoms.

I asked Mr. Deffenbaugh if alkali had hurt the water mains because I saw something in the testimony of Mr. Malone or somebody in regard to that. I took Mr. Deffenbaugh's statement that he had not observed any bad effects from the soil. I heard the testimony of Mr. Deffenbaugh on that point here. I had not heard that the F street well located within the city had produced salt water so briny that they had to abandon the well, and that it affected the pumps and private services in use in the *the* water department of the city of Lincoln, and I had not been informed that there is a flowing salt well in Government square right in the heart of the city, and I was not advised that around the city and extending perhaps into the corporate limits there are areas of alkali salt, and that there are areas of alkali salt within the city where the gas mains have to be laid, and I have never been out to see what are called the salt basins here, and I did not know that salt had accumulated on the top of the ground and has been saved right here in the city and carried away in sacks. I am not posted on the historical facts. In Massachusetts they do not make any general rule for the allowance of depreciation but the state authorities take it up in each company separately as they come up for hearing. I think they are more rigid now than they were formerly. They had a law allowing 5% on the total cost of the new plant in
191 municipal works, but that was not applied by the commissioners to private companies that I know of. That law was in effect up until about two years ago. I don't think it was reasonable under the conditions of the plants as they existed at that time, and I don't think it was so regarded by the public, and generally accredited over the country as reasonable, and I do not think the practical operating gas engineers in the country considered it reasonable. Practical gas engineers have not made any estimates, to my knowledge, at all. They may have in concrete cases.

The first corporation case that I heard argued or read the history of was the Holyoke case. That came out in 20 volumes in 1898, and in that case President Humphreys of Stevens Institute estimated a depreciation of about 5% or 6% per thousand feet in that plant. The plant has sold 68,000,000 feet of gas about two-thirds coal gas and one-third water gas. He has since said that he did not intend to make that the general rule but only in regard to that plant, and his testimony was of a general character in that case. Holyoke had a population at that time of about 40,000. I think I heard one or two witnesses in this case claim 5% for depreciation and I believe in the Saginaw and Cedar Rapids cases I heard the same but in most of the testimony and evidence that I have seen they have not claimed so high a per cent for depreciation. They have mostly in larger cities, though, such as Buffalo, and Syracuse. The size of the city affects the question of depreciation only as regards inadequacy. A large city is not supposed to grow quite as fast though at times it does. Depreciation is affected by the rapidity of growth which controls the question of inadequacy. The character of the soil and elec-

trolysis affects the durability. With respect to the manufacturing plant the factors there which affect depreciation are the progress of the art and an inadequacy due to the growth of the city, by the wear and tear, but this would be about the same as in the small
192 plant and in a large plant. In testifying on the item of depreciation here I understood that the plant was only organized 35 years ago and was originally constructed with wooden mains that had to be replaced, and the original construction I do not suppose would be as expensive as iron though I do not know. Then the plant had to be practically reconstructed a second time in 1890 or 1892, but I do not understand that there has been any reconstruction of the distribution system except in the matter of those wooden mains.

I have taken into account the testimony here of Mr. Honeywell that the distribution system itself was practically reconstructed in 1890, and then again a large part had to be replaced and reconstructed in 1900 to 1902. I do not believe that the cast iron mains have been renewed to any extent. The renewals were probably wooden mains and 2-inch mains, but I do not think the 4-inch, 6-inch, and 8-inch mains have been replaced except as taken care of in ordinary repairs, by the 6¢ a thousand feet. I have not been informed that the M street 6-inch mains were replaced with 8-inch mains and I did not know that the 27th 4-inch mains were replaced with 6-inch mains, but I am not surprised that the mains from the plant were increased from 8-inch to 20-inch mains. I knew that they must have been increased from the days of old. I have noticed a very great increase in the demand in looking over these reports. That was, of course, contemporaneous with a large additional charge for a new-business department, and indicated on its face that there had been a house to house canvass to put in equipments. While the charges were large for that the expenditure will operate in the end to the economy of distribution, and I would not criticise the expenditure of a large sum of money for new business if there were many tenements that were not equipped previously for gas. Persistent and attractive solicitation is a very useful method to promote the business. Of course, reduction in price will also do it but this other method is a useful one in a measure and ought to be resorted
193 to in connection with a reduction in price. It is desirable and customary to call the attention of individuals to the reduction and to explain the advantages and the equipments. Persons who have not been accustomed to the use of gas need to be informed about it and appliances have to be explained to show the convenience and cost and this requires money. It is a sort of legitimate public exhileration.

When the company is charging rates that are only adequate to maintain its plant and give the constitutional recompense to the stockholders, if there is a decrease in the price there is no known way to make up that decrease except to expand the volume of the business so that by enlarging it they can actually carry it on at a decreased percentage of profit provided they had exercised all reasonable prudence and economy in the management. As a result of

the increased consumption the relative cost per thousand feet of administration and labor and the like will be diminished. As the plant is enlarged there are certain elements of necessary cost of manufacture and distribution that will be decreased relatively per thousand feet of output. In this plant without any other change in the plant itself except a reduction of 20¢ a thousand feet in the sale of gas it would very likely take an increase of 40% in the sales to make up for it. I cannot be positive. 30% might do it. You cannot tell off-hand. I do not think it would require 100%.

At the time this ordinance took effect at the end of 1906 the manufacture and distribution cost of the gas was 82.68¢. The increase of sales in 1907 over 1906 was about 17%. I have not worked out to see and it will be hard to say what decrease in the cost per thousand feet this increase of 17% in the sales means. There was quite an increase of some items that was not due at all to increase of growth. The combined cost of manufacture and distribution for 1907 was 72.12¢, which is a decrease of 3.56% in the cost over the previous year. I have not worked this over in that way. I have observed that a decline of 20¢ in price generally means a decline in profit of not over 15¢ owing to the large increase in business
194 and in the second year it would be a decline of not over 10¢, usually. That generally follows. It will vary in different plants. It is not a precise mathematical rule. It would depend on the energy of the company in following it up. All I mean to say is there is a considerable reduction in cost per thousand feet with a large increase of output sure to follow, but I would not attempt to say that that can be reduced to a definitely ascertained basis in this city.

As to leakage, I stated that on the experience of eight companies in Massachusetts in 1907 it was 6.04%, or 150,000 feet. In 1906 it was 5.92% for unaccounted-for gas. It is generally considered fairer to apply the leakage per mile of main rather than per thousand feet of gas. There were 64 miles of mains here at the close of 1906. At the beginning of 1907 there were about 61 miles, an average of 62½ miles and the sales were nearly 180 million feet. That is not quite 3 million feet per mile of main. I do not know how this compares with Madison, Wis., Denver, Colo., Des Moines, Ia., Omaha, Nebr., or Sioux City, Ia. The leakage is somewhat larger proportionally with a small main and in this plant here there is an abnormal ratio of small mains. In the annual report of leakage the figures are given on both bases. The leakage last year was 385,213 feet per mile of main, and 354,081 feet per mile of mains reduced to a 3-inch size. That is a little over twice what I said these 11 companies had. They have an average of 151,000 and I allowed about 200,000 feet as normal in my calculations. I took off only 40%. They have a more expensive equipment in the Massachusetts companies than they have here and if we bring this company to the basis of the Massachusetts companies we would have to employ a greater amount of capital upon which a dividend would be required. This would partially compensate for the decrease in the leakage.

It is more economical to take care of inadequacy by putting down

a parallel small pipe instead of replacing the old pipe with one that is adequate and save the old one, because it generally saves
195 tearing up the paving for services and mains. They generally put the new pipe near the curb and cut off the services from that side of the street from the old mains and supply them from the new. You would not have to open up the surface much, you could simply open up by the curb whereas if you took up the old main and put a new main in its place you would have to tear up the pavement, and if you laid right close to the curb the services on that side would not be under much paving. Anyway it saves the bother of taking up the main more than anything else and leaves it there and you get its use. There is not any difference in cost. A trench has to be dug anyhow. There is not any very large difference in cost but you save your mains. The leakage undoubtedly slightly increases relative as the size of the main decreases. The chief difference is that you must keep a high pressure on a small main; if you have too many small mains relatively to large ones, you have too high a pressure and it causes the leakage. You have relatively more volume of gas to the area of the crevices or joint, though the pressure accounts for more, but both are elements. By this method of taking care of inadequacy you would have two ditches in the same street. That is the way it is commonly done. It leaves a large portion of the street free from services and rather relieves the congestion of pipe in the street. It relieves the company from having services crossing the street so much. You lay another main near the other curb and then all of the services in the center can be removed as needed. If you want to lay a big water main or a big sewer you can cut it.

I am not aware of, and have not been posted, myself, of the ordinance regulations in Lincoln, governing the laying of mains. It is generally true that they have to be laid under the direction of the city engineer. I don't know what the ordinances are here. Sometimes the franchise provides for that. In Cleveland a good share of the gas mains are laid near the curb, one on each side of the street. They have a hundred miles laid that way. The practicability
196 of doing this would depend somewhat on the regulations of the city. It is not a matter that the company should control arbitrarily because in that respect they are using the public streets and are subject to be directed by the city authorities. I do not mean to say that they should not take up the small mains, but I say that it is a very common method to parallel them. If we were to put down a large main in the one trench it would enable the company to remove the smaller main, and only one trench would be required. I do not think there would be any greater economy then in the matter of leakage in using a larger main because the little economy resulting would be set-off by the longer services. If the smaller mains were removed and the pipes were in a good state of preservation they could be used in some other place where their size would be adequate, and there really would not be much difference in actual economy whether you make the large pipe do the work or whether you reenforced the supply by separate pipe in that section. The engineer in each locality should be the best judge. I say that the paralleling

of the mains is a very common method but the judgment of the local engineer on local conditions would be better.

The figures I have given here on the item of depreciation were theories based on statistics which I have collected. It is an acknowledged truth and it is the practice of constructing engineers to allow for contingencies which are added to the theoretical or estimated cost of practically every improvement that is constructed. It is commonly put in as overhead charges. It is customary to allow ten to fifteen per cent on account of over-head charges, including interest during construction. I want to modify what I said about the cost of construction because I do not think the over-head charges are as great for mains, meters, and services, as for the manufacturing plant. As to the life of the plant I think my figures of life, especially 30 years for the buildings and holders and 20 years for the rest of the plant are lower than any I have ever known given by an engineer for a case, in any case that I ever was connected with, with the
197 possible excep'ion of the Saginaw and Cedar Rapids cases. It is customary to estimate mains from 100 to 75 years, buildings 40 years, holders, 30 to 40 years, and the rest of the plant about 25 years, though some of it will be given a shorter life, but I mean taking it as a group. I have taken a shorter life than is usually done for holders, and in most of the plant here because it was a growing town and not quite so large as some.

I have met Henry L. Doherty, president of this company, and talked with him once or twice and I have heard of him outside. He is prominent in the gas enterprises of this country and is regarded as skilled in bringing properties up to efficiency, and I suppose he is an especially skilled man at promoting consumption for individual plants. I think he is a good engineer in all of those lines. Mr. McMillan is prominent and they are connected with the same enterprises. I think Mr. Doherty is Mr. McMillan's general manager, and Mr. Doherty, I think, is largely interested in both engineering and financing properties of this kind. I have never heard him testify in cases of this character nor have I, as I remember, ever read any of his testimony. I do not think he is given to setting himself up as a witness and I do not know how much he estimates the depreciation of machinery nor how he estimates the depreciation in the whole plant per year. I would consider Mr. McMillan a better authority on industrial operation of gas plants. He has been gathering complete data from these companies for many years. I do know what his company set aside for depreciation a few years ago. It was 5¢ a thousand feet and three or four cents for repairs, an average of 2.8¢ being all that he set aside. He did that in the returns to the U. S. Commissioner of Labor, and it was published by the government at Washington. He gave an itemized statement of his ten or fifteen plants, grouped them together. They had aggregate sales of 3,000,000,000 feet, I think. It appeared in the report of the U. S. Department of Labor for 1899. They were not given as his companies but they were his. It appeared as a group owned by a syndicate,
198 but it appeared later that they were his. I talked with him about it and he wondered how it got out that they were his

companies. I don't know whether his experience in Madison, Denver, Lincoln, St. Joseph, Detroit, Milwaukee, and St. Paul, since that time has demonstrated that the amount he then estimated on the basis of the business he had previously conducted, was wholly inadequate. A year ago he told me that on account of the rise in price of labor and material his figures of that date should be raised somewhat, but it was 8¢ then for the aggregate of repairs and depreciation, and included cities of the size of Milwaukee and Denver. I also believe one of his companies was at Nebraska City, but I am not sure. There were 12 companies that had an average of 251,000,000 feet of sales. I am not absolutely certain whether Nebraska City was one of them or not.

In 1907, according to the company's actual experience if there had been a 20¢ reduction in price and a 2½% occupation tax, the reduction in revenue would have been $40,357.35, if there had been no increased output. I think about 7% would be a reasonable rate of interest on the company's invested capital here. , I recommended 6% in Iowa in the Cedar Rapids case. It struck me this morning that 7% would be proper here, though 6% at the start with the idea that there would be growth might be right. An item of between $8,000, and $9,000 to take care of depreciation would be reasonable. I would regard $10,000 a little high.

In 1906 if there had been a reduction in price of 20¢ and the 2½% occupation tax had been effective, the reduction in revenue would have been $34,567.65, if there had been no increase in the output over what was actually sold. I predicted what would take place in the ensuing year of 1908 with certain economies put in instead of taking the past experience of the company, because the result of a reduction in price of sales could not appear in 1907, when in fact there was no reduction. I would have to assume larger sales in that year if I had assumed the rate of $1 in force. I could have predicted what
savings there could have been at the new rate if it had gone
199 into effect in the year 1907 and assuming larger sales just as
I did in 1908, and could have taken the company's actual condition at the date the rate went into effect and I would then have made my predictions on the possibilities as I found them for a period of time nearer and not so remote from the date when the ordinance went into effect. It would have had a greater bearing on the year 1907 but not on the prospects of the four or five years during which the ordinance is supposed to operate. I haven't studied at all the effect on the payment of interest on the bonds. I have only considered what was a reasonable return on the structural value. I considered the structural value to represent the investment.

I predict that the sales of the company will steadily increase and the efficiency and permanency of the plant would be better and the element of depreciation would lessen as the company reached an equipment that was adequate to the city, and more nearly standard in its character, and I don't pretend to say that the requirements of price would necessarily be the same in 1907 to the company that they were in 1908. It changes year by year. I took a year which was remote to the extent of one year from the date of the effect of

the ordinance. In order to make the equipment economical and meet the requirements of the plant like this it is essential that the company have credit, and favorable earnings in relation to the invested capital must be shown in order to command money for investment. I believe that a gas property that earns 7% will sell at par. In the East 5% will make them sell at par. I do not know that the McMillan organization is any stronger than the U. G. I. McMillan's connection with this company gives it a larger financial strength. I could not compare the company to the larger and better known company known as the U. S. Gas & Improve-
200 ment Company. I am not aware of what the McMillan stocks have sold for for the last eight months. All stocks have been low during the last year, I know. In ordinary years they undertake to place value on stock as low as 7%. I do not know how it is now. I know this from a careful study of all the gas stocks sold on the New York market, before the panic.

In connection with the New York Consolidated Gas case I made a report and found that stocks that had been earning 6% and bonds that had earnings of 5% in all the leading gas companies except Buffalo had been selling at par for the previous two years. That netted the investor only five or six per cent. That is what they actually drew in dividends. That is true with the U. S. Gas & Improvement Company stock during those two years. That was in 1907 and up to October, 1907. The panic came soon afterwards. I don't know the market today. If that stock actually returns 8% to the investor it is a good exception to the rule. Buffalo was the only exception when I made the investigation. I do not think I erred in that, but I do not know what it is now. They have outstanding stocks all the time. I do not deny at all that they return the investors 8% dividends. The stock was selling usually in the market at a premium.

A year ago Buffalo was the only company out of 30 or more companies that did not sell at par on a five and six per cent dividend. In most of those cases they made no showing at all of additional earnings, over and above what was withdrawn in dividends. They were dealt with in the stock exchange without knowledge of more than the declaration of dividends and interest. The U. G. I. and most of these companies does not give full reports. I do not know whether any of those companies that sold at par on a 6% dividend, in fact earned a larger additional dividend that remained in the plant. I have not got the information. I think some of the companies did but which ones or how much I do not know. I freely concede that no particular year can be taken as a basis and where I used statistics I take all the experience that I can get. It
201 would not be a very hazardous commercial enterprise in a business of this character which has to deal with municipal bodies and is subject to the regulation of rates to distribute in any year all of the earnings and dividends if the company had what I would call a sound financial status, and was not trying to earn more than they could justify in a rate case as the structural value.

I do not think the people are essentially unfair and unjust in regulating rates. As soon as they know the facts I think they are quite generous to corporations. I think that if a company showed that its entire earnings for the year were distributed in dividends and were all required to distribute a dividend of 6% that such a stock would command the money of investors in this business anywhere in the world, and in this country. There has not been a single stock or bond issue in ten years by a single Massachusetts company that has not been authorized and the rate fixed and there has not been a single issue on more than 6% basis, and they do not allow it. If the stock is paying 16% they will fix a value of $200 or $300 below which it cannot be sold and the bonds cannot pay generally over five, never over six per cent, and all of the gas companies in Massachusetts have financed themselves under these orders of the commission for years. The dividends and interest do not amount to over 23¢ a thousand feet but they may put back into the plant some additional surplus. I think in actual practice it is practical to run a plant of this character on a basis that consumes all of the earnings in dividends, but I do not think that it is necessary under my testimony this morning except for about a year while the ordinance would presumably continue for several years. I would presume that this ordinance would continue for a period of five years because rates are not changed, generally speaking, in the United States by city councils oftener than that. They are not changed anything like as often. As a matter of fact, the company could probably stand a cent or two cents reduction each year as its present output increases. As a practical matter councils
do not attempt to reduce every year or two. The standard
202 of quality is also subject to change.

I know of Prof. Marks who suggests, I think, something like 8% earnings necessary to make the stock pay, but I am not sure of the 15% which he suggested. I thought it was intended to take care of other things—depreciation, etc., and he has taken that back in the last few years. In the latest edition of his work he says it applies only to small companies. I have it but I have not read his later edition. It was discussed in my presence a good deal in New York. I will take your word that the standard of 15% has not been changed in any of the later editions of his work. He has been on my side of these cases and has been letting his services to pound down rates. He was associated with me in the New York case and the Buffalo case. I do not attempt to swear to all of his conclusions nor he to mine. He is not as good an authority as the authority I quoted from in Latta's handbook. As an engineer he ranks a good deal above Mr. Latta. The gas that may be wasted through pressure after it has passed through the meter would cut no figure in the company's net waste. It would merely be a booming of the sales. I do not have very much knowledge of the burner equipment compared with the burners formerly in use. I have heard it discussed a great deal, and I have used gas burners all my life, but I am not an expert on gas burners. There is a burner for fuel consumption that mixes air with the gas before it is burned. I have

one in my own gas stove and they are in common and general use and regarded as the best appliance, and, generally speaking, the mantle burner has taken the place of open gas jets for illuminating purposes and is more efficient and these mantle burners also have, I think, devices for mixing air with the gas before it is ignited. I think that you would find one-half of the burners in this town without Welsbach mantles. They are used more constantly. However, it varies wonderfully in different cities. It is astonishing what a difference there is in that respect. It depends somewhat upon whether or not the policy of the company is aggressive in
203 their business campaign. If they attempt to make the gas attractive and up-to-date, the community will adopt the mantle burners. A high pressure then ordinarily is an advantage where the gas is mixed with the air before being ignited, and it increases the efficiency of the gas. It is found desirable to have the pressure higher now than formerly when the open burner was used. The results are better, on the whole. Just what brings it about I do not know but it is the general agreement among gas men that the pressure should be a little higher than formerly. One and a half inches of pressure will work pretty well but two or four inches is considered about right among most gas men. I was speaking of a minimum for two inches. Doubtless the average would be somewhere near two and a half or three inches. In an ordinance you have to allow for the necessary fluctuation of pressure. You have to allow something to come and go and while two and a half or three inches would be better than either four or two inches you have got to have some margin. I was told by some one when I was at the works that at that time the pressure went up to seven and a half at the city hall. I may not have understood it correctly. I have been trying to get the records for some time and they have just arrived. I have not examined them yet. When the consumption reaches the peak in this system I would think that it would be impossible to give an adequate supply through some of the mains without approximating the pressure which is reported. Where 65% of the mains are 2-inch mains I would not be very much surprised with such a result at times. A low pressure at that time would not give an adequate supply to the burners. Seven and a half is high and it may be that even with the present mains they could get along without going as high. I would not say positive. Actual experience would be the best test and the local engineer and judge of the distribution would be able to inquire into and inform himself of the condition. He is the man to whom the complaints of inadequate supply would come. You could require the company to
204 keep its pressure below seven and a half and leave to them the means of accomplishing it which would, of course, require the investment of some additional capital. The waste of the gas in this plant rose as high as 16.56% in 1906. Extraordinary circumstances or occasions might increase that outside the leakage of mains. There might be a broken main or pilfering or secret tampering with the mains. That occurs very rarely in communi-

ties, though. I have never known it referred to in a single case but, of course, it could occur.

The gas unaccounted for here includes the gas that is stolen and that might be discovered and credited. In 1907 it was reduced to 11.84%. I have no records of the pressure at the holder that I am aware of. By increasing the pressure at the holder it is possible to deliver a great quantity of gas through the same main. The leakage should be proportionate to the extent of the main in a large measure. If you make a delivery of a greater quantity of gas through that same main that would tend relatively to lessen the loss per thousand feet. It would distribute the leakage over a greater amount of gas. Leakage may be due to broken mains, leaks from explosions, or fires. They would cause a great deal of leakage and they are unavoidable. I do not mean to say here that property acquired by the company on credit does not constitute a portion of the invested capital. If $50,000 worth of supplies are unpaid for and the company owes for them it has nevertheless that amount of invested capital in its business. Other companies where similar accounts have appeared do not pay interest on these accounts payable. They merely buy on credit for two or three months which they were granted in buying. So far as this company pays interest that should not be deducted from the working capital. As an item of invested capital it ought to be deducted rationally. As long as the company does not have to pay interest I do not see why the consumers should have to pay it. The operating expenses for 1906 are given as $127,000. That would be a little over $10,000 a month.

The floating indebtedness of $50,000 would not be covered
205 by the current bills of 60 days credit. I have no definite knowledge to warrant apportioning any part of this $50,000 accounts payable to the electric department, nor the $35,000 the previous year.

To keep the company in good credit it is essential that a company of this size should pay their bills more promptly so that $50,000 in bills are not accumulated. If that is for gas alone it is too high, and it is a little too high for both the gas and electric departments. $20,000 for the gas department alone would be a more reasonable allowance. It is very common for companies to have too much credit in buying supplies, and they often have, and it is to their interest to have, cash on hand to discount the bills the same as the successful merchant does. I think they could save money by having all of that capital to pay out at the time of delivery. I would think instead of having an indebtedness of even $5,000 they should keep a credit balance of $5,000 or $10,000 constantly to meet the bills on hand. Yet it is essential that many companies of good standing do have a whole lot of outstanding bills. So long as the company pays interest on the item of working capital I should not deduct it. I would deduct from it the part that they do not pay interest on. If we allow for 60 days' supplies according to the way I figured it at $10,000 a month for total expenses, that would amount to $20,000 and in addition we would still have to have a large amount in equipment from time to time, and current supplies and so much money

invested in wagons, horses, pipe, fuel, and oil, which must be had to carry on the business. That property, of course, is physically valued and subject to a tax burden, and if the company had the money on hand and had that equipment free of debt it would have to be accounted into the invested capital.

I have adopted the fairest method I know of in calculating the physical value of the property to ascertain what the necessary invested capital is, and the physical value of the supplies on hand necessary to carry on the business must be included, but against that there is a set-off. It would be desirable and convenient
206 for the company to carry a balance credit of some five or ten thousand dollars in the bank for the purpose of meeting its bills. That is a legitimate part of its invested capital if it has it there. It is true that unless the town has been pretty thoroughly canvassed already that upon putting into effect a reduced rate of charges good business judgment required the company to employ more men in the new-business department, and increase the promotion costs in order to by expanding sales in a measure compensate for the reduced price.

It is quite common for companies upon the taking effect of a reduced rate to canvass over the patrons and endeavor to induce them to employ new devices and use the gas for new purposes. I would advise it for a few months and then I do not think it would be necessary any more. The immediate effect would not be to increase the promotion charges in view of the amount this company has spent for it. I think I could decrease them here under those conditions by the end of the first year. I would not advise it to be reduced for the first six months, but then I should reduce it. I would not advise it to be increased above the present expenditure in those first six months.

As to the reduction in lost gas no one could tell whether you could reduce it or not in any given year, though the company itself has a lower leakage and unaccounted-for gas in 1903. Then it was 6.84. I allowed in my computation 7%. ½¢ a thousand for legal expense in a town of this sort is not much of a difference. I am entitled to take the average experience of the company on legal expenses for several years. That gives a better idea.

No one man can estimate with any definiteness what the experience of the company concerning litigation will be. This company may go along under normal conditions and pay an attorney a thousand dollars a year to look after its work, and then a year will come where extraordinary demands *is* put on the legal department and they have to hire assistants and take evidence and sometimes employ experienced engineers to testify and pay them money for it. I do not know whether conditions of that kind will arise again or not and when they do arise they will have to be taken care
207 of. With an increase in coal gas from 59,000,000 feet in 1905 to 69,000,000 feet in 1907 I do not think the retort house labor for coal gas would ordinarily increase 60% per thousand feet. It is true that the efficiency of stoker laborers varies but it ought not vary anything like that. Sometimes new men have

to be employed without experience and that reduces the efficiency of the labor. Sometimes they reduce the number of men working in that department and make a small amount of gas and that relatively reduces the efficiency of the labor, and these are variations that will necessarily manifest themselves in an item like that.

The credit for all the residuals in 1907 did not appear in the report of the cost of gas. It was not in the total operating cost per thousand feet of 79¢. Some time in the years to come when they adjust their stock account it will all appear, but as to the year of 1907 I do not think the profit fully appears. Part of the stock that is entered in 1907 may have been on hand at the beginning of the year. I think there should be a yearly adjustment and there apparently was not so as to cover the net profit or loss from the stock account into the operating expenses. It is quite possible that some years had a higher operating expense than appears in these reports. But the making of the adjustments this year might do an injustice to the previous year. In order to make it apply exactly each year there should have been an adjustment made at the beginning of the year as well as the close, and that is what I did practically, by taking the entire amount made of tar and coke and following it through to the amount sold or used. That was not very different from the amount made. It was not enough, as I said this morning, to materially affect it.

In my calculations I took for the basis the present depreciation value of the property and in another calculation I took the company's inventoried value, and in expressing what I thought was a fair depreciation I went back to 4¢ and at the same time I gave the consumers the benefit of the interest upon the depreciation reserve.

In doing that I took the figures that I thought correct and
208 they counted most strongly against the company. If you are going to allow the depreciation upon the decrease in value from time to time and if you are going to allow that per cent on the reserve fund theory, it will only be sufficient at the end of the period to replace the depreciated value and when you allow depreciation only on the depreciated value, when you come to the end of the 50 years or 30 years or 20 years, there will not be sufficient money in the depreciation fund to reconstruct the property or the buildings as it originally was. You would only get the present value back. The investor is entitled to have his invested capital kept intact for the whole period provided he has not eaten his cake as he went along as this company has done. If they have not saved their reserve fund they cannot ask the consumers to make up what they have used up in the last 40 years.

The proper basis would be at the outset when the plant was first constructed to set aside the necessary amount the first year and continue through the life of the plant and in that way the investment would remain intact. The company by some means should preserve unimpaired its original invested capital. The company could more profitably invest its sinking depreciation fund in the extension of its own plant than it could by putting the money in the savings bank or trust companies, and then it would have a com-

plete guarantee against loss. I can give in a general way the process of the manufacture of coal gas but I would not attempt to do it in its full details. I do not pretent to be competent to draw plans for a gas works but I can give you a general idea of the process. I would not attempt to describe with technical accuracy and precision the process of making coal gas including every process of distillation of the coal and every equipment for purifying, scrubbing, and putting it in the holder, nor would I attempt to describe the different machines employed in every detail of that process. I would not even attempt to describe the bench or oven and its processes complete. I know where the coal is put in the bench. The furnace coal is usually put in below and the coal put in at
209 the mouth-piece. Sometimes it is put in with machines. They usually put in coke below at the floor underneath the retort. I don't think I described any process when I was in the plant to Mr. Adams and Mr. Stewart. I hardly remember what I described. I guess I pointed out the ash pits down there but I did not pay much attention to it. I saw afterwards what I had done.

I do not think that a 50 year term of life for any mains in this particular locality in view of the experience of this company as I have gathered it from the testimony is altogether preposterous. I think that while 75 years would be long if there is serious danger to the mains from the soil and electrolysis, I remember what I have seen of the testimony and heard of it, and I am willing to concede that 50 years might be reasonable in view of the doubt as to the soil and electrolysis, but I would consider anything less than 50 years absurdly low. I take into account the question of inadequacy except that the 2-inch mains have already depreciated on account of inadequacy about as much as they ever will. There will not have to be a very large amount of 6- and 8-inch mains replaced on account of inadequacy. There will be some but those mains will be supplemented by mains on the other side, as I said this morning, and in some cases by removal.

I never knew of a company that had so short an average life for street mains as 15 years, not even for inadequacy. There might be individual lengths half a block or a block but I am talking about the mains as a whole. I have been through the rapidly growing western towns a good deal. I have lived in the west a good deal. I have seen them grow pretty rapidly and I have seen the testimony in many of these gas cases. They have grown especially rapidly in Cedar Rapids. Saginaw has not grown so fast. For the past seven years I have been superintendent of the Cleveland waterworks which is operated by the municipality, and that is my first experience in the actual operation of industrial enterprises of this sort, and my first experience in actual industrial operation and manage-
ment. I am 48 years old. Prior to that I was engaged in
210 statistical investigation for a few years, and prior to that I was a school man. Tom Johnson is the Mayor of Cleveland. He is a great advocate of municipal ownership and makes it a political issue, though the water works there have been owned by the city since they started in 1855. I have in my office two or three com-

petent engineers. I am not a practical engineer and do not claim to be, and the work of the architect and engineer in my department is largely done by the engineers. My work is more supervision, statistical, and keeping the costs and looking after the work and seeing to the appointment and efficiency of the men and a great many questions as to the policies.

I think my views on the subject of municipal ownership and reduced charges for public services were all printed before Mr. Johnson ever thought of them. I suppose because of my view being kindred to his own he called me to his service when he became Mayor of Cleveland. We had been personal friends for some time and I suppose that they all had an influence. I was on this investigating committee for the National Civic Federation and that took about two years. It took about one-third of my time each year and I also made a study of municipal street railways and lighting companies at Chicago for the State Board of Labor. I was on that board but I do not think I was a partisan, but I was known to be friendly to municipal ownership as against private enterprise, and I have always appeared in the interests of the cities to sustain reduced rates in the same way that gas engineers have appeared in the interests of the companies. I suppose that I appeared in this case just about the same as a gas engineer would appear. I suppose there is very little difference and I do not know that there is. I appear here for a compensation to be paid by the city. I do not know whether I am to receive what the lawyers would call a considerable compensation or not. I have done considerable work of this kind in the few years. I testified against the Consolidated Gas Company of New York. That case has now gone to the
211 United States Supreme Court.

I testified in the Des Moines case 15 years ago, I think. When I was making statistics in research work for the government I simply did some work three or four different times for the Department of Labor, but I was not studying the gas question then. It was the question of labor. They sent me to Europe in 1900 to study technical questions under Mr. Wright's administration. That work did not pertain especially to the gas problem. When I worked for the state of Illinois I was under the board of labor. I made an investigation in 1896 and 1897 and that is the only work I ever did there. I lived in Chicago then and I had been there for some five years and knew the situation pretty well and lived there during the several months that I made the investigation. I do not think Chicago, New York, or Milwaukee would furnish any particular analogy to Lincoln, but I suppose you could get a good many things in those cases that pertained to a case like this, but the ultimate results would furnish no close analogy. I worked in Montreal, but that was a much larger city with a much larger gas plant. Authorities differ as to whether Murdock or somebody else started the process of manufacturing gas, but it was started in England and France about the same time, about the beginning of the 19th century, along in 1800 somewhere. The process was known and was beginning to be developed, maybe, in London, and other places in the 17th century.

EDWARD W. BEMIS, recalled for further examination, testified on behalf of the defendant, as follows, pages 422 to 426:

Redirect examination by Mr. Stewart:

I have examined Exhibit 144, the automatic gauge register of pressure, and it indicates that some time every day between four and six in the afternoon the pressure exceeds 7 inches. That pressure makes the gas blow and increases the leakage. It may be a necessity in small mains but it may not be necessary that the mains should be so small. There is a tendency of late among gas companies to put in re-enforcing mains of high pressure to take gas at 10 point
212 pressure from the works and tapping it into the supply mains and use an automatic governor that will reduce the pressure to what they want in the mains. With the mains being so small it is less expensive to lay them than to lay the large mains. I meant to say the $7,000 would be a proper allowance of depreciation on this plant. That is what I worked out in my figures this morning. In figuring this depreciation I did not allow for scrap. That makes my estimate all the more conservative because there would be some scrap at the end of the life of the plant. So far as the earnings that should properly go to depreciation have been paid out in either dividends or interest on inflated capital, to that extent the company is not entitled to collect it over again from the consumers, nor for money to pay for plant depreciation. They are only entitled to current and for the future depreciation.

The repair account of the company for 1907 was about ½¢ per thousand feet higher than the average of the previous four or five years. It would be referred to as higher and indicate that the repair account is not likely to increase in the future. Five or six cents is a normal amount in other companies. In my depreciation I figured that all renewals of the retorts or settings and all tools renewals and keeping up of office supplies and furniture and repairs that is not absolutely displaced, or meters or services and mains, and machinery and buildings, and anything along the line of maintenance would be taken care of in the operating expense by way of replacement, repairs, or renewals. All of the items that are necessary to keep the plant up in good shape and physical condition I figured would be paid out of the operating expenses. That is all included in the 6¢ repair item of this company, but where the whole unit is renewed outside of the failing or the retorts and where anything like an entire setting or where you get a new machine in place of an old one or new length of pipe to take the place of the old one or a new meter, then it ought to be charged to the renewal account, which is
213 the fund set aside for depreciation to re-build those units. But when an 8-inch main takes the place of a 4-inch main you should charge off its depreciation at that time only the cost of the 4-inch main taken out, and charge the new 8-inch main to construction. I think that is the way this company does at the present time.

From the testimony which I have heard on the water mains I would say that in the last three or four years there has been very

little electrolysis on the water mains near the power house, and there would be no more danger to the gas mains. There is very little difference so far as the electrolysis is concerned between gas mains and water mains. The water mains are likely to catch it a little the worst because electricity finds water a good conductor and if two mains of equal size were side by side there would be a little more electrolysis through the water pipe after it jumped through the joints or when it left the pipe. It would affect it whether it was water or gas. If there was a little more electricity in the water mains they would get a little the worst. The eight Massachusetts companies had an average of 2,690,000 ft. of sales per mile of main last year, and the Lincoln company had about 2,900,000 ft. of sales per mile of main, or about 10% more. There were five out of eight Massachusetts companies that were included in that study of unaccounted-for gas that had lower sales per mile than Lincoln yet they had an average leakage of only 6%, or 151,000 ft. per mile of main. I used 1907 in making my computation because that was the latest year. I understood 1905 would have been more favorable to use as far as the city was concerned for a considerably lower operating cost, but that was a year in which an inferior quality of coal, I am informed, was used, and they had to use a better coal later. 1905 would have been a fair year so far as the cost of coal was concerned. The average cost of the coal per thousand feet of coal gas made in 1905 was 58.49¢. In 1907 it was 69.31¢. In 1905 the cost per ton was $5.09, and in 1906, $5.68, and in 1907, $5.95 as they charged it. I understand, however, that that included considerable labor of handling and that the
214 actual cost F. O. B. cars, in 1907 was about 50¢ less. That is accounted for, I suppose 10¢ for unloading, perhaps 12¢, and I do not know where the rest of the expense of handling is. The natural growth of the city should be taken into consideration as tending to increase the consumption as well as the reduction in price in attempting to secure new business. It would cut considerable figure. This year, by not making any allowance for the four gallons of tar that was allowed to run to waste last year they saved about eight gallons which even at 2¢ a gallon for steam purposes would amount to 8¢ a ton of coal carbonized. It would amount to at least one-third of a cent for water and coal gas sold and would bring my 24.69¢ up to 25¢ profit on dollar gas. Giving the company its claims on inventory valuation and 50 years' life for the mains, it would make 23¢ instead of 22.69, making those figures approximately 25¢ and 23¢.

Recross-examination by Mr. Rose:

There are advantages to the consumers in having the management of the electric and gas departments combined and in getting a consumption for the tar, and there are also advantages in dividing the cost of administration between the two departments. On the other hand, there is likely to be less competition in rates and to that extent the consumers would not be benefited so much. However, if municipal regulation took the place of that it would tend to economize the cost.

Pure distilled water is a conductor of electricity. When you say pure distilled water I don't know just what you mean. The ordinary drinking water such as flows through the water main is a good conductor and I am not informed just what would result from your claim of pure distilled water. That water that most cities have for drinking purposes—ordinary pure water—is an excellent conductor of electricity. Pure water does not have impurities in it that bacteriologists would consider bad for drinking or for cleanliness. It is not absolute free from all bacteria or chemical constituents and solids in solution but these are not deleterious to health necessarily. I have never had occasion to ascertain and determine whether or not pure water free from anything in solution was a conductor of electricity but I did not suppose there was any difference. I don't believe there is any. If water that contains impurities and solids in solution only is a conductor of electricity I am not so sure but that a water main would conduct it through the iron just the same, whether the water inside would or not. I don't believe the water would be as free a conductor of electricity as the iron. I think it would have been fully as much as the gas. 12 gallons of tar per ton of coal is the average production. That is not the maximum that is reached in any plant and does not run from that down to 8 or 9 gallons, according to the coal that is used. 12 gallons is considered a normal output for a company that pays attention to it and tries to save it, using Youghiogheny coal. I don't know what they can get from Kansas coal. I think the market for tar is most likely in a city for local purposes and for steam as it is used here. Of course, in some eastern cities they are able to sell it. They sell it in New York, but I don't know as Lincoln would find it profitable to send it off. The company says it is worth 2¢ a gallon for fuel, and that saving is really made because the two plants are combined. At times in the past they have charged themselves, until recently, three or four cents for it.

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216 C. P. WALTERS, being first duly sworn testified on behalf of the defendant as follows:

Direct examination by Mr. Stewart:

I am Clerk in the water office in the city of Lincoln and have been there for four years. There is a gauge for the testing of gas pressure in this city. It is an instrument by which a constant record is kept of the pressure of gas in inches. It is located in the City Hall. It is about ten blocks or three-fourths of a mile from the gas plant. The gauge registers automatically, on a chart prepared for the purpose. Exhibit 144 contains a record of that instrument from December 28, 1907 to March 31, 1908. The figures at the top of the chart are the hours of the day, and the tracing appearing irregularly over this chart is a line made by a pencil which is held in the machine for the purpose of recording the pressure. The figures on the left hand of the chart indicate the number of inches of pressure and the seven at the top indicates seven inches, and the record made by this chart

is made each day during this period. When the gauge goes beyond the top of the chart it indicates a pressure higher than seven inches.

217 H. F. PETERS, being first duly sworn testified on behalf of the defendant as follows: Pages 426 to 429 printed record.

Direct examination by Mr. Stewart:

I reside at 2803 Holdrege street, Lincoln, Nebraska. I have lived here for 19 years and I am in the real estate business. I have been in the real estate business for 16 years in this city and I am somewhat acquainted with the values of the real estate in the vicinity of the plant of the Lincoln Gas & Electric Light Company. I have property in Lincoln for sale down there and I have had occasion to familiarize myself somewhat with the values in that vicinity. The reasonable value of the block of ground per lot whereon the electric and gas plant is located, is about $300.00 a lot without the buildings.

Cross-examination by Mr. Rose:

There is trackage to these lots, and I don't think that effects the value of the property. Where a man starts an institution of that kind, if he needs trackage, he generally gets it, I think. I could not say whether lots having trackage facilities sell higher there in that community than those that do not have trackage facilities. I think the lots there were higher in the boom of 1888 than they are now. I think there are twelve lots in that block. I do not know what lots in that vicinity, between the gas company's plant and the passenger station, with trackage facilities, have sold for recently. I could not say whether they have sold for as high as $1,000.00 a lot or not and I don't think the trackage facilities in that location effects the price.

Redirect examination by Mr. Stewart:

If a party locates a manufacturing plant or something that consumes large quantities of coal or other material, in that section of the city, they can secure trackage facilities without expense. The railroad will build to them without charging and that is the reason why I say it does not add to the value.

218 Recross-examination by Mr. Rose:

I remember two years ago when I was interested in a mill that was built at Fremont, we first talked of taking the old mill that was built on 27th street, and the Burlington road offered to run a switch track over there without any expense to us. I do not know whether they would not do that for the Gooch Mill Company or not. That was a $40,000.00 new mill. The mill that I spoke of was the old Conn mill. It is on the Northwestern and about four blocks from the Burlington. It had trackage facilities on other roads, and is at least four blocks from the Burlington. The Rock Island does not run to it, neither does the Missouri Pacific. I do not know whether the Burlington required this year a payment of $4,000.00 as a condition

for going into that same mill for Mr. Gooch. I have not posted myself as to whether or not they would go in there free. We were figuring on a 500 barrel mill and that is what we built at Fremont and we expected to make that out of this one. I could not say what officer of the Burlington offered to go in there free for us. I was the man who had charge of it. Mr. Royston was interested in it and told me about it. He went with him but the man that told us was the man who looks after the leasing of ground. We also went over there on North 14th street and looked at some ground there and they spoke about putting in a switch if we wanted it.

219 A. S. TIBBETTS, being first duly sworn, testified on behalf of the defendant as follows: Pages 429 to 445 printed record.

Direct examination by Mr. Stewart:

I have resided in the city of Lincoln something over 27 years and my occupation during that time has been the law business. I have interests in other businesses. I am a director in several corporations and am a director in the City National Bank, and I have been fairly well acquainted with the prevailing rates for money for the past few years, in this city. For temporary loans the rates run from 4% to 8% varying a good deal according to the size of the loan and the responsibility of the party. Large institutions generally have borrowed at about 5% or 6% in the last few years. The current rate on municipal bonds and other classes of bonds has been from 4% to 5%. I have an opinion as to the value of real estate in the vicinity of the gas plant and have known of property being sold in that locality and I have sold some amount of property myself there, and I believe I could give a pretty good opinion of the reasonable value of the property there. I would say that the twelve lots of the Lincoln Gas & Electric Light Company at this time are worth about $250.00 a lot. I am also acquainted with the cost of organizing corporations as an attorney in this city. I would say that $500.00 was the reasonable cost of examining the titles to real estate, preparation of certificates of incorporation, mortgage bonds and matters incident to the organization of a company such as the Lincoln Gas & Electric Light Company would be. It would depend a little upon the amount of capital put into the business, but with my knowledge of the plant I would say that the local fees of an organization of such a matter would be in the neighborhood of $500.00. For the attorneys fees for the first year, in addition to the organization charge, I would say that $500.00 would be ample. There might not be any services at all except advice; if a person was engaging for the corporation and it was new and had not gotten into any difficulties except what
220 could not be avoided in the organization, I would say that $500.00 would be ample. A corporation of that kind where they have no litigation damage suits, could engage a good attorney for that amount. Most any of the attorneys here would undertake to do it for that unless they had some reason for not doing it. I have had certificates of stock engraved and I presume bonds also and I have an idea what it would cost, that is, what has been paid

for those things and my opinion is that 300 bonds would cost $100.00 or $150.00, possibly $200.00 for the engraving. It depends upon the quality, and it would be about the same or possibly a little less for stock certificates. The trustee certifies to bonds and makes any transfers that are necessary. If the transfer- of the bonds are to be made upon the books of the company, and the work incidental to a thing of that kind is very small, and the only thing required is reliability, the trustee could not be held *expect* for some misconduct of his own which might arise. A reasonable sum to be paid for a person acting as such a trustee, in the first instance, would be $300.00 or $400.00 per annum, then the work accruing after that depends upon the number of transfers and I could not say that there would be anything that would add anything to it. A couple of hundred dollars for the first year would be sufficient, it seems to me, that is, supposing that the transfers are made from the books of the company and the bonds are not transferred by delivery.

Cross-examination by Mr. Rose:

I have never put out a bond issue of upwards of $1,000,000.00 with a large industrial organization. There are very few that have done so here and I don't think there has been enough of that work here to make a market price of the legal work. I don't suppose there ever was one organization in this town with an issue of bonds of $1,000,000.00 where the work was done here, but they all know what such work is worth, what it would be worth here. I suppose that work has generally been done by New York attorneys. It was not done here.

221 Only these large municipal corporations have anything of that kind. One of the street railways here had its organization work done by John H. Ames. If he charged a fee of $2,500.00 for drawing articles of incorporation, he charged five times too much. It was a graft. I do not know what the cost of that work was in his case, and it is not a matter of general publicity that he got $2,500.00 for the articles of incorporation which did not involve any bond issue. I have examined one of the trust deeds pledging properties of a varied nature of the Lincoln Gas & Electric Light Company, which saves to the company its right to make replacements and protects in minute details both the company and the bond holder and the trustee. These instruments are more common than ordinary deeds and they are more voluminous also. In protecting all of the rights of the parties in common, the instrument itself makes up several pages of legal cap. Ordinarily it does not amount to several hundred printed pages. Ordinarily the trust deed that secures the issue of a million and one-half of bonds of the Lincoln Gas & Electric Light Company, ought not to require several hundred printed pages.

I don't know in detail what the requirements of a trustee of good credit in Chicago and New York are, but I know what requirements he ought to have, and I don't know what his particular requirements are with respect to the conditions of such a mortgage before he will accept the trust. It would depend upon the trustee. Any of the

trust companies engaged in this business would require that the conditions of the bond be examined by its own attorneys and approved and would require the company to pay the cost of that examination, but if it was done here there would be no necessity for that. Bonds of that amount have not been floated here up to this time on individual enterprises. In order to have them placed on the market it would be necessary to have a trustee that had a reputation. I have never seen any of the lithographic bonds with the coupons annexed of the Lincoln Gas & Electric Light Company, but I have seen those of similar companies. I don't know anything about how many words there are in one of them nor how many coupons there are attached.

222 If the bonds run forty years, it would make at least forty coupons. I don't know how many full sheets there would be required for lithographing. I could not tell you and do not know how many plates the bond for forty years, secured by a voluminous trust deed and containing the recitals of the trust, would require, but I suppose the cost of the lithographing would be affected by the number of plates, and I could not tell the cost of the plates without knowing the number of words there were upon it, but I give in a general way the fair cost of lithographing in corporations that I have been connected with, where they had lithographing done; but I don't think my evidence in regard to lithographing amounts to such a great deal and I would not want to guarantee my prices on that.

I don't think there would be much call for the services of an attorney with a company that was being organized and was expending in the construction of the plant from $800,000.00 to $950,000.00. An attorney would not be required for its contract with the city and its contractors and would not be needed to arrange for the opening of streets nor in connection with the hiring of men and manufacturers, for pumps, gas holders and machinery. He would not be needed in carrying on that work and drafting the contracts, looking to the enforcement of contracts, advise as to getting the streets open, going before the city council and getting permits and things of that sort. I don't think there would be much call for an attorney in that work. It would be possible that an attorney might be called upon for extensive advice, but I don't think it would be probable; or it might happen that a man might be killed or injured in extensive operations of that kind, but in that event the attorney would make separate fees. The executive manager, in administering and carrying on a construction enterprise of this magnitude, might ordinarily have the counsel of a competent attorney, to guide him in the prosecution of his work and in the execution of his contracts and to advise him as to liabilities of the company as they arise from time to time, but in general practice they generally

223 make their own contracts without seeing an attorney, unless they have an attorney hired by the year, to whom they can consult just as well as not. There has never been a situation in the history of this city where this amount of money has been expended by which that custom could grow. I never knew of a case in this city where the contractor in the execution of a mere paving contract

of much smaller magnitude than the amount involved in this case, has ordinarily expended large sums during the year on construction work, solely for attorney and counsel fees. I know that Buckstaff claimed he paid $5,000.00 to some party for attorney's fees. I don't know what he paid to Whedon & Mason, but he might have paid that. I don't think Murphy paid a great deal, nor do I think the Barber Asphalt People paid Frank Hall and Pettis a great deal. I would say $500.00 is a large sum for counsel fees, but larger sums might be paid under certain circumstances where the company had to call upon attorneys to protect them in the matter of damage suits or things of that kind. There might be paid many times $500.00 when the magnitude of the work is contemplated, but that would only be a possibility.

I should say that the Lincoln Gas & Electric Light Company has credit which will enable it to borrow money to meet its notes at the rate of 6% or 7% in this community. I do not think they have a credit for that amount. I know that they have offered $100,000.00 of short time notes, giving a trust pledge of its bonds at double the face of the notes and have been unable to place them. I do not know the amount exactly and my recollection is that they did not offer 7%. I do not recall that they offered any bonus of 1%. There was a time here when no company could borrow $100,000.00. If they had pledged their bonds I do not see why they could not get the money before October 28, 1907. My recollection is that they offered some notes last summer and I don't know that they could not place them with the banks or with private individuals in this town. I think some of them were placed.

224 I don't know upon what terms the American Light & Traction Company sold its notes a year ago. It may not have been a very good financial institution. I know what Armour & Company and Cudahy Company sold their notes for. They go away into the millions. I can tell what Raymond Bros. Clarke Co. and Miller & Payne borrowed money at. Assuming that the American Light & Traction Company was in good sound financial condition and a worthy institution, they could have floated short time notes a year ago, before the bankers' panic at less than 7% and a commission for placing them of 1%. If they had good credit they could do it for less. There was in the neighborhood of $40,000,000.00 of packing house paper here in Nebraska last summer at the rate of 5%. It raised to 6% for a little while, but now it is back to 5%. That is a legitimate enterprise and they have good credit. I know that there has been more or less agitation and distrust of gas companies and they have been over-capitalized, and that has had a bad effect on their credit. A company like the gas company here, with its right to occupy the streets questioned in a suit by the city, might go into the market and borrow money today at any price if it was not over-capitalized. If the capitalization was unquestioned and it had no debts at all, I do not see why it should not borrow money.

I know the Lincoon Telephone Company borrows money on their notes at 6%. They have $550,000.00 worth of bonds sold and paying 6% and with the bonds went a stock bonus equal to the face of

the bonds. That was when they first started. There is no stock bonus now. When they started they sold their bonds at 90¢ on the dollar. The stock represented no money paid in at all. It was simply water stock, but that is the way the bonds were floated. When they started $90.00 would buy $100.00 worth of bonds and $100.00 worth of stock. It was an experiment at that time. Nobody knew what it was. That would give some indication of the cost of getting money in this community for gas enterprises. The bonds are still outstanding and have gone into the market and the company can not redeem them at less than par with accrued interest.

225 You can not buy these bonds for less than par now. I do not know that there is anybody that wants to buy any bonds now, even government bonds. The telephone company we consider on a good financial basis, but the gas company is bonded too heavy to have a good credit. I have heard the representatives of the company state on the witness stand the value of the company's property. If it was shown that the bonds of the gas company do not cover the full value of the physical properties in all its departments, I would say that the company was on a good financial basis. I have bought stocks of this kind and sold them myself in a small way lately, but not in the gas company's stock. I never owned a dollar of the gas company's stock or bonds in my life. I have had bonds in the Lincoon Telephone Company and have some stock in that company today. Some of that stock represents nothing but water. I would not be considered an expert on the financing of gas companies over the country. I never was a promotor. I have been counseled by promotors in coal matters and in insurance companies, but not in gold mines.

Redirect examination by Mr. Stewart:

The Lincoln Telephone Company was put in here in competition with the Bell Company at the time when the Bell Company occupied the field. We introduced an automatic service that was considered at the time an experiment and it had to be exploited in the face of strong competition. The Lincoln Gas & Electric Light Company, with something like $1,168,000.00 of outstanding bonds and notes, would be entitled to credit on small current amounts only. It would not be entitled to any large amount. It would not be strange that any company that had bond issue in excess of its value secured by a mortgage or trust deed, would have trouble in borrowing additional money. Any concern borrowing money here in Lincoln in the past few years with a good credit, could get the money at from 5% to 6%. If the gas company was organized on a business basis and had money paid in to show for its investment, it could borrow plenty of money right here in town at 5% if it wanted to.

226 The credit of the Citizens' Street Railroad Company and the Traction Company is good and they borrow money at not to exceed 6% and I think they borrowed money last summer at 5%.

Recross-examination by Mr. Rose:

The New York Central and a good many roads issuing notes, paid as high as 7% last summer. Some of them couldn't borrow money for that because they were bonded for more than they were worth. At that time stocks were tumbling and they lost the confidence of the people and investors and those who were loaning money. They did not consider them safe. That was the reason for the high rates of interest last summer. Since the October panic the high rate has been due to the stringency in the money market, more than anything else. I can not name any one person who did not consider the New York Central good, but one of my clients was speaking to me about investing some money, or had some money invested in railroad notes. I do not know just what railroad it was now, and he did not consider them very good. These notes are not placed here to any extent. I did not ask my client whether he had any confidence in these notes when he invested his money.

I have never testified as an expert financier before, except just what I knew. I know about some of these things. So far as the legal part of financing enterprises of this kind, I think I know, but I am not a financial man. I simply know about the financial matters that are incident to my business and to the part I have had in business. I have pretty intimate relations with the banking business and have had for some 7 or 8 years and have been consulted on the financial part of it quite a good deal. I am not the financial manager of any bank no more than that I am on the Board of Directors and one of the consulting members of the Board. I spend but little time with the affairs of the bank. I know something about the commission paid to financial underwriters to put into the market an issue of bonds of a company like the Lincoln Gas & Electric Light Company. They take just whatever commission they can get.
227 The amount depends upon the institution. Some can place their bonds at a fraction of 1% and others are willing to pay as high as 5%. That is my knowledge. I would say that the biggest financial underwriters in New York would float the best railroad stocks in the country for a commission of less than 5%, but so far as taking an entire issue and placing it, the charge for doing that I am not acquainted with. I would say that there are financial underwriters who would place the best securities for less than 5% and the ordinary securities for less than 10%. I can not tell you who they are but that is my opinion. I have known of underwriters taking propositions to place bonds at 2% and 3%. Municipal bonds can be placed for less than that. A broker offered to do this, but I have known of no one assuming the responsibility of placing an entire issue. I would say that that was a poor way of doing anyhow. I would not know whether it was necessary to do that or not until I had tried and then it would depend entirely upon the corporation. If I wanted to put an enterprise upon its feet thoroughly and get the money and know in advance so as to contract for expenditures, it would be a prudent and safe thing to provide for the entire issue, but I can not say that was ever necessary with the gas company here,

unless to go and organize a new one. If a man has the money to put into the business and to promote a gas company, that ends it.

Redirect examination by Mr. Stewart:

I believe if there was nothing of the kind of the gas company in town today, that we could promote one and get the money and organize here in Lincoln in ten days, if it was honestly financed. I heard the officers of the company place the cost of replacement of the entire plant at $225,000.00 at the trial of the tax cases some time in 1903 and 1904.

228 Recross-examination by Mr. Rose:

I can not tell you who the manager of the gas company was at that time, but he made that statement. William Lawler was one of the witnesses. I do not recall who the other one was. They fixed the price of replacement at $225,000.00.

229 PAUL HOLM, being first duly sworn, testified on behalf of the plaintiff as follows: Page 468 printed record.

Direct examination by Mr. Rose:

I am engaged in the real estate business as an agent and dealer in Lincoln Nebraska and have been for about 22 years and have been active in the business continuously, and have been a large dealer and am acquainted with the market value of real estate throughout the city. I am acquainted with Block 79 on which the Lincoln Gas & Electric Light Company have their plant, and in my opinion the fair and reasonable value of that Block of twelve lots, exclusive of all improvements, and taking into account its nearness to the tracks and many other advantages that it has, is about $600.00 a lot for the inside lots and about $700.00 a lot for the corner lots.

230 S. W. CHENEY, being first duly sworn testified on behalf of the plaintiff as follows: Pages 468 to 469 printed record.

Direct examination by Mr. Stewart:

I am employed by the Lincoln Gas & Electric Light Company as superintendent of distribution. I have had experience in the laying of mains and services for them. I have been with this company for nearly two years and was with the Denver company for about a year, and I have had to do with the construction, reconstruction and repair of the distribution system, which includes the services. In actual practice a ditch 18 inches wide is required to lay a two inch main or smaller and 20 inches for a four inch main. The average depth of the ditch required for services is about 4 feet, and a man in actual practice will dig on an average between 10 and 20 lineal feet of 18 inch ditch of an average depth of 4 feet.

231 Page 139 printed record.

## Copy of Exhibit "E."

*Gas Construction.*

| | | |
|---|---|---|
| 1873 | 54,247.32 | |
| 1874 | 887.31 | |
| 1875 | ..... | |
| 1876 | 10,117.44 | |
| 1877 | 3,371.55 | |
| 1878 | 1,656.06 | |
| 1879 | 2,976.56 | |
| 1880 | 1,004.21 | |
| 1881 | 1,318.42 | |
| 1882 | 11,160.80 | |
| 1883 | 1,177.98 | |
| 1884 | 3,233.36 | |
| 1885 | 7,609.33 | |
| 1886 | 15,163.34 | |
| 1887 | 12,390.47 | |
| 1888 | 24,261.65 | |
| 1889 | 9,650.72 | |
| 1890 | 43,301.28 | |
| 1891 | 48,429.26 | |
| 1892 | 71,284.59 | |
| 1893 | 17,345.41 | |
| 1894 | 6,534.89 | |
| 1895 | 9,081.63 | |
| 1896 | 5,327.06 | |
| 1897 | 6,810.45 | |
| 1898 | 6,427.28 | |
| 1899 | 11,480.62 | |
| 1900 | 22,538.31 | |
| 1901 | 53,343.85 | |
| 1902 | 55,424.53 | |
| 1903 | 23,664.67 | |
| 1904 | 20,359.09 | |
| 1905 | 20,916.24 | |
| 1906 | 14,632.32 | |
| 1907 | 6,150.14 | Six months to June 30, 1907. |
| | 603,278.14 | |

232 Page 143, Printed Record.

EXHIBIT 4 (EXHIBIT H IN INDEX).

Whereas, this company has been incorporated for the purpose of engaging, and with power to engage in the gas and electric business in the city of Lincoln, Nebraska, and vicinity, all as set out in Article 3 of the Articles of Incorporation, and

Whereas, In order to accomplish the purposes for which it has been incorporated it will be necessary for the company to acquire gas and electric plants, and distributing systems and franchises for the operation of the same, and

Whereas, The Lincoln Gas & Electric Company, a corporation organized under the laws of the State of Nebraska is the owner of valuable gas and electric plants, and distributing systems in the city of Lincoln, together with the right of franchise to operate the same under an ordinance of the Mayor and Councilmen of the city of Lincoln, approved March 12, 1872, as amended by an ordinance approved June 19, 1890, and as further amended by an ordinance approved May 2, 1900, and under various other ordinances of the Mayor and City Council of the City of Lincoln, all of which property, rights and franchises are suitable for the business to engage in which this company was incorporated, and

Whereas, It has been ascertained that the same can be purchased by the company for the consideration and upon the terms and conditions hereinafter set forth,

Now Therefore Resolved, That this company purchase property, rights, privileges and franchises of every name and nature at and for a consideration equal to Two Million Two Hundred and Forty Nine Thousand One Hundred ($2,249,100.00) Dollars, plus all the existing just debts and liabilities of the Lincoln Gas & Electric Company for the said sum of Two Million Two Hundred and Forty Nine Thousand One Hundred ($2,249,100.00) Dollars, to be paid in this company's full paid nonassessable capital stock at par, and the balance of said consideration to be paid by the company
233 assuming and agreeing to pay as and when they shall respectively mature and become due all the existing just debts and liabilities of the Lincoln Gas & Electric Company. The transfer to be made as of date December 1, 1901.

Resolved Further, That the Board of Directors of this company, and the proper officers of this company when elected, be and they hereby are fully authorized and empowered and directed upon receipt of the proper conveyances to this company of the property, rights, privileges and franchises aforesaid, to issue and deliver to the Lincoln Gas & Electric Company, or to such persons as it may direct, certificates for Two Million Two Hundred and Forty Nine Thousand One Hundred ($2,249,100.00) Dollars, fully paid, nonassessable capital stock of this company, and generally to perform such acts, and to execute such instruments in behalf of, and in the name of this company as may be necessary, proper or convenient

to fully carry out and complete on the part of this company the purchase aforesaid, and

Whereas, This company when it has assumed and agreed to pay all the debts and liabilities of the Lincoln Gas & Electric Company as aforesaid will be under the necessity of making proper and adequate provisions therefor, and it is expedient and proper that this company should at this time provide for immediate extensions to, and improvements upon the properties which it will acquire as aforesaid, and also to provide for future extensions thereto, and improvements thereon.

Therefore Resolved Further, That the Board of Directors of this Company be, and they hereby are fully authorized and empowered and directed to cause to be executed a mortgage upon all of the said property, rights, privileges and franchises when acquired, such mortgage, and the bonds to be issued thereunder and secured thereby to be in the form and of tenor and effect set out in the copy submitted to this meeting, and on file in the office of the company in record files as Document No. 3 identified by the signature of
234 the Secretary of this meeting thereon indorsed; and further, that the Board of Directors be generally authorized to do or cause to be done whatever may be necessary and proper to fully authorize the execution, and delivery of such mortgage and bonds as aforesaid.

It being expressly stipulated that in purchasing the property, rights, privileges and franchises of the Lincoln Gas & Electric Company this company agrees to become liable for any claim that one J. C. Van Riper may have against the Lincoln Gas & Electric Company in case he shall hereafter succeed in establishing the same.

"The following was introduced, referring to the action had at the first meeting of the stockholders of this company of all of the property, rights, privileges and franchises of the Lincoln Gas & Electric Company for the consideration, and upon the terms and conditions set forth in the minutes of said meeting of the stockholders, reference to which is hereby made.

Resolved, That the President or Vice President and the Secretary, or the Assistant Secretary, of this company when elected be and they hereby are authorized and empowered and directed upon receipt of proper deeds and conveyances to this company of all of the property, rights privileges and franchises of the Lincoln Gas & Electric Company, to execute, issue and deliver to the Lincoln Gas & Electric Company, certificates for this company's fully paid, non-assessable capital stock, and such other undertakings and instruments in the name and on behalf of this company as may be necessary, proper and convenient to fully complete and effect on the part of this company the purchase of the property, rights, privileges and franchises of the Lincoln Gas & Electric Company for the consideration and upon the terms and conditions set out in the minutes of said meeting of the stockholders.

235 Page 146 printed record.

EXHIBIT J.

Whereas, the Lincoln Gas & Electric Light Company has been incorporated for the purpose of engaging and with power to engage in the gas and electric business in the City of Lincoln, Nebraska, and vicinity, as will appear by the articles of Incorporation of said Company on file in the offices of the Secretary of State of Nebraska, and the County Clerk of Lancaster County, Nebraska, and

Whereas, in order to accomplish the purposes for which it has been incorporated it will be necessary for the Lincoln Gas & Electric Light Company to acquire Gas and Electric Plants and distributing systems and franchises for the operation of the same, and

Whereas, this Company is the owner of gas and electric plants and distributing systems in the City of Lincoln, together with the right and franchise to operate the same under an ordinance of the Mayor and Councilmen of the City of Lincoln, approved March 12th, 1872, as amended by an ordinance approved June 19th, 1900, and under various other ordinances all of which property, rights, privileges and other franchises are suitable for the business, to engage in which the Lincoln Gas & Electric Light Company was incorporated, and

Whereas, it has been ascertained that the Lincoln Gas & Electric Light Company will purchase from this Company, the property, rights, privileges, and franchises aforesaid for the consideration and upon the terms and conditions hereinafter set forth:

Now, Therefore, Resolved that this Company sell to the Lincoln Gas & Electric Light Company all this Company's property, rights, privileges and franchises of every name and nature, at and for a consideration equal to Two million, two hundred and forty nine thousand, one hundred dollars, ($2,249,100.), plus all this Company's existing just debts and liabilities, the said sum of Two million, two hundred and forty-nine thousand, one hundred dollars, ($2,-
249,100.) to be paid in full paid non-assessable Capital Stock
236 of the Lincoln Gas & Electric Light Company at par, and the balance of said consideration to be paid by the Lincoln Gas & Electric Company's assuming and agreeing to pay as and when they shall respectively mature, and becomde due all the existing, just debts, and liabilities of this Company, the transfer to be made as of December 1st, 1901.

Resolved, further that the Board of Directors of this Company and the proper officers of this Company be and they hereby are, fully authorized and empowered and directed to cause to be prepared and to execute, in the name of this Company, proper deeds and other conveyances of the property, rights, privileges and franchises aforesaid, and to deliver the same to the Lincoln Gas & Electric Light Company upon receipt of certificates for Two Million, two hundred and forty-nine thousand, one hundred dollars, ($2,-249,100.) at par of full-paid and non-assessable Capital Stock of the Lincoln Gas & Electric Light Company or upon receiving satisfactory assurance that such certificates will be issued and delivered

so soon as the same can be prepared, and generally to perform such acts and to execute such instruments on behalf and in the name of this Company as may be necessary, proper, or convenient to fully carry out and complete on the part of this Company the sale aforesaid.

It being expressly stipulated that as part of the consideration for the sale and conveyance of the property, rights, privileges, and franchises aforesaid, the Lincoln Gas & Electric Light Company shall assume and agree to become liable for any claim which one, J. C. Van Riper, may have against this Company, in case he shall hereafter succeed in establishing the same.

Resolved, further that the Board of Directors and proper officers of this Company be, and they hereby are, fully authorized and empowered and directed, upon receipt of certificates for the amount of Capital Stock of the Lincoln Gas & Electric Light Company aforesaid, to transfer and distribute the same to the Stockholders of this Company pro rata.

237 Resolved, further than when such distribution to the Stockholders shall have been made this Company be then and thereupon dissolved in accordance with Section 134, Chapter 16, Compiled Statutes of Nebraska, 1901, and that the Stockholders Present and voting at this meeting comprising more than two-thirds of all the members and stockholders of this Company, do hereby consent to such dissolution, and that the Board of Directors and proper officers of this Company be, and they hereby are, fully authorized and empowered and directed to perform all such acts and proceedings in the name and on behalf of this Company, and to execute all such instruments as may be necessary or proper to fully accomplish and effect such dissolution.

The question being upon the adoption of the foregoing Preamble and Resolutions, a ballot was had which resulted as follows:

Number of shares of stock voted in favor of the adoption of the Preambles and Resolutions 6749, Contra. None.

Thereupon the entire outstanding Capital Stock of the Company, excepting one share, has been voted in favor of the adoption of the foregoing Preambles and Resolutions, the Chairman declared that the same were fully adopted.

The following was introduced:

Referring to the action had at the Special Meeting of the Stockholders held this day respecting the sale and conveyance of all this Company's property, rights, privileges and franchises to the Lincoln Gas & Electric Light Company, and the dissolution of this Company, (Reference to the Minutes of said Special Meeting of the Stockholders being hereby made.)

Resolved, that the President and Assistant Secretary of this Company be, and they hereby are, authorized and directed to do and perform such acts, and to execute, acknowledge and deliver such deeds and conveyances in the name of, and in behalf of this Company as may be necessary, proper or convenient to fully complete

and carry into effect the sale and conveyance of this Com-
238 pany's property, rights, privileges and franchises to the Lincoln Gas & Electric Light Company, for the consideration and upon the terms and conditions set out in the said Resolutions of the Stockholders.

The question being upon the adoption of the foregoing Preamble and Resolution, the same were Unanimously adopted.

239 Page 155 of Printed Record.

COPY OF EXHIBIT "F."

City of Lincoln, Nebraska, Page 25, Book 1.

*Realty Tax List for the Year* 1907.

| | | | Total valuation. | 39¼ mills. |
|---|---|---|---|---|
| Lin. Gas & Elec. Light Co., Lot | 1, B. | 79.. | $1,400 | $54.95 |
| " | 2 | .. | 1,800 | 70.65 |
| " | 3 | .. | 1,800 | 70.65 |
| " | 4 | .. | 1,800 | 70.65 |
| " | 5 | .. | 1,800 | 70.65 |
| " | 6 | .. | 1,800 | 70.65 |
| " | 7 | .. | 500 | 19.63 |
| " | 8 | .. | 500 | 19.63 |
| " | 9 | .. | 30 | 1.18 |
| " | 10 | .. | 30 | 1.18 |
| " | 11 | .. | 30 | 1.18 |
| " | 12 | .. | 40 | 1.57 |
| Page 24, Book 1: | | | | |
| Halleck F. Rose, | 11 | 77.. | 10 | .40 S. 92 ft. E. ½ |
| " | 11 | .. | 15 | .59 W. ½ |
| " | 12 | .. | 145 | 5.69 S. 92 ft. |
| Page 25, Book 1: | | | | |
| Lin. Gas & Elec. Light Co., | 3 | 83.. | 240 | 9.42 |

*Personal Tax List for the Year* 1907.

City of Lincoln, Nebraska.

Page 253:

Lincoln Gas & Elec. Light Co., Val. $158,060; Am't, $6,203.86.

Page 256:

Total assessed value of all property in the City of Lincoln ..... $7,795,540.00

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, Thos. H. Pratt, City Clerk of the City of Lincoln, County and State aforesaid, do hereby certify that the foregoing is a true and correct copy of the taxes on real and personal property owned by the Lincoln Gas & Electric Light Co. together with the total assessed valuation of the City of Lincoln, as shown by the records and files of my said office.

Witness my hand and official seal this 24th day of Sept. A. D. 1907.

[SEAL.] THOS. H. PRATT,
*City Clerk.*

240 Page 156, Printed Record.

COPY OF EXHIBIT "G."

W. L. Dawson, County Clerk.
D. A. Frye, H. E. Wells, Deputies.

Office of County Clerk, Lancaster County, Lincoln, Nebraska.

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, W. L. Dawson, County Clerk in and for said County and State, do hereby certify that the taxes for the year 1907 on the personal property of the Lincoln Gas & Electric Light Co., is $4,873.15, and on the following pieces and parcels of land, to-wit:

| Lot. | Block. | Tax. |
|---|---|---|
| | 79 | $367.20 |
| 3 | 83 | 9.01 |
| So. 92 ft. 12 | 77 | 5.04 |
| So. 92 ft. E. ½ 11 | 77 | .36 |
| All west ½ 11 | 77 | 1.99 |

In testimony whereof I have hereunto set my hand and affixed the seal of said county this 24th day of September, 1907.

[SEAL.] W. L. DAWSON,
*County Clerk.*

241 Page 157, Printed Record.

EXHIBIT "L."

803 *Warranty Deed—Corporation.*

State Journal Co., Lincoln, Neb.

This Indenture, Made this 19th day of December, in the year of our Lord One Thousand Nine Hundred and One, between The Lincoln Gas and Electric Company, a corporation organized and existing under and by virtue of the laws of the State of Nebraska, party of the first part, and Lincoln Gas & Electric Light Company, also a corporation organized and existing under and by virtue of the State of Nebraska (of the County of — and State of —), party of the second part,

Witnesseth, That the said party of the first part, for and in consideration of the sum of Thirty thousand 00/100 Dollars, in hand paid, and other valuable considerations, receipt whereof is hereby acknowledged, has sold and by these presents does grant, convey, and confirm unto the said party of the second part, the following described premises, situated in the County of Lancaster and the State of Nebraska, to-wit:

All of Block seventy-nine (79) in the City of Lincoln, and all of Lot three (3) in Block eighty three (83) in said City, together with all the appurtenances thereto belonging; subject, however, to all existing liens thereon, (together with all the appurtenances thereto belonging.

And the said —— —— for itself and its successors, does hereby covenant to and with the said part- — of the second part and — heirs and assigns, that at the time of the execution and delivery of these presents it is lawfully seized of said premises; that it has good right and lawful authority to convey the same; that they are free from incumbrance — and does hereby covenant to warrant and defend the said premises against the lawful claims of all persons whomsoever.)

In Witness Whereof, The said The Lincoln Gas and Electric Company has hereunto caused its corporate seal to be affixed and these presents to be signed by its President the day and year first above written.

THE LINCOLN GAS AND
ELECTRIC COMPANY,
By HENRY L. DOHERTY,
*President.*

242 Signed, Sealed, and Delivered in the Presence of—

W. E. FOUTHIRT.
H. LINCOLN CLINTON.
W. E. DOUTHIRT.

STATE OF NEBRASKA,
*Lancaster County, ss:*

On this 19th day of December, 1901 before me, Emma J. Hedges, a Notary Public duly commissioned and qualified for and residing in said County, personally appeared Henry L. Doherty, President of The Lincoln Gas and Electric Company a corporation, to me known to be the identical person described in and whose name is affixed to the foregoing instrument as President of said corporation, and acknowledged said instrument to be his voluntary act and deed, and the voluntary act and deed of said corporation.

Witness my hand and seal at Lincoln in said County, the day and year last above written.

[SEAL.] EMMA J. HEDGES,
*Notary Public.*

Internal Revenue Stamps Amounting to $13.75.

Real Estate. (803.) (Have This Deed Recorded.) Corporation. (Warranty) Deed. From the Lincoln Gas and Electric Company to Lincoln Gas & Electric Light Company.

THE STATE OF NEBRASKA,
*Lancaster County, ss:*

Entered on Numerical Index and filed for record in the Register of Deeds' office of said County, the 25th day of March 1902 at 10 o'clock and 40 minutes A. M., and recorded in Book 106 of Deeds on page 578.

$1.25 Pd.

J. D. MOORE,
*Reg. of Deeds.*
By T. E. WHEELER, *Deputy.*

J. N.

243 Pages 159 and 160, Printed Record.

EXHIBIT M.

*Warranty Deed Corporation.*

State Journal Co., Lincoln, Neb.

This Indenture, Made this 19th day of December in the year of our Lord One Thousand Nine Hundred and One, between The Lincoln Gas and Electric Company a corporation organized and existing under and by virtue of the laws of the State of Nebraska, party of the first part, and Lincoln Gas & Electric Light Company, also a corporation organized and existing under any by virtue of the laws of the State of Nebraska (of the County of — and State of —), party of the second part.

Witnesseth, That the said party of the first part, for and in con-

sideration of the sum of — Dollars, in hand paid, and other valuable considerations receipt whereof is hereby acknowledged, has sold and by these presents does grant, convey, and confirm unto the said party of the second part (the following described premises, situated in the County of — and the State of —, to wit:)

All of the party of the first part's property, rights, privileges and franchises of every kind and nature (except real estate which is conveyed to the party of the second part by another deed bearing even date herewith), including the rights and franchises granted to The Lincoln Gas Company by an Ordinance of the Mayor and Councilmen of the City of Lincoln, approved March 12th 1872, as amended by an ordinance approved June 19th, 1890, and as further amended by an Ordinance approved May 2nd, 1900, and under various other ordinances of the Mayor and the Council of the City of Lincoln (together with all the appurtenances thereto belonging.

And the said —— —— for itself and its successors, does hereby covenant to and with the said part — of the second part and — heirs and assigns, that at the time of the execution and delivery of these presents it is lawfully seized of said premises; that it has good right and lawful authority to convey the same; that they are free from incumbrance — and does hereby covenant to warrant and defend the said premises against the lawful claims of all persons whomsoever.)

In witness whereof, The said The Lincoln Gas and Electric Company has hereunto caused its corporate seal to be affixed
244 and these presents to be signed by its President the day and year first above written.

THE LINCOLN GAS AND ELECTRIC COMPANY,
[SEAL.] By HENRY L. DOHERTY, *President.*

W. F. DOUTHIRT.
H. LINCOLN CLINTON.
W. F. DOUTHIRT.

STATE OF NEBRASKA,
*Lancaster County, ss:*

On this 19th day of December, 1901, before me Emma J. Hedges, a notary public duly commissioned and qualified for and residing in said County, personally appeared Henry L. Doherty, President of The Lincoln Gas and Electric Company a corporation, to me known to be the identical person described in and whose name is affixed to the foregoing instrument as President of said corporation, and acknowledged said instrument to be his voluntary act and deed, and the voluntary act and deed of said corporation.

Witness my hand and notarial seal at Lincoln in said County, the day and year last above written.

EMMA J. HEDGES,
*Notary Public.*

All property other than Real Estate (803). This Deed not to be recorded). Corporation. (Warranty) Deed from the Lincoln Gas and Electric Company to Lincoln Gas & Electric Light Company.

THE STATE OF NEBRASKA,
— *County, ss:*

Entered on Numberical index and filed for record in the Clerk's office of said County, the — day of — 19— at — o'clock and — minutes — M. and recorded in Book — of Deeds on Page —.

—— ——,
*County Clerk.*
—— ——, *Deputy.*

245 Page 235 to 239, Printed Record.

EXHIBIT 1. M. E. W.

*Recapitulation.*

*Cost of Replacing Gas Plant at Lincoln, Nebr.*

| Page | | |
|---|---|---|
| 1. | Coal gas apparatus | $80,605.00 |
| 2. | Water gas apparatus | 31,503.00 |
| 3. | Cost of buildings | 37,286.00 |
| 3. | Real Estate | 7,200.00 |
| 4. | Street mains in dirt streets, including permits | 90,578.00 |
| 5. | " " " paved " " " | 130,027.00 |
| 6. | Gas Services, including repairing and permits | 107,106.82 |
| 6. | Gas meters in use | 36,282.90 |
| 6. | Meter connections | 13,184.00 |
| 6. | Piping for gas ranges | 16,500.00 |
| | | $550,272.72 |
| | Engineering cost on above at 2½% | 13,756.82 |
| | | $564,029.54 |
| | Contingent expense on $5,430,272.76 not including real estate or eigineering cost at 2½% | 67,884.09 |
| | | 631,913.63 |
| 7. | Working capital | 59,146.88 |
| | | 691,060.51 |
| 8. | Cost of organizing company | 24,950.00 |
| | Interest on $631,913.63 during erection (1 yr.) | 31,550.00 |
| | | 747,560.51 |
| | Cost of obtaining money 20% | 149,512.10 |
| | | 897,072.61 |
| | Interest on $149,512.10 at 5% | 7,500.00 |
| | Value of franchise | 904,572.61 |

## Coal Gas Apparatus.

| | | |
|---|---|---|
| 3 recuperative benches of 6's complete, with economizer. | | $8,950.00 |
| 3½ depth " " without economizer ..... | | 8,480.00 |
| 1 #6 Root's coal gas exhauster and engine equipped with Bristol Recording Gauge..... | | 1,475.00 |
| 1 #3 P. & A. tar extractor with by-pass connections.. | | 755.00 |
| 1 Tower scrubber 66" x 30' with 16" by-pass connections. | | 925.00 |
| 1 Water tube condenser 54" x 25' with 16" by-pass connections ..... | | 1,060.00 |
| 1 Standard rotary scrubber and by-pass connections... | | 2,650.00 |
| 1 Coal gas meter 5' x 5' with by-pass connections..... | | 1,050.00 |
| 1 Set horizontal water cooled condensers..... | | 550.00 |
| 1 Ammonia circulating pump ..... | $75.00 | |
| Motor *d*or same ..... | 150.00 | |
| | | 225.00 |
| 1 Root's economizer blower and engine Piping system Gauges, etc. ..... | | 875.00 |
| 132 ft. 10" Foul main from benches to purifiers..... | | 260.00 |
| 4 25' x 21' x 5' purifiers, center seal, carriage, connections, etc. ..... | | 18,960.00 |
| 1 10' x 10' McDonald Station Meter and Hinman Drum with by-pass connections ..... | | 4,750.00 |
| 1 77' 16" Foul main from purifiers to holder— | | |
| Material ..... | $410.00 | |
| Labor ..... | 430.00 | |
| | | 840.00 |
| 246 | | |
| 1 205,000 ft. 2 lift gas holder..... | | 18,000.00 |
| 1 Brick tank for same— | | |
| Cap stone ..... | $180.00 | |
| 312,000 at $12.50 per M..... | 3,900.00 | |
| 5,550 yds. excavation at 40¢..... | 2,220.00 | |
| | | 6,300.00 |
| 1 20" Conolly Street Main governor and connections.. | | 1,100.00 |
| 1 Booster outfit and motor with connections..... | | 525.00 |
| 4 6,000 Gallon iron shell storage tank for tar at $300.. | | 1,200.00 |
| 1 5,000 " " " " " " " " ..... | | |
| 1 8,700 " brick " " " " " ..... | | 900.00 |
| 1 Gas Calorimeter ..... | | 150.00 |
| 1 Bar photometer..... | | 350.00 |
| Laboratory apparatus and supplies ..... | | 275.00 |
| | | $80,605.00 |

## Water Gas Apparatus.

| | |
|---|---|
| 1 6' 6" Western Gas Construction Co., water gas set complete and connections ..... | $8,437.00 |
| 1 Operating floor for above..... | 600.00 |
| 1 6' Springer water gas set complete..... | 6,720.00 |

| | | |
|---|---|---|
| 1 #10 Buffalo forge blower including piping | | 300.00 |
| 1 35 H. P. 1045 R. P. M. D. C. Motor and auto starter. | | 535.00 |
| 1 15 H. P. 1200 R. P. M. reserve blower and motor. | | 350.00 |
| 1 50,000 cu. ft. relief holder | | 6,500.00 |
| 1 Brick tank for same 10′ deep 50′ diameter | | 2,875.00 |
| 1 MacKenzie exhauster and engine with by-pass connections | | 725.00 |
| 325′ of 12″ foul main from gas machine to gas holder and from holder to purifiers | | 720.00 |
| 1 12,500 gallon oil storage tank | | 375.00 |
| 1 10,000 " " " " | | 325.00 |
| 250′ of ¾″ and 250′ of 2″ pipe (boxed) from tanks to gas machines | | 137.00 |
| 1 Oil pump | $50.00 | |
| 1 Governor | 37.50 | |
| 1 Heater | 55.00 | |
| 1 Filter | 20.00 | |
| 1 Meter | 41.00 | |
| | | 203.50 |
| Oil Spray system and drilling apparatus | | 165.00 |
| 1 Tar separator | 166.50 | |
| Circulating system | 55.00 | |
| 2′ pumps | 72.00 | |
| Pipe connections | 17.00 | |
| | | 310.50 |
| 1 150 H. P. Boiler erected complete with stack | | 2,225.00 |
| | | $31,503.00 |

Real Estate and Buildings.

| | | |
|---|---|---|
| 8 Lots | | $7,200.00 |
| Water Gas Geb, House 32′ x 48′ x 37′ high 12″ walls | | 5,200.00 |
| Coal gas retort house 70′ x 33′ x 37′ high 12″ walls | | 6,750.00 |
| Purifying house — engine, condensing and meter rooms Laboratory 177′ x 36′-30′ | | 14,550.00 |
| Boiler room | | 1,250.00 |
| Coal sheds 23′-6″ x 110′-11″ | | 2,475.00 |
| Oil house 35′-23′-6″ x 10′ | | 1,335.00 |
| Street Main Governor House 12′-20′-10′ | | 488.00 |
| Two thirds cost of barn | | 333.00 |
| One-half cost of blacksmith shop | | 165.00 |
| Sewage system and settling tank comprising— | | |
| 1,100′ of 10″ x 10″ sewer bos | $391.00 | |
| 800′ of 6″ sewer tile | 240.00 | |
| | | 631.00 |
| Water system comprising 1,894′ of ¾″ to 2″ galvanized pipe and labor | $460.00 | |
| Meter | 40.00 | |
| | | 500.00 |

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| | |
|---|---|
| Steam heating system, comprising 6,410′ of 1½″ and 2″ pipe | $1,600.00 |
| Electric and Gas Lighting Systems | 269.00 |
| Steam pipe system for coal and water gas | 650.00 |
| Track scales | 750.00 |
| Wagon scales | 250.00 |
| Platform scales | 90.00 |
| | $44,486.00 |

Cost of Replacing Gas Main Distribution System in Dirt Streets at Lincoln, Nebraska.

| Size. | No. miles. | Cost. per mile. | Total cost. |
|---|---|---|---|
| 2″ | 30.79 | $1,320 | $40,643.00 |
| 4″ | 6.17 | 3,150 | 19,436.00 |
| 6″ | 1.25 | 4,660 | 5,825.00 |
| 8″ | .23 | 6,426 | 1,478.00 |
| 10″ | 1.04 | 8,750 | 9,100.00 |
| 12″ | .43 | 11,480 | 4,936.00 |
| 16″ | .18 | 15,400 | 2,772.00 |
| 20″ | .26 | 23,800 | 6,188.00 |
| | 40.35 | | $90,378.00 |
| Plus 400 permits @ 50¢ | | | 200.00 |
| Total | | | $90,578.00 |

248 Page 240, Printed Record.

*Cost of Replacing Gas Main Distribution in Paved Streets, Including Repaving, at Lincoln, Nebraska.*

Wooden Block.

| Size. | No. miles. | Cost per mile. | Total cost. |
|---|---|---|---|
| 2″ | .568 | $2,790. | $1,585. |
| 4″ | .... | ..... | ..... |
| 6″ | .075 | 6,130. | 460. |
| 8″ | .150 | 7,896. | 1,184. |
| 10″ | .... | ..... | ..... |
| 12″ | .... | ..... | ..... |
| 16″ | .... | ..... | ..... |
| 20″ | .... | ..... | ..... |
| | .793 | | $3,229. |

Two-course Brick.

| Size. | No. miles. | Cost per mile. | Total cost. |
|---|---|---|---|
| 2" | 3.636 | $3,383. | $12,300. |
| 4" | 4.800 | 5,213. | 25,022. |
| 6" | 2.080 | 6,723. | 12,982. |
| 8" | .530 | 8,489. | 4,499. |
| 10" | .220 | 10,813. | 2,377. |
| 12" | .300 | 13,543. | 406. |
| 16" | .060 | 17,463. | 1,048. |
| 20" | .... | ..... | ..... |
| | 11.626 | | $63,291. |

Asphalt.

| Size. | No. miles. | Cost per mile. | Total cost. |
|---|---|---|---|
| 2" | 4.250 | $5,431. | $23,082. |
| 4" | 4.070 | 7,261. | 29,552. |
| 6" | .... | 8,771. | 3,924. |
| 8" | .... | ..... | ..... |
| 10" | .530 | 12,861. | 6,816. |
| 12" | .... | ..... | ..... |
| 16" | .... | ..... | ..... |
| 20" | .... | ..... | ..... |
| | 9.300 | | $63,397. |

| | |
|---|---|
| Wooden Block | $3,229.00 |
| Two-course Brick | 63,291.00 |
| Asphalt | 63,397.00 |
| Plus 220 permits @ 50¢ | 110.00 |
| Total cost Replacing Mains Under Pavements | $130,027.00 |

249 Page 241, Printed Record.

Gas Services, Meters, Meter Connections, and Piping for Ranges.

| | | |
|---|---|---|
| 3597 | Services in dirt streets @ $13.50 | $48,559.50 |
| 72 | " under wooden block pavement @ $19.66 | 1,451.52 |
| 1074 | " " two-course brick pavement | 25,668.50 |
| 854 | " " asphalt | 31,427.20 |
| | | 107,106.82 |

Gas Meter Connections.

| | |
|---|---|
| 6304 Meter connections @ $2.25 | $13,184.00 |

Piping for Gas Ranges.

| | |
|---|---|
| 5500 ranges @ $3.00 | 16,500.00 |

### Gas Meters.

| | | | |
|---|---|---|---|
| 2951– 3 | light gas meters | @ 5.00 | 14,755.00 |
| 3221– 5 | " " " | @ 6.25 | 20,131.00 |
| 48– 10 | " " " | @ 7.50 | 360.00 |
| 17– 20 | " " " | @ 10.60 | 180.20 |
| 7– 30 | " " " | @ 14.10 | 98.70 |
| 13– 45 | " " " | @ 20.00 | 260.00 |
| 5– 60 | " " " | @ 27.00 | 135.00 |
| 5–100 | " " " | @ 45.00 | 225.00 |
| 2–150 | " " " | @ 69.00 | 138.00 |
| | | | 36,282.90 |

250 Working Capital.

| | | |
|---|---|---|
| Coal stock (90) days 3300 tons @ $6.00 | | $19,800.00 |
| Purifying Material 4000 bu. .40 | | 1,600.00 |
| C. I. Pipe Stock 6" 500' = 7½ tons @ $42.00 | | 291.38 |
| " " " 4" 1000 = 10 " 42.00 | | 398.50 |
| Wro-t Iron Pipe, fittings, brass goods, etc | | 1,500.00 |
| Gas ranges, Water heaters, Atmos. Heaters, Ind. Appliances | | 7,500.00 |
| Oil Stock, 15000 *glas.* Minimum capacity @ 4½¢ | | 630.00 |
| 120, - 3, 5, and 10 light meters @ 7.00 | | 840.00 |
| 1 Meter prover | | 130.00 |
| Shop tools, street dept. tools and plant tools | | 750.00 |
| 1840 tons coke, avg. @ $5.00 | | 9,200.00 |
| 40,000 gallons tar @ 2¢ | | 800.00 |
| Filling at gas plant | | 1,300.00 |
| 2 adding machines @ $225.00 | $450.00 | |
| 1 addressograph | 250.00 | |
| 2 typewriting machines | 150.00 | |
| Office furniture and fixtures | 2,710.00 | |
| | | 3,560.00 |
| Two-thirds chargeable to gas department | | 2,372.00 |
| 10 horses @ $140.00 | | 1,400.00 |
| 9 wagons @ $65.00 | | 455.00 |
| 10 sets harness | | 180.00 |
| Payrolls and purchase of supplies | | 10,000.00 |
| | | $59,146.88 |

### Cost of Organizing Company.

| | |
|---|---|
| Engraving 300 Bonds ($100-500 and $1,000) | $2,500.00 |
| Engraving stock certificates | 500.00 |
| Trustee's fees, certifying bonds | 1,250.00 |
| Trustee's annual fee | 250.00 |
| Registrar and transfer agent | 200.00 |
| Filing certificates of inc. Sec. of State | 250.00 |

| | |
|---|---|
| Attorney's fees (examinations of titles, prep. of contracts, preparation of certificates of incorporation, mortgage, bonds and organization matters) | 5,000.00 |
| Attorney's fees, first year | 5,000.00 |
| Incorporation expense in obtaining subscriptions for bonds | 10,000.00 |
| | $24,950.00 |

251 Page 243, Printed Record.

Office Furniture and Fixtures (Included in Working Capital).

| | | |
|---|---|---|
| 3 Roll-top desks @ | $50.00 | $150.00 |
| 4 " " " | 30.00 | 120.00 |
| 2 Tables | 15.00 | 30.00 |
| 1 " | 30.00 | 30.00 |
| Safe | ..... | 150.00 |
| 5 Desks | 20.00 | 100.00 |
| Counters, furniture, fret-work, etc | ..... | 1,500.00 |
| 2 Book cases | 15.00 | 30.00 |
| Demonstration Room, furniture and supplies | ..... | 200.00 |
| Books and stationery | ..... | 300.00 |
| Chairs, stools, etc | ..... | 100.00 |
| Total | | $2,710.00 |

Street Mains under Paved and Dirt Streets.

Lincoln, Nebraska.

| | Paved streets. | | Dirt streets. | | Total. | |
|---|---|---|---|---|---|---|
| Size. | Feet. | Miles. | Feet. | Miles. | Feet. | Miles. |
| 2"... | 44,650 | 8.46 | 162,637 | 30.79 | 207,287 | 39.25 |
| 4"... | 46,850 | 8.87 | 32,567 | 6.17 | 79,417 | 15.04 |
| 6"... | 13,800 | 2.61 | 6,600 | 1.25 | 20,400 | 3.86 |
| 8"... | 3,600 | .68 | 1,222 | .23 | 4,822 | .91 |
| 10"... | 4,000 | .76 | 5,500 | 1.04 | 9,500 | 1.80 |
| 12"... | 1,600 | .32 | 2,350 | .43 | 3,950 | .75 |
| 16"... | 350 | .06 | 950 | .18 | 1,300 | .24 |
| 20"... | .... | .... | 1,400 | .26 | 1,400 | .26 |
| Total.. | 114,850 | 21.76 | 213,226 | 40.35 | 328,076 | 62.11 |

252 Page 471, Printed Record.

EXHIBIT 100, M. E. W.

1902.

| | | | |
|---|---|---|---|
| 2"..... | 46,995 | ft. | |
| 4"..... | 12,394 | " | |
| 6"..... | 3,759 | " | |
| | 63,148 | | |
| | 822 | services. | |

1903.

| | | | |
|---|---|---|---|
| 2"..... | 22,558 | ft. | |
| 4"..... | 1,237 | " | |
| | 24,795 | | |
| | 691 | services ..... | 56,025 ft. |

1904.

| | | | |
|---|---|---|---|
| 2"..... | 7,055 | ft. | |
| 4"..... | 2,005 | " | |
| 6"..... | 1,094 | " | |
| 8"..... | 938 | " | |
| | 11,092 | " | |
| | 576 | services ..... | 48,110 ft. |
| | 77 | cu-b services ..... | 1,676 ft. |

1905.

| | | | |
|---|---|---|---|
| 2"..... | 16,787 | ft. | |
| 4"..... | 8,514 | " | |
| 8"..... | 2,734 | " | |
| | 28,035 | | |
| | 610 | services ..... | 45,171 ft. |
| | 5 | curb services ..... | 201 ft. |

1906.

| | | | |
|---|---|---|---|
| 2"..... | 20,126 | ft. | |
| 4"..... | 1,909 | " | |
| 6"..... | 1,605 | " | |
| | 23,640 | | |
| | 554 | services ..... | 40,528 ft. |
| | 34 | curb services ..... | 665 ft. |

1907.

| | | | |
|---|---|---|---|
| 2"..... | 15,403 | ft. | |
| | 569 | services ..... | 42,822 ft. |
| | 35 | curb services ..... | 699 ft. |

253 Pages 472 and 473, Printed Record.

EXHIBIT 102.

Gas Ordinance #22.

An Ordinance Defining Duties of Gas Companies, Fixing Maximum Rates for Gas Meters, Rules Regulating Supply, Use of, and Payment for Gas, Penalties for Violation Thereof, and Repealing All Ordinances in Conflict Therewith.

Section 1. Rates.—It will be unlawful for any one furnishing illuminating or fuel gas to charge customers more than one dollar ninety-two and one-half cents per thousand cubic feet for illuminating gas, or one dollar and fifty cents for gas used as fuel after October 1st, 1899. Annually thereafter gas used for lights shall be reduced seven and one half cents per thousand until October 1st, 1905, after which not more than one dollar and fifty cents shall be charged for gas used for either purpose. A meter rent of twenty five cents per month may be charged if less than three hundred feet per month are consumed, but not otherwise.

Section 2. Duty to Furnish.—Any person furnishing gas shall supply it to any property owner or occupant requesting service who has properly fitted his premises therefor, and paid or tendered the actual cost of extending service from point of location of meter to the curb line of any street wherein the supply man has gas mains. Service may be denied to consumers in default till payment for past service is made and to persons not responsible till deposit of sufficient sum to pay one and one-half month's estimated service is made to pay such service, and is from month to month kept good.

Section 3. Same.—Service may be denied if permission to inspect service or interior pipes or fixtures is refused, or if on inspection they are found defective. If service is denied for such alleged cause, the council may on the request of the person aggrieved, cause inspection by any competent person, the expense whereof shall be paid by the supply man refusing if the alleged defect does not exist.

254 Section 4. Discount.—Gas dues paid at the Company's office at or before six o'clock afternoon of the sixth day after any month's service, shall be allowed the customary ten per cent discount from the fixed or current rates.

Section 5. Penalty.—Any person or executive officer, president or manager of any corporation refusing to comply with this ordinance, or to furnish gas to any person entitled thereto, shall be guilty of a misdemeanor, and on conviction thereof be fined in any sum not less than ten dollars nor more than one hundred dollars, and each twenty-four hours' refusal shall be a new offense.

Section 6. Repeal.—An ordinance entitled: "An ordinance defining the duties of Gas Companies and prescribing the maximum rates to be charged and paid for gas and gas meters and the rules

regulating the supply and use of gas, prescribing penalties for violation of this ordinance and repealing section 928 A of the Revised Ordinances of the City of Lincoln and all Ordinances in conflict herewith," so far as in conflict with this ordinance, and all ordinances in conflict herewith, are hereby repealed, and this ordinance shall be in force from and after its approval and publication according to law.

Passed October 9th, 1899.

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, Thos. H. Pratt, City Clerk, of the City of Lincoln, County and State aforesaid, do hereby certify that the foregoing is a true and correct copy of Ordinance No. 22, known as the Gas Ordinance, passed October 9, 1899, and approved October 14, 1899.

Witness my hand and Official seal this 6th day of May, 1908.

[OFFICIAL SEAL.] (Signed) THOS. H. PRATT,
*City Clerk.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, Thos. H. Pratt, City Clerk, of the City of Lincoln, County and State aforesaid, do hereby certify that the foregoing is a true and correct copy of Gas Ordinance No. 363, introduced by John S. Bishop, passed April 9, 1906, and approved April 16, 1906.

255 Witness my hand and Official seal this 6th day of May, 1908.

[OFFICIAL SEAL.] (Signed) THOS. H. PRATT,
*City Clerk.*

256 Pages 474 to 477, Inclusive, Printed Record.

EXHIBIT 103, M. E. W.

Gas Ordinance No. 363.

An ordinance establishing a unit of measure and a standard for manufactured gas, regulating the quality, purity, pressure, supply and use of gas; defining the duties of gas companies; creating the office of gas inspector and defining his duties; providing for a reduction in the price to be paid for gas not meeting the required standard established herein; establishing penalties for the violation of the provisions hereof, and repealing all ordinances in conflict herewith.

Be it ordained by the mayor and council of the City of Lincoln:

Section 1. Unit of Measure.—The unit of measure for the sale by meter of manufactured gas used for illuminating or heating purposes, shall be the cubit foot of sixty-two and 321-1000 pounds

avoirdupois weight of distilled rain water, weighed in air of the temperature of 62 degrees Fahrenheit scale, the barometer being at 30 inches.

Section 2. Standard.—All gas manufactured and sold in the City of Lincoln for illuminating or heating purposes shall be of the following standard: It shall have an illuminating power of not less than 18 English sperm candles when burned from a Suggs London argand burner No. 1, at the rate of five cubic feet per hour. It shall contain not less than 625 British thermal units per cubic foot, at a pressure of 14.7 pounds per square inch and a temperature of 60 degrees Fahrenheit scale. It shall have sufficient odor to be readily detected by its smell. It shall contain not to exceed 20 grains of sulphur per one hundred cubic feet. It shall have a pressure of not less than one and one-half inches nor more than five inches measured in a water gauge at the place where tested as herein provided.

Section 3. Testing Room.—The city council shall provide a suitable room in the city hall or elsewhere to be used as a testing
257 room by the gas inspector, and shall install and maintain therein all necessary apparatus, chemicals, supplies, books and records for testing and recording the pressure, quality, purity and illuminating and heating power of the gas supplied by any gas company to consumers in the City of Lincoln, and also all necessary apparatus, supplies, and records for testing, sealing and recording the accuracy of meters supplied and used by any gas company in said city. Said testing room shall be equipped with a Junker's calorimeter, or a calorimeter of standard make approved by the gas inspector; a bar photometer or a photometer of a construction approved by the gas inspector, a self registering pressure gauge and all necessary apparatus chemicals and supplies for making tests for the presence of sulphur, ammonia and sulphuretted hydrogen, and a machine of standard make approved by the gas inspector for testing meters, with necessary materials and apparatus for marking and numbering each meter tested with the result of the test and its date, together with all necessary books and records for recording the results of all tests and keeping a permanent record thereof.

Section 4. Gas Inspector.—The water commissioner is hereby made ex-officio gas inspector with authority to authorize the assistant superintendent of lighting plant, or any other competent person in his department, to act as assistant gas inspector.

Section 5. Duties of Gas Inspector.—It shall be the duty of the gas inspector to inspect, test and determine the pressure, quality, purity, heating and illuminating power of the gas manufactured and furnished to consumers for illuminating and heating purposes by any gas company in the City of Lincoln once each day and report in writing to the city council the result of said tests as to the pressure, quality, purity, heating and illuminating power. It shall be the duty of the gas inspector upon the written demand of any gas consumer and the payment of a fee of one dollar, together



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with the location of the meter he desires to have tested to at once notify in writing the gas company owning said meter that
258 a complaint has been filed and the time when he will send after such meter, whereupon the gas company shall, in the presence of the gas inspector or assistant disconnect said meter, replacing it with another meter and deliver the old meter to the gas inspector to be tested by him, and if said meter shall be found to be correct, according to the standard hereinafter fixed, the one dollar paid by the gas consumer shall remain the property of the city. But if the meter is found to register more gas than consumed, within the standard hereinafter fixed, the fee of one dollar shall be paid by the gas company owning the meter and the gas inspector shall deliver to said gas consumer his certificate, showing that the meter has been found to register more gas than consumed and the fee of one dollar paid — said gas consumer shall be repaid to him by the city treasurer on the production and delivery of such certificate. It shall be the duty of the gas inspector to record in a suitable book provided for that purpose the number of meters inspected and sealed or condemned by him with the date and name of manufacturer and the results of such test, and he shall make a monthly report to the mayor and city council of the results of such tests.

Section 6. Meters.—Standard and Application.—All meters registering within two per cent slow or three per cent fast in every one hundred cubic feet of gas registered at a pressure of not less than one and one-half inches or more than five inches, measured in a water gauge, and when measuring the number of cubic feet per hour that the meter is designed to measure, shall be considered accurate. Inspection herein provided for shall be conclusive, both upon the gas company and the consumer, as to the amount of gas consumed during the three months previous to the month in which such meter shall be inspected.

Section 7. Monthly Reports.—It shall be the duty of the gas inspector to report in writing monthly to the mayor and city council the result of all tests of gas and meters made by him during said month, showing all moneys received by him, and to pay over to the city treasurer all money collected by him for testing meters and file his receipt therefor.

259 Section 8. Penalty for Violation of Standard. If the gas furnished by any gas company is found on any test to fail to meet the standard and requirements established by this ordinance, the gas inspector shall at once notify in writing the mayor and city council and such gas company, and shall make daily tests thereafter until the gas is found to comply with the standard and requirements herein established. And if the gas of any gas company is found for three consecutive days to fall below the standard and requirements established by this ordinance, such gas company shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be subject to a fine of one hundred dollars for each day that the gas furnished by it fails, upon inspection, to meet the standard and requirements herein established. Provided, the penalty provided for herein shall not be enforced when the failure to furnish gas according to the

standard and requirements herein established, is by reason of some unavoidable accident and was not caused through any negligence or fault of said gas company.

Section 9. Gas Below Standard Price. In case the gas furnished by any gas company to gas consumers within the City of Lincoln shall fall below the average of 625 British thermal units for the period of a month, beginning on the 20th of the month and ending on the 20th of the succeeding month, a reduction from the maximum amount allowed to be charged therefor by any gas company under the ordinances of the city shall be made to such gas consumers of five cents for each ten British thermal units which the average of such gas as hereinabove set forth shall show below 625 British thermal units.

Section 10. Application of Tests. The tests made by the gas inspector of the city for the purpose of determining the British thermal units shall be conclusive on all gas companies furnishing gas in the City of Lincoln for the purpose of determining the price to be paid for such gas by the gas consumers as hereinabove set forth.

260 It shall not be necessary for the gas inspector to make more than 15 tests for the purpose of determining the British thermal units on 15 separate days within any given month, and the average thereof shall be taken and deemed to be the average for the month for the purpose of determining the price to be paid therefor. If more than 15 tests are made the average shall be taken of all tests so made.

Section 11. Inspection of Books and Records. The books and records of all gas companies shall be subject to inspection by the officers of the City of Lincoln for the purpose of determining the amount charged and received for gas by any such company during any particular month.

Section 12. Violations of Ordinance. If any person shall counterfeit or wilfully deface the seal placed upon any gas meter by the gas inspector, the person or persons so offending shall be guilty of a misdemeanor and shall upon conviction thereof be fined not less than twenty-five ($25.00) or more than one hundred dollars ($100.00). Any gas company after receiving a written notice from the gas inspector, refusing to disconnect within twenty-four hours any meter of any consumer in the City of Lincoln and to deliver the same to the gas inspector to be tested shall be guilty of a misdemeanor and upon conviction thereof shall be fined in the sum of not less than ten dollars ($10.00) or more than one hundred dollars ($100.00).

Section 13. Application of Ordinance. The provisions of this ordinance shall apply to all companies which manufacture or distribute gas for sale for illuminating or heating purposes; and the term "gas company" shall include all persons, firms, corporations or individuals who own or operate works for the manufacture and sale of gas for illuminating or heating purposes.

Section 14. Repealing Clause. All ordinances and parts of ordinances in conflict herewith are hereby repealed.

This ordinance shall take effect and be in force from and after

its passage, approval and publication according to law. In-
261 troduced by John S. Bishop. Passed, April 9, 1906. Approved April 16, 1906.

F. W. BROWN, *Mayor.*

Attest:

[SEAL.] THOS. H. PRATT,
*City Clerk.*

Pages 478 to 480 Printed Record.

EXHIBIT 104, M. E. W.

*Pipe.*

Section 1 (Left Hand).

| | Style of street. | Size. | Miles. | Lineal feet. | Tons. | Price per ton. | Cost of pipe. |
|---|---|---|---|---|---|---|---|
| 1 | Dirt | 2″ | 30.79 | 162,578.20 | ..... | 11.60 | $18,859.07 |
| 2 | Cedar Blks. | " | 0.57 | 3,009.60 | ..... | Per cwt. | 349.11 |
| 3 | 2 Course Br. | " | 3.64 | 19,197.08 | ..... | " | 2,226 86 |
| 4 | Asphalt | " | 4.25 | 22,440.00 | ..... | " | 2,603.04 |
| 5 | Totals | | | | | | $24,038.08 |
| 6 | | | | | | | |
| 7 | Dirt | 4″ | 6.70 | 32,577.60 | 309.50 | 33.00 | 10,213.50 |
| 8 | 2 Course Br. | " | 4.80 | 25,344.00 | 240.70 | " | 7,943.10 |
| 9 | Asphalt | " | 4.07 | 21,489.60 | 204.10 | " | 6,738.60 |
| 10 | Totals | | | | | | $24,895.20 |
| 11 | | | | | | | |
| 12 | Dirt | 6″ | 1.25 | 6,600.00 | 99.00 | 33.00 | 3,267.00 |
| 13 | Cedar Blks. | " | 0.75 | 396.00 | 5.94 | " | 196.02 |
| 14 | 2 Course Br. | " | 2.08 | 10,982.40 | 164.70 | " | 5,435.10 |
| 15 | Totals | | | | | | $8,898.12 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16 | | | | | | | |
| 17 | Dirt | 8″ | 0.25 | 1,320.00 | 27.72 | 33.00 | 914.76 |
| 18 | Cedar Blks. | " | 1.50 | 7,920.00 | 166.30 | " | 5,487.90 |
| 19 | 2 Course Br. | " | 0.53 | 2,798.40 | 58.76 | " | 1,939.08 |
| 20 | Asphalt | " | 0.53 | 2,798.40 | 58.76 | " | 1,939.08 |
| 21 | Totals | | | | | | $10,280.82 |
| 22 | | | | | | | |
| 23 | Dirt | 10″ | 1.04 | 5,591.20 | 153.70 | 33.00 | 5,072.10 |
| 24 | 2 Course Br. | " | 0.22 | 1,161.60 | 31.90 | " | 1,052.70 |
| 25 | Asphalt | " | 0.45 | 2,376.00 | 65.34 | " | 2,156.22 |
| 26 | Totals | | | | | | $8,281.02 |
| 27 | | | | | | | |
| 28 | Dirt | 12″ | 0.43 | 2,270.40 | 82.86 | 33.00 | 2,734.38 |
| 29 | 2 Course Br. | " | 0.30 | 1,584.00 | 57.80 | " | 1,907.40 |
| 30 | Totals | | | | | | $4,641.78 |
| 31 | | | | | | | |
| 32 | Dirt | 16″ | 0.18 | 950.40 | 52.74 | 33.00 | 1,740.42 |
| 33 | 2 Course Br. | " | 0.06 | 316.80 | 17.58 | " | 580.14 |
| 34 | Totals | | | | | | $2,320.56 |
| 35 | | | | | | | |
| 36 | Dirt | 20″ | 0.26 | 1,372.80 | 103.64 | 33.00 | 3,420.12 |
| 37 | Totals | | | | | | $3,420.12 |

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VERTICAL

AGE BOUND
AL IN BOOK



| | | | | | | |
|---|---|---|---|---|---|---|
| 38 | | | | | | |
| 39 | Services. | | | | No Con's. | |
| 40 | Dirt | 1¼" | 34.06 | 179,850.00 | 3,597 | .07¼ Per ft. |
| 41 | Cedar Blks. | " | 0.27 | 1,440.00 | 72 | " |
| 42 | 2 Course Br. | " | 10.17 | 53,700.00 | 1,074 | " |
| 43 | Asphalt | " | 8.10 | 42,700.00 | 854 | " |
| 44 | Totals. | | | | | |

EXHIBIT 104, M. E. W.

Section 2 (Left Center).

***Extras.***

| Drayage. | Lead. | Labor. | Specials. |
|---|---|---|---|
| $500.00 | ..... | $18,578.72 | $1,000.00 |
| 472.00 | $3,389.50 | 13,917.54 | 2,982.30 |
| 135.00 | 816.00 | 2,872.00 | 720.00 |
| 93.00 | 507.00 | 1,547.00 | 430.00 |
| 125.00 | 656.00 | 1,986.60 | 541.80 |
| 70.00 | 350.00 | 963.50 | 385.00 |
| 35.00 | 172.50 | 543.45 | 126.70 |
| 52.00 | 268.75 | 548.80 | 205.70 |

| Drayage. | Lead. | Labor. | Specials. |
|---|---|---|---|
| .50 per 50′ | ..... | 3.35 | (3′ Stop Box .72 |
| " | ..... | " | (1¼" Gas Cock .78. |
| " | ..... | " | " |
| " | ..... | " | " |

EXHIBIT 104, M. E. W.

Section 3 (Right Center).

***Paving.***

Cost Taking Up Cedar Bl'ks, 2 Course Brick, Asphalt, and Replacing.

| | | | |
|---|---|---|---|
| $993.17 | $993.17 | ..... | ..... |
| 2,303.65 | ..... | $2,303.65 | ..... |
| 13,089.25 | ..... | ..... | $13,089.25 |
| 16,386.07 | | | |
| 3,041.28 | ..... | 3,041.28 | ..... |
| 12,534.88 | ..... | ..... | 12,534.88 |
| 15,576.16 | | | |
| 130.68 | 130.68 | ..... | ..... |
| 1,317.89 | ..... | 1,317.89 | ..... |
| 1,448.57 | | | |

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| | | | |
|---|---|---|---|
| 2,613.60 | 2,613.60 | ..... | ..... |
| 335.81 | ..... | 335.81 | ..... |
| 1,632.30 | ..... | ..... | 1,632.30 |
| 4,581.71 | | | |
| 139.40 | ..... | 139.40 | ..... |
| 1,385.92 | ..... | ..... | 1,385.92 |
| 1,525.32 | | | |
| 190.08 | ..... | 190.08 | ..... |
| 190.08 | | | |
| 38.02 | ..... | 38.02 | ..... |
| 38.02 | | | |
| | 316.80 | ..... | ..... |
| | | 2,577.60 | ..... |
| | | | 6,627.04 |
| | 4,054.25 | 9,943.73 | 35,269.39 |

EXHIBIT 104, M. E. W.

Section 4 (Right Hand).

| | Services, cost of, for paved and unpaved streets. | Totals. Cost of labor & material of services & mains in paved and unpaved streets. |
|---|---|---|
| | ..... | $60,502.87 |
| | ..... | 61,232.70 |
| | ..... | 14,889.69 |
| | ..... | 17,439.53 |
| | ..... | 13,115.74 |
| | ..... | 6,600.36 |
| | ..... | 3,236.23 |
| | ..... | 4,495.37 |
| | $32,373.00 | 32,373.00 |
| | 964.80 | 964.80 |
| 264 | 12,243.60 | 12,243.60 |
| | 14,313.40 | 14,313.40 |
| | 59,894.80 | 241,407.29 |

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265 Page 481, Printed Record.

EXHIBIT 105, M. E. W.

| Weight of cast iron pipe. | Size. | Labor & extras. Labor. | | Extras. |
|---|---|---|---|---|
| 4" = 19# Per Foot. | 2" Iron. See Note. | | | |
| 6" = 30# " " | 4" Cast Iron..... | .14 | .03 | Per Foot |
| 8" = 42# " " | 6" " " ..... | .16 | .04 | " " |
| 10" = 55# " " | 8" " " ..... | .18 | .05 | " " |
| 12" = 73# " " | 10" " " ..... | .22 | .06 | " " |
| 16" = 111# " " | 12" " " ..... | .25 | .10 | " " |
| 20" = 151# " " | 16" " " ..... | .35 | .10 | " " |
| | 20" " " ..... | .40 | .15 | " " |

NOTE.—2" Iron Pipe .09 Per Ft. Inc. Digging, Backfall and Laying Lead .05 Per Lb.

Cost of Single Service.

| | |
|---|---|
| 50' — 1¼" pipe at .07¼ per ft..... | $3.62 |
| 1¼" Gas Cock..... | .78 |
| 3' Stop Box..... | .72 |
| Labor ..... | 3.35 |
| Drayage ..... | .50 |
| Total ..... | $8.97 |

Services.

Dirt Sts. 50' Average Length. Pavement 20' & 30'.

Cost Small Pipe & Fittings.

| | | |
|---|---|---|
| 3' Stop Box..... | $.72 | |
| 1" Gas Cock..... | .53 | |
| 1¼" Gas Cock..... | .78 | |
| 2" Gas Cock..... | 1.75 | |
| 1¼" Gas Pipe..... | 7.25 | Per 100' |
| 2" " " ..... | 11.60 | " " |

266 Pages 481 and 482, Printed Record.

EXHIBIT 106, M. E. W.

Cost of Laying in Dirt Streets.

| | | | | |
|---|---|---|---|---|
| 207,208 ft. | 2 in. | pipe at 21¢ | $43,413.68 | |
| 82,637 | 4 | 52 | 44,971.24 | |
| 17,978 | 6 | 80 | 13,382.40 | |
| 15,236 | 8 | 1.00 | 15,236.00 | |
| 9,028 | 10 | 1.28 | 11,555.84 | |
| 3,854 | 12 | 1.65 | 6,359.10 | |
| 1,267 | 16 | 2.68 | 3,395.56 | |
| 1,372 | 20 | 3.26 | 4,472.72 | |
| 338,580 | | | | $142,886.54 |

Services.

| | | |
|---|---|---|
| 5591 Services at $9.00 | 50,319.00 | 50,319.00 |

Paving in Wooden Blocks.

| | | |
|---|---|---|
| 11,300 lineal feet main at 33¢ | 3,729.00 | |
| 1,440 " " Service at 22¢ | 316.80 | |

2 Course Brick.

| | | |
|---|---|---|
| 61,353 lineal feet main at .06¢ | 3,681.18 | |
| 21,480 lineal feet service at .06¢ | 1,288.80 | |

Asphalt.

| | | |
|---|---|---|
| 49,100 lineal feet main at 58⅓ | 28,640.23 | |
| 17,080 lineal feet service at 38 | 6,627.04 | |
| | | $44,283.05 |
| | | $237,488.59 |

267 Page 482, Printed Record.

EXHIBIT 107, M. E. W.

April 22, 1908.

M. U. N.

Trade Notes.

Cast Iron Pipe.—Foundries report no large lettings in sight for the immediate future, and it is evident that municipal estimates are being cut to meet only imperative improvements. There is no

demand of consequence for gas pipe, although some plants are willing to buy on long terms of payment. Quotations: 4-inch, $27; 6 to 12-inch, $26; 16-inch and up, $25, with $1 extra for gas pipe. Frequent inquiries gives encouragement to manufacturers. Quotations: 4 to 6-inch, $23; 8 to 12-inch, $22; over 12 inch, $21, with $1 extra for gas pipe: On large contracts these prices have been steadied. San Francisco: Inquiries continue for small quantities all along the coast. Quotations: 6 to 12-inch, $38; 4-inch, $39.

Lead.—The market is firm, but dull. The American Smelting & Refining Company is selling at 4¢, New York, and independent interests are not competing, asking higher prices. The St. Louis market is also firm at 3.85¢. Considerable lead is in the market, bought at lower prices, but holders show no disposition to go after business.

New Pipe Foundry.—

268 Page 482 and 483, Printed Record.

108, M. E. W.

-nicipal Journal and Engin-.

Trade Notes.

Cast Iron Pipe.—Chicago; Business very quite. Quite a number of small municipal contracts are hinging on the disposal of bond issues. Competition has resulted in the reduction of $1 a ton. Quotations: 4-inch, $27; 6 to 12-inch, $26; 16-inch and up $25, with $1 extra for gas pipe. Birmingham: Proposed improvement in Manila, where 7,000 tons will be needed, and in Cuba where 18,400 tons will be taken, are encouraging to Southern producers. Prices low on large contracts, but firm for small orders. Quotations: 4 to 6-inch, $27; 8 to 12-inch, $25; over 12-inch, average $24, with $1 extra for gas pipe. New York: Prices advanced on account of stiffening in Southern iron. Quotations: car load lots, 6-inch, $24.50 to $25.

Lead.—Market firm with desilverized lead scarce and all grades held firm at 4¢, New York. St. Louis market firmer at 3.85¢. Inquiries have been made for good sized lots, and the demand continues to improve.

269 Pages 483 and 484, Printed Record.

EXHIBIT 109, M. E. W.

Western Sales Office.
Pittsburgh Coal Company.
Railway Exchange.
Western Sales Office.

*Contract No. —.*

CHICAGO, Feb. 27, 1905.

Lincoln Gas & Elec. Lt. Co., Lincoln, Nebr., Bought of Pittsburgh Coal Company, Chicago, Ill.

Quantity.—About 8,000 tons, of 2,000 lbs. each, or all they may use at their plant at Lincoln, Nebr., during the life of this contract.

Grade.—¾" Screened, thin vein, Second Pool, Youghiogheny Gas Coal.

Price.—$5.20 per ton, F. O. B. cars their plant at Lincoln, Nebr.

Terms.—Cash on or before the 15th of each month for all coal shipped during the month previous.

Route.—Option of the Pittsburgh Coal Company.

Delivery.—Approximately monthly tonnage. About 650 tons per month as ordered by the Gas Company.

Expiration.—This contract expires April 1st, 1906.

Weights.—Actual Railroad weights by scales nearest loading point to govern all settlements.

This contract is one of a number of contracts made by the seller and is made subject to strikes, accidents, car supply or other causes beyond control.

The buyer and seller in entering into this contract realize the uncertainties of absolute deliveries, growing out of strikes, casualties, or other causes beyond the control of either party; and it is hereby mutually acknowledged that the intent of this agreement is not to bind either party as to failure to perform or modified performance by reason of matters beyond the control of the party in default, but that the material shall be shipped by the seller and accepted by the buyer as per delivery specified so far as the labor, the physical conditions at the respective plants, and the ability of carriers
270 will permit. It is mutually understood and agreed, however, that in the event of only partial fulfillment of this contract through restrictions of output from causes beyond control by seller, then the buyer shall accept without recourse such amount of coal as seller may be able under above conditions to supply from the seller's supply of available coal with other obligations.

The coal covered by this contract is to be used only in the plant

of the purchaser, located at Lincoln, Nebraska, and not to be sold or delivered to other purposes.

In consideration of the price named in this contract it is understood and agreed that the purchaser shall use no less than sixty tons each month, during the life of this contract.

This agreement is not effective until approved by home office and shall be subject to cancellation in case of violation of any of its terms or conditions.

LINCOLN GAS & ELECTRIC LIGHT CO.,
(Signed) By HOMER HONEYWELL,
*Acting Gen. M'g'r.*
PITTSBURGH COAL COMPANY,
(Signed) By H. J. ELLIOTT, *Sales Agent.*

Approved—
H. W. HORTON,
*Western Sales Agent.*

271 Pages 484 and 485, Printed Record.

EXHIBIT 110, M. E. W.

(Copy.)

Pittsburgh Coal Company.
Western Sales Department.
Railway Exchange.

*Contract No. —.*

CHICAGO, April 5, 1906.

Lincoln Gas & Elec. Lt. Co., Lincoln, Nebr., Bought of Pittsburgh Coal Company, Chicago, Ill.

Quantity.—About 15,000 tons of 2,000# each, or all they may use at their plant at Lincoln, Nebr., during the life of this contract.

Grade.—¾" Screened Thin vein Second Pool Youghiougheny gas coal.

Price.—$5.37½ per ton, F. O. B. their plant at Lincoln, Nebr. If during the life of this contract, the freight rate at $2.10 for the mines of Peoria is reduced, the Gas Co. shall receive the benefit of such reduction.

Terms.—Cash on or before the 15th of each month for all coal shipped during the month previous.

Route.—Option of the Pittsburgh Coal Co.

Delivery.—Approximate monthly tonnage. About 650 tons per month, as ordered by the Gas Co.

Expiration.—This contract expires April 1, 1907.

Weights.—Actual Railroad weights by scales nearest loading point to govern all settlements.

Deliveries of coal shall be subject to delays occasioned by strikes, lockouts, accidents and other unavoidable casualties in the operation of the seller's mines, the want of car supply, the failure of the railway companies to deliver or place cars at the mines for loading or other causes beyond the control of the seller.

It is understood between the parties hereto that the seller will be obliged to deliver coal to other buyers and consumers, and if by reason of the causes above mentioned, or either or any of them, such total obligations exceed the total shipments from the seller's mines, the seller may apportion among the buyer and other customers the coal it may be able to mine or ship for the time
272 being. And in event of partial fulfillment of this contract as aforesaid, the buyer without recourse, shall accept such amount of coal as the seller may be able to supply under such apportionment.

And it is further mutually covenanted and agreed that in the event of the buyer defaulting or failing to comply with the terms of this agreement and refuses to receive coal as specified herein, then this agreement may, at the option of the seller, be cancelled and ended; and for all coal delivered prior to such default, whether billed and paid for or not, the buyer shall pay, and hereby agrees to pay, the regular net circular price or prices in effect at the time of delivery.

The coal covered by this contract is to be used only in the plant of the purchaser, located at Lincoln, Nebraska, and not to be sold or delivered to other purposes.

This agreement is not effective until approved by home office and shall be subject to cancellation in case of violation of any of its terms or conditions.

LINCOLN GAS & ELECTRIC LIGHT CO.,

(Signed) By HOMER HONEYWELL,
*Acting Gen. Mgr.*

PITTSBURGH COAL COMPANY,

By H. J. ELLIOTT, *S. Agt.*

Approved—

W. H. HORTON,
*Western Sales Agent.*

273 Pages 486 and 487, Printed Record.

EXHIBIT 111, M. E. W.

(Copy.)

Pittsburgh Coal Company of Illinois.

Railway Exchange.

*Contract No.* —.

CHICAGO, March 19, 1907.

Lincoln Gas & Electric Light Company, Lincoln, Nebr., Bought of Pittsburgh Coal Company, Chicago, Ill.

Quantity.—About 15,000 tons, or all they may use at their plant at Lincoln, Nebraska, during the life of this contract.

Grade.—¾" Screened Thin Vein Second Pool Youghiougheny Gas Coal.

Price.—$5.52 per ton of 2,000 lbs. each, f. o. b. cars, their works, Lincoln, Nebraska.

Terms.—Cash on or before the 15th of each month for all coal shipped during the month previous.

Route.—Option of Pittsburgh Coal Co.

Delivery.—Approximate monthly tonnage. 1,200 tons per month.

Expiration.—This contract expires April 1, 1908.

Weights.—Actual Railroad weights by scales nearest loading point to govern all settlements.

The above prices are based upon present freight rate per ton of 2,000 lbs.; should freight rate advance or decline these prices will advance or decline accordingly.

Deliveries of coal shall be subject to delays occasioned by strikes, lockouts, accidents and other unavoidable casualties in operation of seller's mines, the want of car supply, the failure of the railway companies to deliver or place cars at the mines for loading, or other causes beyond the control of the seller.

It is understood between the parties hereto that the seller will be obliged to deliver coal to other buyers and consumers, and if by reason of the causes above mentioned, either or any of them, such total obligations exceed the total shipments from the seller's mines the seller may apportion among the buyer and other customers the coal it may be able to mine or ship for the time being. And
274 in event of partial fulfillment of this contract as aforesaid, the buyer, without recourse, shall accept such an amount of coal as the seller may be able to supply under such apportionment.

And it is further mutually covenanted and agreed that in the

event the buyer defaults or fails to comply with the terms of this agreement, and refuses to receive coal as specified herein, then this agreement may, at the option of the seller, be cancelled and ended; and for all coal delivered prior to such default, whether billed and paid for or not, the buyer shall pay, and hereby agrees to pay, the regular net circular price or prices in effect at the time of delivery.

The coal covered by this contract is to be used only in the plant of the purchaser, located at Lincoln, Nebraska, and not to be sold or diverted to other purposes.

This agreement is not effective until approved by home office and shall be subject to cancellation in case of violation of any of its terms or conditions.

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
(Signed) By HOMER HONEYWELL.
PITTSBURGH COAL COMPANY OF ILLINOIS,
(Signed) By H. J. ELLIOTT, *S. A.*

Approved—
A. W. HORTON,
*Western Sales Agent.*

275 Pages 487 and 488, Printed Record.

EXHIBIT 112, M. E. W.

(Copy.)

Agreement made this 6th day of April, A. D. 1905, between the Standard Oil Company (Indiana), party of the first part, and the Lincoln Gas & Electric Light Company, Lincoln, Nebraska, party of the second part.

Witnesseth: For valuable consideration it is agreed between the parties aforesaid, as follows:

The first party agrees to and does hereby sell to the second party, and the second party agrees to and does hereby purchase from the first party all the Gas Oil the second party shall use for the manufacture of Gas in its plant during the period of twelve (12) months from the above date, such supply estimated to be four hundred thousand (400,000) gallons, and it is hereby agreed shall not exceed four hundred fifty thousand (450,000) gallons, at and for the price of four and five one-hundredths (4.05) cents per gallon, in tank cars delivered at Lincoln, Nebraska, shipments to be made from Sugar Creek, Missouri.

The first party shall ship the aforesaid goods to Lincoln, Nebraska, as the business of the second party may require, and as they may in writing order, but not less than one tank car at any

one time, and as near as may be in equal quantities until the whole amount contracted for is delivered.

This agreement is understood to cover all the liquid Gas-making material that may be required for use in the plant of the party of the second part during the period embraced in this agreement.

The first party agrees that there shall be no unnecessary or unusual detention in the shipments of the goods herein mentioned, but they shall not be held responsible for accidents or unavoidable delays in delivery of same.

276 There shall be no delay in unloading cars. If cars are detained at destination over 48 hours (Sundays and Legal Holidays excepted) for the first day's detention thereafter there will be a charge of one dollar $1.00; for the second day, $2.00; for the third and each succeeding day, $3.00.

Terms.—Net cash thirty (30) days after date of shipment, payments to be made in New York or Chicago Exchange.

In witness whereof the said parties have executed this agreement in duplicate the day and date first written herein.

LINCOLN GAS & ELECTRIC LIGHT CO.,

(Signed) By HOMER HONEYWELL, *Acting Gen. Mgr.*

STANDARD OIL COMPANY OF INDIANA,

(Signed) By N. W. COWAN, *Vice-Pres.*

277 Pages 488 and 489 Printed Record.

EXHIBIT 113, M. E. W.

(Copy.)

Agreement Made This 21st Day of March, A. D. 1906, Between the Standard Oil Company (Indiana) Party of the First Part, and the Lincoln Gas & Electric Light Company, Lincoln, Nebraska, Party of the Second Part.

Witnesseth: For valuable considerations it is agreed between the parties aforesaid, as follows:

The first party agrees to and does hereby sell to the second party, and the second party agrees to and does hereby purchase from the first party all the Gas Oil the second party shall use for the manufacture of gas in its plant during the period of twelve months from April 6, 1906, such supply estimated to be four hundred fifty thousand (450,000) gallons, and it is hereby agreed shall not exceed five hundred thousand (500,000) gallons, at and for the price of four and one-tenth (4 1/10) cents per gallon, in tank cars delivered at Lincoln, Nebraska, shipments to be made from Sugar Creek, Missouri.

The first party shall ship the aforesaid goods to Lincoln, Nebraska as the business of the second party may require, and as they may in writing order, but not less than one tank car at any one time, and as near as may be in equal quantities until the whole amount contracted for is delivered. This agreement is understood to cover all the liquid Gas making material that may be required for use in the plant of the party of the second part during the period embraced in this agreement.

The first party agrees that there shall be no unnecessary or unusual detention in the shipment of the goods herein mentioned but they shall not be held responsible for accidents or unavoidable delays in the delivery of same.

There shall be no delays in unloading cars. If cars are detained at destination over 48 hours (Sundays and Legal Holidays excepted) for the first day's detention thereafter there will be a charge of One Dollar; for the second day, two dollars; for the third and each succeeding day, Three Dollars.

278 Terms: Net cash thirty (30) days after date of shipment, payments to be made in New York or Chicago Exchange.

In witness whereof the said parties have executed this agreement in duplicate the day and date first written herein.

STANDARD OIL COMPANY,
(Signed) By G. W. STAHL, *Treas.*
LINCOLN GAS & ELECTRIC LIGHT CO.,
(Signed) HOMER HONEYWELL, *Acting Gen. Mgr.*

279 Page 489 Printed Record.

EXHIBIT 114, M. E. W.

(Copy.)

Gas Oil (27-34 Degrees).

Agreement Made This 15th Day of April, A. D. 1907, Between the Standard Oil Company of Nebraska, a Corporation Organized under the Laws of the State of Nebraska, Party of the First Part, and the Lincoln Gas & Electric Light Company, of Lincoln, Nebraska, Party of the Second Part, Witnesseth:

In consideration of the mutuality hereof, it is hereby agreed between the parties hereto as follows:

1. The party of the first part sells and agrees to deliver to the party of the second part the number of gallons of Gas Oil (27-34 degrees) the second party shall use in the manufacture of gas in its plant during the contract period beginning April 15, 1907, and ending April 15, 1908; such supply estimated to be 500,000 to 600,000 gallons.

The party of the second part agrees to receive the gas oil defined in Section 1 at and for the price of four and 20/100 (.0420) cents

per gallon delivered in tank cars at Lincoln, Nebraska; such deliveries to be made as the business of the second party may require and as they in writing order but not less than one tank car at any one time.

This agreement is understood to cover the liquid gas making material that will be required for use in the plant of the said party of the second part during the period embraced in this agreement.

The party of the first part agrees that there will be no unusual or unnecessary detention in the shipment of the oil herein mentioned, but said party shall not be held responsible for accidents or unavoidable delays in the delivery of same.

It is agreed that the party of the second part is to make all necessary arrangements for the prompt unloading and return of cars upon arrival at their works, and in all instances to use their utmost endeavors to prevent delay.

280 It is agreed between the parties hereto that payments shall be made in cash, monthly, on invoices of the preceding month; payments to be made in Omaha Exchange.

In witness whereof the parties hereto have executed this agreement the day and date first written hereunder.

STANDARD OIL COMPANY,
NEBRASKA,
(Signed) By C. L. ALLEMAN,
*Vice-President.*

281 Page 490 Printed Record.

EXHIBIT 116, M. E. W.

The Fidelity Land & Improvement Co., Miners and Shippers of Anthracite and Bituminous Coal,
Sixth Floor, Keith & Perry Bldg.

E. R. Dusky, Gen'l Sales Mgr.
General Offices: Kanses City, Mo.

KANSAS CITY, Mo., Feb'y 1st, 1904.

Lincoln Gas & Electric Light Co., Lincoln, Nebraska.

GENTLEMEN: We hereby agree to furnish you with what coal you may require for one year from the date of this letter at the following price per ton of two thousand pounds f. o. b. mines: Cherokee or Fidelity Deep Shaft Shaker Screened Gas Lump $2.25.

The coal to be furnished to be known as Cherokee or Fidelity. Railroad or mine weights in all cases to govern settlements. Payments to be made on or before the tenth day of each month for all coal shipped during the preceding month. You to take your supply of Kansas coal from us, and we are to fill your orders promptly at all times, except in cases of strikes of mine or railway employes, break-downs at mines, contingencies of transportation and other unavoidable delays.

It is further mutually agreed and understood that should there be any advance or reduction in the cost of mining during the life of this contract, the above price shall be accordingly reduced or advanced.

The acceptance of this proposition in writing is to be considered a contract and binding on both parties.

Yours truly,

(Signed) E. R. DUSKY,
*General Sales Manager.*

Accepted:

LINCOLN GAS & ELECTRIC LIGHT CO.

(Signed) HOMER HONEYWELL.

Indorsed: Contract with Gas Co. Fidelity Coal. Expired Feb'y 1st, 1905.

282 Page 491, Printed Record.

#117.

Manufacturing Cost Coal Gas.

| | |
|---|---|
| 1905 | .3808 |
| 1906 | .5426 |
| 1907 | .6290 |

EXHIBIT 117, M. E. W. No. 1.

Coal Gas.

| | 1905. | C. per M. |
|---|---|---|
| Coal Carbonized | $31,091 85 | 52 32 |
| Economizing Royalty | 171 53 | 00 29 |
| Bench Fuel | 3,499 31 | 05 88 |
| Total Cost Coal Gas Material | $34,762 69 | 58 49 |
| Less Coke Residual | 18,516 53 | 31 15 |
| Tar Residual | 2,221 65 | 03 74 |
| Total Residual | 20,738 18 | 34 89 |
| Net Cost Coal Gas Material | 14,024 51 | 23 59 |
| Retort House Labor | 3,113 26 | 05 24 |
| Bench Repairs | 1,255 62 | 02 11 |
| Retort House Expense | 331 46 | 00 56 |
| Total Cost Generating Coal Gas | 18,724 85 | 31 50 |

| | | |
|---|---|---|
| Steam | 1,500 00 | 02 52 |
| Purifying Labor, Expense & Repairs | 160 00 | 00 27 |
| Purifying Material | 90 00 | 00 15 |
| Gen'l Works Repairs, Coal Gas | 140 00 | 00 23 |
| Gen'l Works Apparatus | 937 76 | 01 58 |
| Sundry Labor | 838 56 | 01 41 |
| Works Expenses & Supplies | 874 68 | 01 47 |
| General Supervision | 970 66 | 01 64 |
| Total Purifying & Storage | 5,512 64 | 09 27 |
| Total Cost Coal Gas in holder | 24,237 49 | 40 77 |

283 Coal Gas.

| | 1906. | C. per M. |
|---|---|---|
| Coal Carbonized | $43,033 89 | 60 97 |
| Economizer Royalty | 230 74 | 00 33 |
| Bench Fuel | 5,090 92 | 07 22 |
| Total Cost Coal Gas Material | 48,360 55 | 68 52 |
| Less Coke Residual | 22,566 96 | 31 97 |
| Tar Residual | 1,316 96 | 01 87 |
| Total Residual | 23,883 92 | 33 84 |
| Net Cost Coal Gas Material | 24,476 63 | 34 68 |
| Retort House Labor | 4,790 97 | 06 79 |
| Bench Repairs | 1,976 39 | 02 80 |
| Retort House Expense | 269 12 | 00 38 |
| Total Cost Generating Coal Gas | 31,513 11 | 44 65 |
| Steam | 1,500 00 | 02 12 |
| Purifying Labor, Expense & Repairs | 460 92 | 00 65 |
| Purifying Material | 279 11 | 00 39 |
| Gen'l Works Repairs, Coal Gas | 397 36 | 00 56 |
| Gen'l Works Apparatus | 1,125 61 | 01 60 |
| Sundry Labor | 1,163 90 | 01 65 |
| Works Expense & Supplies | 824 32 | 01 17 |
| General Supervision | 1,034 78 | 01 47 |
| Total Purifying & Storage | 6,786 00 | 09 61 |
| Total Cost Coal Gas in holder | 38,299 11 | 54 26 |

284 Coal Gas.

| | 1907. | C. per M. |
|---|---|---|
| Coal Carbonized | $42,844 46 | 61 39 |
| Economizer Royalty | 178 41 | 00 26 |
| Bench Fuel | 5,347 42 | 07 66 |
| Total Cost Coal Gas Material | 48,370 29 | 69 31 |
| Less Coke Residual | 20,537 73 | 29 43 |
| Tar Residual | 1,248 26 | 01 79 |
| Total Residual | 21,785 99 | 31 22 |
| Net Cost Coal Gas Material | 26,584 30 | 38 09 |
| Retort House Labor | 5,708 18 | 08 18 |
| Bench Repairs | 4,022 24 | 05 76 |
| Retort House Expense | 201 54 | 00 29 |
| Total Cost Generating Coal Gas | 36,516 26 | 52 32 |
| Steam | 1,649 97 | 02 36 |
| Purifying Labor, Expense & Repairs | 386 68 | 00 55 |
| Purifying Material | 389 13 | 00 56 |
| Gen'l Works Repairs, Coal Gas | 812 40 | 01 16 |
| Gen'l Works Apparatus | 908 62 | 01 30 |
| Sundry Labor | 1,303 51 | 01 87 |
| Works Expense & Supplies | 878 50 | 01 26 |
| General Supervision | 1,052 67 | 01 51 |
| Total Purifying & Storage | 7,381 48 | 10 57 |
| Total Cost Coal Gas in holder | 43,897 74 | 62 90 |

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#118.

Manufacturing Cost Water Gas.

| | |
|---|---|
| 1905 | .4095 |
| 1906 | .4195 |
| 1907 | .3951 |

EXHIBIT 118, M. E. W. No. 2.

Water Gas.

| | 1905. | C. per M. |
|---|---|---|
| Steam for Generating | $3,794 56 | 03 53 |
| Generating fuel | 12,663 95 | 11 76 |
| Enricher | 17,455 65 | 16 22 |
| Total Material | 33,914 11 | 31 51 |
| Less Tar Residual | 214 97 | 00 19 |
| Net Cost Material | 33,699 19 | 31 32 |
| Gas Making Labor | 2,147 24 | 01 99 |
| Repairs W. G. Generating Apparatus | 1,953 28 | 01 81 |
| Water Gas Gen. House Expense | 39 99 | 00 04 |
| Total cost Generating Water Gas | 37,839 70 | 35 16 |
| Steam | 480 00 | 00 45 |
| Purifying W. G. Labor Exp. & Repairs | 157 68 | 00 15 |
| Purifying W. G. Material | 210 00 | 00 19 |
| Generating Works Repairs | 127 82 | 00 12 |
| Generating Apparatus Repairs | 734 48 | 00 68 |
| Sundry Labor | 1,271 42 | 01 18 |
| Works Expenses & Supplies | 1,483 60 | 01 38 |
| General Supervision | 1,757 44 | 01 63 |
| Total Cost Purifying & Storage | 6,222 44 | 05 78 |
| Total Cost Water Gas in holder | 44,062 14 | 40 95 |

286

Water Gas.

| | 1906. | C. per M. |
|---|---|---|
| Steam for Generating | $4,107 16 | 03.56 |
| Generating fuel | 13,985 51 | 12 12 |
| Enricher | 17,587 74 | 15 25 |
| Total Material | 35,677 41 | 30 93 |
| Less Tar Residual | ..... | .. .. |
| Net Cost Material | 35,677 41 | 30 93 |
| Gas Making Labor | 2,919 50 | 02 53 |
| Repairs W. G. Generating Apparatus | 2,312 47 | 02 01 |
| Water Gas Gen. House Expense | 73 79 | 00 06 |
| Total cost Generating Water Gas | 40,983 17 | 35 53 |

| | | |
|---|---|---|
| Steam | 480 00 | 00 42 |
| Purifying W. G. Labor Exp. & Repairs | 621 24 | 00 54 |
| Purifying W. G. Material | 226 50 | 00 19 |
| Generating Works Repairs | 327 11 | 00 28 |
| Generating Works Repairs | 952 26 | 00.83 |
| Sundry Labor | 1,494 95 | 01 29 |
| Works Expense & Supplies | 1,453 89 | 01 26 |
| General Supervision | 1,857 98 | 01 61 |
| Total Cost Purifying & Storage | 7,413 93 | 06 42 |
| Total Cost Water Gas in holder | 48,397 10 | 41 95 |

Water Gas.

| | 1907. | C. per M. |
|---|---|---|
| Steam for Generating | $4,183 74 | 03 15 |
| Generating fuel | 14,491 19 | 10 90 |
| Enricher | 20,623 74 | 15 51 |
| Total Material | 39,298 67 | 29 56 |
| Less Tar Residual | 916 14 | 00 69 |
| Net Cost Material | 38,382 53 | 28 87 |
| Gas Making Labor | 3,737 66 | 02 81 |
| Repairs W. G. Generating Apparatus | 1,045 53 | 00 79 |
| Water Gas Gen. House Expense | 24 03 | 00 02 |
| Total cost Generating Water Gas | 43,189 75 | 32 49 |
| Steam | 880 78 | 00 66 |
| Purifying W. G. Labor Exp. & Repairs | 799 10 | 00 60 |
| Purifying W. G. Material | 392 04 | 00 30 |
| Generating Works Repairs | 253 03 | 00 19 |
| Generating Apparatus Repairs | 996 16 | 00 75 |
| Sundry Labor | 2,266 18 | 01 70 |
| Works Expense & Supplies | 1,662 97 | 01 25 |
| General Supervision | 2,084 52 | 01 57 |
| Total Cost Purifying & Storage | 9,334 78 | 07 02 |
| Total Cost Water Gas in holder | 52,524 53 | 39 51 |

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## #119.

Net Cost in Holder of Gas Sold.

| | |
|---|---|
| 1905 | .4178 |
| 1906 | .4789 |
| 1907 | .4808 |

EXHIBIT 119, M. E. W. No. 3.

Mixed Gas.

| | 1905. | C. per M. |
|---|---|---|
| Manufacturing Expense per 1,000 cu. ft. sold, less used by Co. & lost | $60,035 87 | 41 78 |
| Distribution expense: | | |
| Street main Maintenance | 949 45 | 00 66 |
| Service Maintenance | 1,060 36 | 00 74 |
| Street Dep't Expense | 716 51 | 00 50 |
| Meter Maintenance | 868 70 | 00 60 |
| Meter Dep't Expense | 404 20 | 00 28 |
| Setting & Removing Meters | 1,933 56 | 01 35 |
| Gratuitous Work | 1,820 32 | 01 27 |
| Total | 7,753 10 | 05 40 |
| Gas Lost & Unaccounted for | 8,000 95 | 05 57 |
| Total Distribution Expense | 15,754 05 | 10 97 |
| Collection Department: | | |
| Reading Meters | 699 38 | 00 49 |
| Collection Clerical Salaries | 3,153 27 | 02 20 |
| Collection Office Expense | 677 01 | 00 48 |
| Rent Collection Office | 554 08 | 00 38 |
| Delivering Bills | 155 82 | 00 10 |
| Outside Collections | 461 54 | 00 32 |
| Total Collection Expense | 5,701 10 | 03 97 |
| Executive Department: | | |
| Executive Salaries | 2,446 68 | 01 70 |
| General Clerical Salaries | 484 00 | 00 34 |
| General Office Expenses | 337 32 | 00 23 |
| Incidental Expense | 1,621 85 | 01 13 |
| Rent of Executive Office | 356 48 | 00 25 |
| Legal Expense | 652 87 | 00 45 |
| Total Executive Expense | 5,899 20 | 04 10 |
| Promoting New Business | 15,919 73 | 11 08 |
| Taxes | 2,112 00 | 01 47 |
| Total General Expense | 23,930 93 | 16 65 |
| Grand Total | 105,421 95 | 73 37 |

## Mixed Gas.

| | 1906. | C. per M. |
|---|---|---|
| Manufacturing Expense per 1,000 cu. ft. sold, less used by Co. & lost | $73,580 22 | 47 89 |
| Distribution Expense: | | |
| Street Main Maintenance | 638 00 | 00 42 |
| Service Maintenance | 396 60 | 00 25 |
| Street Dept. Expense | 608 38 | 00 39 |
| Meter Maintenance | 1,037 36 | 00 68 |
| Meter Dept. Expense | 353 11 | 00 23 |
| Setting & Removing Meters | 2,392 51 | 01 56 |
| Gratuitous Work | 1,906 52 | 01 24 |
| Total | 7,332 48 | 04 77 |
| Gas Lost & Unaccounted for | 12,301 84 | 08 01 |
| Total Distribution Expense | 19,634 32 | 12 78 |
| Collection Department: | | |
| Reading Meters | 980 55 | 00 64 |
| Collection Clerical Salaries | 3,670 97 | 02 39 |
| Collection Office Expense | 702 68 | 00 46 |
| Rent Collection Office | 537 31 | 00 34 |
| Delivering Bills | 141 37 | 00 09 |
| Outside Collections | 659 73 | 00 43 |
| Total Collection Expense | 6,692 61 | 04 35 |
| Executive Department: | | |
| Executive Salaries | 2,804 70 | 01 82 |
| General Clerical Salaries | 493 62 | 00 32 |
| General Office Expense | 340 30 | 00 22 |
| Incidental Expense | 2,137 77 | 01 39 |
| Rent of Executive Office | 485 38 | 00 32 |
| Legal Expenses | 757 43 | 00 49 |
| Total Executive Expense | 7,019 20 | 04 56 |
| Promoting New Business | 13,432 41 | 08 74 |
| Taxes | 6,690 48 | 04 36 |
| Total General Expense | 27,142 09 | 17 66 |
| Grand Total | 127,049 24 | 82 68 |

289 Mixed Gas.

| | 1907. | C. per M. |
|---|---|---|
| Manufacturing Expense per 1,000 cu. ft. sold, less used by Co. & lost | $86,235 19 | 48 08 |
| Distribution Expense: | | |
| Street Main Maintenance | 1,147 28 | 00 64 |
| Service Maintenance | 385 17 | 00 22 |
| Street Dept. Expense | 797 48 | 00 44 |
| Meter Maintenance | 1,338 31 | 00 75 |
| Meter Dept. Expense | 458 60 | 00 26 |
| Setting & Removing Meters | 2,011 93 | 01 12 |
| Gratuitous Work | 1,891 53 | 01 05 |
| Total | 8,030 30 | 04 48 |
| Gas Lost & Unaccounted for | 9,947 75 | 05 54 |
| Total Distribution Expense | 17,978 05 | 10 02 |
| Collection Department: | | |
| Reading Meters | 952 10 | 00 53 |
| Collection Clerical Salaries | 5,355 20 | 02 99 |
| Collection Office Expense | 770 14 | 00 43 |
| Rent Collection Office | 634 42 | 00 35 |
| Delivering Bills | 176 26 | 00 10 |
| Outside Collections | 709 63 | 00 39 |
| Total Collection Expense | 8,597 75 | 04 79 |
| Executive Department: | | |
| Executive Salaries | 3,215 52 | 01 79 |
| General Clerical Salaries | 394 80 | 00 22 |
| General Office Expense | 478 25 | 00 27 |
| Incidental Expense | 1,723 38 | 00 96 |
| Rent of Executive Office | 664 04 | 00 37 |
| Legal Expense | 2,160 31 | 01 20 |
| Total Executive Expense | 8,636 30 | 04 81 |
| Promoting New Business | 13,394 04 | 07 47 |
| Taxes | 7,085 04 | 03 95 |
| Total General Expense | 29,115 38 | 16 23 |
| Grand Total | 141,924 37 | 79 12 |

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EXHIBIT 120, M. E. W.

| | Gas made and sold. | |
|---|---|---|
| | Made. | Sold. |
| 1902 | 85,246,000 | 75,680,800 |
| 1903 | 106,210,000 | 98,343,284 |
| 1904 | 128,501,512 | 117,429,858 |
| 1905 | 167,039,400 | 143,690,700 |
| 1906 | 185,917,700 | 153,663,600 |
| 1907 | 202,720,200 | 179,366,300 |

#120.

#4.

| | 1902. | 1903. |
|---|---|---|
| Coal Gas Made | 33,695,000 | 35,823,000 |
| Water Gas Made | 51,581,000 | 70,387,000 |
| Total Gas Made | 85,276,000 | 106,210,000 |
| Gas Sold | 75,680,800 | 98,343,284 |
| Used by Company | 1,412,400 | 585,000 |
| Loss and Unaccounted for | 8,394,800 | 7,272,505 |
| Per Cent. Unaccounted for | 9.84 | 6.84 |

| | 1904. | 1905. |
|---|---|---|
| Coal Gas Made | 37,621,500 | 59,427,300 |
| Water Gas Made | 90,880,012 | 107,612,100 |
| Total Gas Made | 128,501,512 | 167,039,400 |
| Gas Sold | 117,429,858 | 143,690,700 |
| Used by Company | 675,800 | 720,600 |
| Loss and Unaccounted for | 10,339,625 | 22,586,000 |
| Per cent. Unaccounted for | 8.20 | 13.53 |

| | 1906. | 1907. |
|---|---|---|
| Coal Gas Made | 70,581,200 | 69,789,600 |
| Water Gas Made | 115,336,500 | 132,930,600 |
| Total Gas Made | 185,917,700 | 202,720,200 |
| Gas Sold | 153,633,600 | 179,366,300 |
| Used by Company | 438,200 | 586,700 |
| Loss and Unaccounted for | 30,587,200 | 24,013,600 |
| Per cent. Unaccounted for | 16.56 | 11.84 |

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#121.

Comparative Net Rates.

1905..... $1.20 net per M for both light and fuel.
1906..... $1.20 net per M for both light and fuel.
1907..... $1.20 net per M for both light and fuel.

EXHIBIT 121.

Comparative Ratios.

| | Per cent. |
|---|---|
| Water Gas made in 1906 shows increase over amount made in 1905 of | 6.26 |
| Cost of Generating Water Gas in 1906 shows increase over cost of Gen. in 1905 of | 8.30 |
| Coal gas made in 1906 shows increase over amount made in 1905 of | 18.77 |
| Cost of Generating Coal Gas in 1906 shows increase over cost of Generating in 1905 | 68.29 |
| Water Gas made in 1907 shows increase over amount made in 1905 of | 23.52 |
| Cost of Generating Water Gas in 1907 shows increase over cost of generating in 1905 of | 14.13 |
| Gas making labor 1907 shows increase over same in 1905 | 74.07 |
| Purifying labor Expense & Supplies in 1907 shows increase over same in 1905 | 406.7 |
| Purifying Material 1907 shows increase over same in 1905 | 86.7 |
| Total Cost in holder of Water Gas 1907 shows increase over same in 1905 | 19.2 |
| Coal gas made in 1907 shows increase over amount made in 1905 | 17.43 |
| Cost of generating coal gas in 1907 shows increase over cost of generating in 1905 | 95.00 |
| Cost of coal gas in holder in 1907 shows increase over same in 1905 | 81.11 |
| Bench Repairs, 1907 shows increase over same in 1905 | 220. |
| Retort House Labor 1907 shows increase over same in 1905. | 83.35 |
| Tons of Coal Carbonized 1907 shows increase over same in 1905 | 16.14 |
| Purifying labor, Expense & Supplies 1907, shows increase over same in 1905 | 140.21 |
| Purifying Material 1907 shows increase over same in 1905 | 332.36 |
| Sundry labor 1907 shows increase over same in 1905 | 55.44 |
| General Works Repairs, 1907, shows increase over same in 1905 | 480. |
| Mixed Gas in 1907 shows increase over 1905 | 21.36 |

Distribution Expense 1907 shows increase over same in 1905 of ..... 3.57
Reading meters 1907 shows increase over same in 1905 of.. 36.00
Collection Clerical Salaries, 1907, shows increase over same in 1905 of ..... 70.00
Outside Collections 1907 shows increase over same in 1905 of ..... 53.7
Executive Expenses 1907 shows increase over same in 1905 of ..... 46.4

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#122.

Gas Sales, Expenses & Net Earnings.

| | Sales. | Expense. | Net earnings. |
|---|---|---|---|
| 1902..... | 75,680,800 | $91,051.62 | $15,174.74 |
| 1903..... | 98,343,300 | 81,582.79 | 52,888.27 |
| 1904..... | 117,429,858 | 101,472.85 | 51,373.30 |
| 1905..... | 143,690,700 | 105,421.95 | 68,197.08 |
| 1906..... | 153,663,000 | 127,049.24 | 58,729.02 |
| 1907..... | 179,366,300 | 141,924.37 | 73,851.83 |

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EXHIBIT 122, M. E. W.

Comparative Statement of Gas Sales, Expenses, and Net Earnings.

| Year. | Cubic feet gas sold. | Average net price per 1,000. | Gross earnings, gas. | Operating expenses, gas. | Net earnings, gas. |
|---|---|---|---|---|---|
| 1902.. | 75,690,800 | $1.3833 | $104,766.66 | $74,164.96 | $30,601.70 |
| 1903.. | 98,343,284 | 1.3664 | 134,471.06 | 81,582.79 | 52,888.27 |
| 1904.. | 117,429,585 | 1.3015 | 152,846.15 | 101,472.85 | 51,373.08 |
| 1905.. | 143,690,700 | 1.2086 | 173,619.03 | 105,421.95 | 68,197.08 |
| 1906.. | 153,663,600 | 1.2090 | 185,778.26 | 127,049.24 | 58,729.02 |
| 1907.. | 179,366,300 | 1.2031 | 215,776.20 | 141,924.37 | 73,851.83 |
| Total..... | | | $967,257.36 | 631,616.16 | $335,641.20 |

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#125.

Expenses and Earnings—Gas Department.

| | Expenses. | Earnings. |
|---|---|---|
| 1904..... | $101,472.85 | $152,846.15 |

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#126.

Earnings & Expenses—Gas Department by Month, 1905.

| | Earnings. | Expenses. |
|---|---|---|
| Jan. | $13,728.03 | $9,366.69 |
| Feb. | 12,874.64 | 8,220.61 |
| March | 13,791.38 | 8,883.34 |
| April | 13,940.71 | 8,741.47 |
| May | 13,805.99 | 7,756.28 |
| June | 13,742.16 | 8,261.63 |
| July | 13,709.95 | 7,952.93 |
| Aug. | 14,233.66 | 8,099.03 |
| Sept. | 15,744.65 | 8,202.77 |
| Oct. | 15,749.25 | 9,186.04 |
| Nov. | 15,981.42 | 9,928.23 |
| Dec. | 16,317.19 | 10,772.93 |

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#127.

Earnings and Expenses—Gas Department for the Year 1905.

| Earnings. | Expenses. |
|---|---|
| $173,619.03 | $105,421.95 |

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#128.

Earnings & Expenses—Gas Department for the Year 1906.

| Earnings. | Expenses. |
|---|---|
| $185,778.26 | $127,049.24 |

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1.

Gas Construction.

1873.

| | | |
|---|---|---|
| National Gas Building Co. | $54,185.99 | |
| Extension of Main | 61.33 | |
| | | $54,247.32 |

1874.

| | | |
|---|---|---|
| Laying Pipe | $39.27 | |
| A. G. Hastings | 413.34 | |
| D. McDonald & Co., Meters | 222.00 | |
| D. Long, Retorts | 212.70 | |
| | | 887.31 |

1875.

No Construction.

1876.

| | |
|---|---|
| C. E. Gray, Exp. to St. Louis | 28.25 |
| A. G. Bowman, Pipe | 1,001.84 |
| Lac Lede Brick Co. | 88.13 |
| Fittings | 7.85 |
| Labor | 5.60 |
| Cash, Freight Check | 9.57 |
| Cash, Chambers | 8.75 |
| Cash, Smeltvw'ks | 205.20 |
| H. J. W. Phil | 200.00 |
| L. H. Case | 4.00 |
| On trenches | 118.00 |
| Redfield B. & Co. | 99.69 |
| On trenches | 82.30 |
| At works | 65.00 |
| B. & M. Freight | 203.53 |
| B. & M. Freight | 103.50 |
| Moore & Crone | 30.00 |
| Interest &c. | 33.00 |
| B. & M. Freight | 324.12 |
| Draft, Refield B. & Co. | 27.65 |
| Moore & Crone | 100.00 |
| Labor, trenches | 100.00 |
| J. Otterbine Stone Works | 5.75 |
| A. & N. Fire Brick | 70.00 |
| Labor, trenches | 159.00 |
| McClay coets | 41.10 |
| Keyes & Bullock, stone | 37.00 |
| Freight B. & M. and A. & M. | 18.98 |
| Labor, trenches | 170.00 |
| Moore & Crone | 125.00 |
| H. H. Schaberg | 10.75 |
| Carter Brothers | 10.44 |
| R. J. Williams | 7.00 |
| Fire Clay, Jones | 1.75 |
| Dennis Long & Co. | 1,298.51 |
| Interest 4 mos. $649.26 10% and exch. one quarter | 24.39 |
| Interest 8 mos. $649.25 10% and exch. one quarter | 46.11 |

| | | |
|---|---|---|
| Cas-, Ballard & Y | 8.90 | |
| Cash, Baker Arnold & Co. | 6.50 | |
| Redfield Bowen & Walworth Co | 99.69 | |
| " " " | 24.61 | |
| Dennis Long & Co. | 3.69 | |
| " " | 45.60 | |

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| | | |
|---|---|---|
| Redfield, Bowen Walworth & Co. | $3.04 | |
| Wolcott, Rowe & Co. | 5.25 | |
| Redfield Bowen & W | 2.15 | |
| D. McDonald & Co. | 67.75 | |
| Omaha Smelting & Ref. Co. | 204.87 | |
| Morris Tasker & Co. | 2,417.15 | |

2—403½.

| | | |
|---|---|---|
| Interest 3 mos. 1,208.75 | 30.21 | |
| Interest 6 mos. " | 60.43 | |
| L. M. Rumsey, bill pipe | 286.03 | |
| Pd. W. & P. | 108.27 | |
| " " | 252.77 | |
| Freight B. & M. Carter | 10.40 | |
| Graham & Gregg | 100.00 | |
| Labor, trenches | 50.00 | |
| H. C. Babcock, Lime | 38.20 | |
| Ballard Bros. | 11.65 | |
| C. Johnson | 20.11 | |
| B. & M. Freight | 6.58 | |
| D. Long & Co. | 49.29 | |
| Carter Bros. Cartage | 25.10 | |
| N. Y. Draft, lead | 106.50 | |
| Disct. | 31.00 | |
| S. J. Chambers | 21.00 | |
| Labor, trenches | 100.00 | |
| Moore & Crone | 9.00 | |
| Chambers | 21.00 | |
| Freight | 23.24 | |
| Disct. | 31.00 | |
| Union Foundry | 7.00 | |
| H. S. Babcock | 30.40 | |
| A. & N. Frt. | 63.00 | |
| Labor, trenches | 109.00 | |
| D. McDonald & Co. | 456.10 | |
| " " | 88.75 | |
| Lewis Lawson | 30.50 | |
| | | $9,937.44 |

1877.

| | | |
|---|---|---|
| C. Johnson | | 32.00 |
| D. L. Graham Extras | | 27.84 |
| Leighton & B. | | 12.22 |
| John Fisher | | 11.70 |
| H. Bins stone | | 18.00 |
| Hawley & B. | | 38.35 |
| D. & C. L. Baum | | 9.22 |
| Moore & Crone | | 26.60 |
| Carter Bros. | | 15.90 |
| Babcock | | 91.04 |
| B. & M. Freight | | 36.16 |
| Laclede Mfg. Co. | | 543.35 |
| Construction renewal | | 31.00 |
| Construction: | Babcock | 66.20 |
| " | lime house | 25.00 |
| " | Baum lime house | 6.50 |
| " | coal house lumber | 133.40 |
| " | | 5.80 |
| " | W. & P. | 100.00 |
| " | " | 27.00 |
| " | " | 100.00 |
| " | " | 20.84 |
| " | " | 60.02 |
| D. McDonald & Co. | | 115.00 |
| Construction: | Laclede W. | 29.25 |
| Construction: | W. E. Jones & Co. | 5.60 |
| " | A. Nichol | 40.00 |
| " | Schaberg | 11.70 |
| " | Buckstaff & Co. | 1.00 |
| " | Baum & Co. | 1.70 |

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| | | |
|---|---|---|
| Construction: | Garnashee | $14.00 |
| " | R. J. Williams | 25.00 |
| " | Baum | 6.92 |
| " | J. Hagan, brick | 17.35 |
| " | Buckstaff & Co | 2.00 |
| " | Baum | 3.20 |
| " | C. Koch for mason, brick W. K. Lime-house | 50.00 |
| Moore & Crone, rebuilding works | | 390.63 |
| J. G. Rosling, carpenters gas works | | 48.40 |

3–404.

| | | |
|---|---|---|
| Construction: | carpenter, W. & P. | 13.00 |
| " | lumber Jones W. & P. | 48.52 |
| " | Lead, Omaha Smelting works | 7.75 |
| " | Wm. Ashton, pipe | 26.70 |

| | | | |
|---|---|---|---|
| " | W. G. Jones & Co. pd. by W. & P | 314.60 | |
| " | Laclede F. B. Mfg. Co | 193.35 | |
| " | Wm. Ziegler | 4.65 | |
| " | checks "243 and "244 | 12.75 | |
| " | Stevens Laying pipe | 7.15 | |
| " | Wm. Ashton, pipe | 24.99 | |
| " | 4¾ days Hitchcock | 7.00 | |
| " | Dave Kitchen | 9.35 | |
| " | D. McDonald & Co | 42.16 | |
| " | Wm. Cadget | 6.00 | |
| " | Bignell | 93.48 | |
| " | Small bills | 30.05 | |
| " | Borax | 1.00 | |
| " | Hitchcock | 3.15 | |
| " | Wm. Ashton pipe | 25.00 | |
| " | D. & C. L. Baum | 9.91 | |
| " | R. L. Smith | 1.50 | |
| " | D. McDonald & Co | 75.60 | |
| " | Hiltner at works | 20.18 | |
| " | Jas. Gilbert wtg. holder | 135.40 | |
| " | Small bills | 30.12 | |
| " | Wm. Ashton | 2.01 | |
| " | R. L. Smith | 14.68 | |
| " | Cart. freight on pump | 1.57 | |
| " | Well point, etc | 4.00 | |
| " | F. M. Howf | 3.30 | |
| " | Small bills | 27.32 | |
| | | | 3,371 55 |

1878.

| | | | |
|---|---|---|---|
| Construction: | Byer & Batty | 7.50 | |
| " | M. L. Hiltner | 1.20 | |
| " | Jones, lumber lime house | 62.61 | |
| " | Hedges, weights | 46.24 | |
| " | R. L. Smith | 11.45 | |
| " | Lime house, Buckstaff | 12.81 | |
| " | Bignell & Co. Steam pump | 110.88 | |
| " | G. W. Jones & Co | 3.30 | |
| " | Kitchen, work | 1.00 | |
| " | Service Church Kitchen | 2.00 | |
| " | Isaac Gasot | 4.00 | |
| " | Dave Kitchen | 3.00 | |
| " | Christoom | 4.50 | |
| " | D. Kitchen | 1.00 | |
| " | Work on service, Crawford | 1.50 | |
| " | D. Kitchen | 1.50 | |
| " | I. Zain | .75 | |
| " | Wm. Lowery | 1.50 | |
| " | freight on pipe | 60.00 | |

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|---|---|---|---|
| " | I. Zinn | 7.20 | |
| " | D. B. Bootoon | 5.70 | |
| " | F. M. House | 5.70 | |
| " | Kitchek | 7.20 | |
| " | Telegraph Will S. Wise | .40 | |
| " | Field House, Dutchen & B. | 49.85 | |
| " | Cash, freight pipe | 7.88 | |

300

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|---|---|---|---|
| Construction: | Cartage two loads pipe | $1.00 | |
| " | Dave Kitchen | 4.35 | |
| " | Adv. Beatrice Journal | .75 | |
| " | D. & C. L. Baum | 1.65 | |
| " | Dave Kitchen | 4.50 | |
| " | " " | 6.75 | |
| " | H. J. Bigam | 1.30 | |
| " | Humphrey Bros | 1.35 | |
| " | Small items | 11.10 | |
| " | A. Nichol | 2.56 | |
| " | Sycamore Morris Harvester Co. | 2.04 | |
| " | D. Kitchen | 4.50 | |
| " | J. T. Beach | .75 | |
| | J. H. McAleer digging and filling 242½ rods trenches. | 145.50 | |
| | Bignell & O | 7.90 | |

4–405.

| | | | |
|---|---|---|---|
| Construction: | Wheeler, fittings | $2.00 | |
| " | Wm. Lowery Jul. & Aug. | 40.00 | |
| " | Lumber, Babcock | 36.25 | |
| " | D. & C. L. Baum | 11.10 | |
| " | Buckstaff & Co | 93.04 | |
| " | Dave Kitchen | 5.25 | |
| " | Carter & Godfrey | 18.25 | |
| " | Stiles & L. Coal house | 20.00 | |
| " | Dave Kitchen | 5.25 | |
| " | C. D. Pacon | 3.75 | |
| | | | 1,656.06 |

1879 and 1880.

| | | | |
|---|---|---|---|
| Construction: | Bignell & O | $18.64 | |
| " | D. Kitchen | 30.00 | |
| " | " | 16.50 | |
| " | Nat'l Tube Works | 19.57 | |
| " | Frt. B. & M. | 1.85 | |
| " | Nat'l Tube Works | 19.52 | |
| " | Frt. Pipe | 109.38 | |
| " | F. J. Loveland | 5.55 | |

| | | |
|---|---|---|
| " | D. Kitchen | 2.55 |
| " | Holmes | .50 |
| " | Cartridge, two barrels tar | .25 |
| " | Nat'l Tube Works, invoice | 35.14 |
| " | Furnas | 3.00 |
| " | Invoice | 1,638.69 |
| " | Lock nut | .28 |
| " | Frt. Pipe, B. & M | 57.00 |
| " | Work on Ditches, Howard | 4.50 |
| " | D. Kitchen | 12.75 |
| " | P. A. Robbins | 10.65 |
| " | J. Christoffer | 18.75 |
| " | D. A. Bouton | 9.65 |
| " | Lawsons and others | 31.95 |
| " | Nat'l Tube Works | 56.38 |
| " | " | 1.75 |
| " | Sundries, May 17th | 78.50 |
| " | " 31st | 100.65 |
| " | Frt. on pipe | 9.60 |
| " | Laying Pipe | 38.10 |
| " | Bouton | 4.40 |
| " | Shepers C. P. G | 1.00 |
| " | A. G. Bemis | 12.43 |
| " | J. Christoffer | 18.75 |
| " | D. Kitchen | 7.00 |
| " | Tuttle & Doolittle | 42.55 |

301

| | | |
|---|---|---|
| Construction: | D. Kitchen | $2.65 |
| " | Men to Asylum | 24.60 |
| " | " | 9.15 |
| " | Express, gas fixtures | .35 |
| " | To Asylum, Robbins | 3.15 |
| " | " Larson | 3.15 |
| " | " D. Kitchen | 5.50 |
| " | May & Cooper | 19.19 |
| " | Frt. fixtures, B. & M | 9.60 |
| " | May & C. Asylum | 9.55 |
| " | Laying Pipe | 10.50 |
| " | Scraping & Plowing | 10.00 |
| " | Frt. Sept. 19 and 26 | 15.85 |
| " | Walter Carveth | 5.00 |
| " | Dave Kitchen | 10.90 |
| " | " | 5.65 |
| " | Nat'l Tube Works | 273.06 |
| " | A. & N. Frt. Pipe | 18.28 |
| " | D. Kitchen on trenches | 8.25 |
| " | Frt. A. & N | 7.70 |
| " | D. Kitchen | 3.00 |
| " | L. Stevenson | 1.90 |
| " | J. Lawson | 12.20 |

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|---|---|---|
| " | L. Stevenson | 12.20 |
| " | Byers | 2.95 |
| " | J. Christoffer | 11.85 |
| " | D. Kitchen | 8.60 |
| " | Larson | 7.85 |
| " | D. Kitchen | 6.75 |
| " | J. Christoffer | 5.00 |

5–406.

1879 and 1880.

| | | |
|---|---|---|
| Construction: | J. Christoffer | 8.75 |
| " | T. L. Stevenson | 13.75 |
| " | T. Walker | 2.50 |
| " | A. & N. Frt. on Pipe | 7.70 |
| " | Nat'l Tube Works Co | 107.28 |
| " | L. B. Rippley, St. Louis | 14.42 |
| " | D. Kitchen | 9.60 |
| " | Pipe, L. B. Ripley | 108.71 |
| " | J. Sullivan | 11.25 |
| " | D. Kitchen | 7.50 |
| " | " | 8.15 |
| " | J. Sullivan | 3.00 |
| " | D. Kitchen | 3.25 |
| " | Pipe | 50.10 |
| " | Laying Pipe | 8.75 |
| " | " | 12.00 |
| " | J. Ward, trenches | 6.90 |
| " | D. & C. L. Baum | 16.04 |
| " | Carpenter, Harper | 36.00 |
| " | Morris Tasker & Co | 51.73 |
| " | D. Kitchen | 12.00 |
| " | B. & M. Frt. Retorts | 83.40 |
| " | Adams, team work | 7.50 |
| " | D. Kitchen | 8.65 |
| " | D. H. Druty | 6.00 |
| " | D. Kitchen | 6.00 |
| " | Adams | 8.25 |
| " | Labor | 8.05 |
| " | C. A. Creamer & Co | 6.00 |
| " | Buckstaff & Co | 199.98 |
| " | D. Kitchen | 9.00 |
| " | Hamil | 6.25 |
| " | Ruddy | 9.00 |
| " | Morris Tasker & Co | 135.00 |

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| | | |
|---|---|---|
| Construction: | D. Kitchen | $8.25 |
| " | Ruddy | 8.25 |
| " | Kitchen | 6.75 |

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|---|---|---|---|
| " | Ruddy | 6.75 | |
| " | " | 5.25 | |
| " | Kitchen | 6.00 | |
| " | U. P. Frt. Casting | 53.90 | |
| " | B. & M. Frt. | 65.40 | |
| " | Bullock Stone | 8.05 | |
| " | Taylor Jones | 5.50 | |
| " | Kitchen | 14.25 | |
| | | | 4,122.97 |

1881.

| | | | |
|---|---|---|---|
| Construction: | John Fisher | 12.60 | |
| " | Buckstaff | 18.80 | |
| " | Evans & Howard | 114.00 | |
| " | May & Cooper | 5.10 | |
| " | Stout, brick | 9.00 | |
| " | D. Kitchen | 6.00 | |
| " | J. Sullivan | 5.75 | |
| " | " | 8.25 | |
| " | D. Kitchen | 8.25 | |
| " | Men at works | 63.00 | |
| " | D. Kitchen, service work | 9.00 | |
| " | J. Sullivan | 9.00 | |
| " | D. Kitchen, trenches | 9.00 | |
| " | Sullivan trenches | 7.50 | |
| " | D. Kitchen | 7.50 | |
| " | Sullivan trenches | 6.00 | |
| " | Kitchen | 6.00 | |
| " | A. Cox | 1.50 | |
| " | Rough | 3.00 | |
| " | Anderson Bros | 14.50 | |
| " | Frt. on pipe | 50.28 | |
| " | Anders on Bros | 14.50 | |
| " | Nat'l Tube Works | 448.57 | |
| " | D. Long & Co | 477.82 | |
| " | Walton, laying pipe | 18.00 | |
| | | | 1,318.42 |



1882.

| | | | |
|---|---|---|---|
| Construction: | Stacy Mfg. Company | 4,307.61 | |
| " | John Lanham | 4,900.00 | |
| " | C. M. Slade, Mason tender | 8.75 | |
| " | Nat'l Tube Works | 278.39 | |
| " | Keyes & Bullock | 98.50 | |
| " | Frt. on boiler | 36.82 | |
| " | Boiler | 295.00 | |
| " | Old Smelting Works | 24.50 | |
| " | Labor laying brick | 23.61 | |

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|---|---|---|---|
| " | Johnson & D. G. Lay Brick.. | 34.50 | |
| " | Logan, tending mason..... | .45 | |
| " | J. Macheil..... | 4.40 | |
| " | Johnson, laying brick..... | 10.00 | |
| " | Nat'l Tube Works..... | 213.17 | |
| " | Young, sand..... | 9.00 | |
| " | D. Groth & Tender..... | 19.30 | |
| " | Werr laying pipe..... | 27.60 | |
| " | Holmes, brick..... | 100.00 | |
| " | John Werr laying pipe..... | 46.88 | |
| " | Frt. on Exhauster..... | 15.11 | |
| " | Hiltner, carpenter..... | 23.70 | |
| " | Cooper, pipe, &c..... | 68.51 | |
| " | Smith Exhauster..... | 615.00 | |
| | | | 11,160.80 |

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1883.

| | | | |
|---|---|---|---|
| Construction: | Main by Cobb..... | $51.10 | |
| | 10th Street Extension..... | 5.20 | |
| | " ..... | 14.25 | |
| | " ..... | 17.00 | |
| | Constructing lamp main.... | 39.40 | |
| | " .... | 34.20 | |
| | " .... | 31.50 | |
| | " .... | 31.35 | |
| | " .... | 17.50 | |
| | " .... | 29.10 | |
| | Wm. Grainger..... | 10.60 | |
| | " ..... | 19.77 | |
| | Main. E. 11th St. Sewer.... | 19.65 | |
| | U. P. Frt. on Rotary Exhauster ..... | 46.00 | |
| | Miller & Shepherd H'l'ng Lamp heads..... | 6.70 | |
| | Newcomb & Co., Lumber... | 29.66 | |
| | Rotary Exhauster..... | 7.75 | |
| | | | 1,177.98 |

1884.

| | | | |
|---|---|---|---|
| Construction: | Frt. B. & M. on 4" pipe.... | 140.62 | |
| | " 4" pipe..... | 149.05 | |
| | " on valves ..... | 1.35 | |
| | " on pig lead..... | 2.25 | |
| | " John Meanor..... | 2.60 | |
| | W. M. Granger..... | 9.65 | |
| | D. Kitchen..... | 3.05 | |
| | Casting mains ..... | 1.00 | |
| | " " ..... | 3.00 | |
| | Pig lead..... | 41.80 | |
| | Hauling Pipe..... | 1.50 | |
| | W. M. Granger..... | 9.45 | |

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|---|---|---|
| | Frt. on oakum | .80 |
| | Carting pipe | .50 |
| | Valves & Oakum | 34.60 |
| | David Kitchen | 10.10 |
| | W. M. Granger | 10.90 |
| | Frt. on Pig Lead | 2.20 |
| | Hauling Pipe | 1.50 |
| | David Kitchen | 1.75 |
| | Hauling Pipe | 3.00 |
| | W. M. Grander | 9.65 |
| | Creame., hauling pipe | 1.00 |
| | " " | .75 |
| | Dubois, " | 1.50 |
| | Granger & Kitchen | 10.50 |
| | David Kitchen | 8.30 |
| | Shephard, hauling pipe | 1.50 |
| | W. M. Granger | 10.50 |
| | Hauling Pipe | 2.50 |

7–408.

1884.

| | | | |
|---|---|---|---|
| Construction: | L. Baker contract | 405.65 | |
| | Pig Lead | 41.08 | |
| | Kitchen & Crosby Co | 3.50 | |
| | Frt. on 2" pipe | 33.70 | |
| | " " 6" " | 19.20 | |
| | L. Baker contract | 114.00 | |
| | Express & Cartage | 1.75 | |
| | Kitchen & Crosby | 8.10 | |
| | Miller, cartage | .25 | |
| | Byrum, cartage | .50 | |
| 304 | B. & M. Frt. on pipe | 1.90 | |
| | Kitchen & Crosby | 6.20 | |
| | A. L. Strang, valve | 11.25 | |
| | Nat'l Tube Works, St. Louis | 253.74 | |
| | " " " Chicago. | 158.26 | |
| | L. Baker, 48½ rods | 48.50 | |
| | Kitchen & Higgins | 18.90 | |
| | Frt. on 3" pipe | 10.20 | |
| | Shickle, H. & Howard, 4" | 213.13 | |
| | Higgins & Byram | 2.10 | |
| | E. S. Abbott, lead | 9.36 | |
| | D. Kitchen | 1.60 | |
| | 6" pipe & return bends | 185.85 | |
| | | | 3,233.36 |

1885.

| | | | |
|---|---|---|---|
| Construction: | Shickle, Harrison & H | $4.02 | |
| | Nat'l Tube Works | 62.93 | |
| | D. Kitchen | 7.90 | |

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|---|---|
| Put Bartley | 2.62 |
| Frt. on pig lead | 1.50 |
| Kitchen and men | 37.15 |
| J. Long, cartage | .25 |
| Rotschild | .35 |
| Kitchen and men | 66.45 |
| Chas. Brown, cartage | .50 |
| Kitchen and Men | 60.10 |
| John Mohr | 14.50 |
| Dennis Long & Co | 392.90 |
| Pig Lead | 26.36 |
| John Dorsey | 3.35 |
| Lee Mayfield | 7.50 |
| John Mohr | 1.60 |
| Kitchen & Men, N St | 25.54 |
| John Crosby | .45 |
| Kitchen & Men, N St | 48.30 |
| M. Richardson, " | 2.25 |
| Kitchen & Men, " | 16.00 |
| Humphreys, tar rope | 4.50 |
| Tracing plans | 2.00 |
| Wm. Keller | 2.00 |
| " | 7.00 |
| John Mohr | 7.50 |
| Making piers | 2.50 |
| John Mohr | 4.50 |
| Breaking stone | 1.25 |
| Beach scraping | 2.25 |
| Kitchen & Men | 31.50 |
| D. Kitchen | 11.40 |
| Granger, Kitchen & Dorsey | 20.80 |
| Frt. on stone | 26.55 |
| Men w'kly wages | 66.87 |
| Breaking stone | 1.00 |
| Chicago L. Co., Cement | 80.10 |
| Geo. W. Blake | 80.00 |
| Day laborers, Kitchen | 53.95 |
| Keys & Bullock | 100.00 |
| Kitchen, cartage | 6.60 |
| D. Sullivan | 3.00 |
| Cummings, Reed & Co | 15.85 |
| Geo. W. Blake, lead | 39.27 |
| Dorsey & Johnson | 13.25 |

305 8–409.

1885 (Continued).

| | | |
|---|---|---|
| Construction: | H. C. Myers, cartage | $.25 |
| | Keys & B., Stone | 70.30 |
| | R. S. Young, sand | 38.47 |
| | D. L. Graham, Cont | 1,200.00 |

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|---|---|---|---|
| | Stevens Bros., " ..... | 760.00 | |
| | Chicago L. Co., cement..... | 8.05 | |
| | Day Labor, Kitchen & C... | 75.05 | |
| | D. Cashman..... | .75 | |
| | Reddy & Pearson..... | 3.05 | |
| | John Mohr ..... | 3.15 | |
| | Stout, stone..... | 22.40 | |
| | Stockwell, brick ..... | 40.80 | |
| | Kerr-Murray Mfg. Co..... | 3,250.00 | |
| | Hayden, Plain Wire..... | 3.05 | |
| | Granger, Dorsey & Co..... | 31.50 | |
| | D. Kitchen..... | 3.50 | |
| | James Robinson..... | 11.00 | |
| | John Dorsey ..... | 9.65 | |
| | 4" pipe, Mc. & M..... | 14.56 | |
| | Kitchen & Dorsey..... | 19.10 | |
| | Albright, cartage..... | .50 | |
| | Kitchen, McC. & Dorsey.... | 23.10 | |
| | Frt. on pig lead..... | 1.25 | |
| | Chicago L. Co., cement..... | 11.40 | |
| | Rivets for Roof..... | 2.19 | |
| | 10" pipe and fittings..... | 157.17 | |
| | 10" hub valve ..... | 30.67 | |
| | Pig lead ..... | 26.88 | |
| | Frt. on pig lead..... | 1.60 | |
| | D. Kitchen..... | 9.45 | |
| | Keys & B., cut stone..... | 45.00 | |
| | Baldwin Bros..... | 36.09 | |
| | R. S. Young, sand..... | 10.12 | |
| | W. J. Cooher..... | 95.70 | |
| | Cement ..... | 3.80 | |
| | Hedges, use of punch..... | 10.00 | |
| | W. B. Hughes..... | 20.00 | |
| | Frt. station meter fittings... | 12.50 | |
| | Connections for " ... | 174.60 | |
| | (Continued) Connections, Holder & Scrubber..... | 50.92 | |
| | | | 7,609.33 |

1886.

| | | | |
|---|---|---|---|
| Construction: | Chicago L. Co..... | 82.88 | |
| | Keys & B., Stone..... | 2.50 | |
| | H. J. W., Exp. to Min..... | 36.30 | |
| | Kitchen & Mastrom..... | 16.65 | |
| | Drayage, Freight & digging | 6.15 | |
| | Wm. Granger..... | 6.00 | |
| | Frt. on pig lead..... | 19.52 | |
| | Pd. Men G, 17th & N St. main ..... | 327.36 | |
| | Wm. Granger ..... | 5.25 | |
| | Car sand..... | 22.00 | |

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|---|---|---|
| | Shovels & Spades | 18.10 |
| | Demgiss & McGahey | 12.30 |
| | 4& valve | 11.38 |
| | Rumsy, oakum | 14.25 |
| | Pig lead | 198.20 |
| | Frt. on Sp | 10.77 |
| | " " Stone | 12.60 |
| | Kitchen & Bostrom | 18.50 |
| | Pd. Men & Cartage | 210.67 |
| 306 | | |
| | G. M. Walch 5 weeks | $100.00 |
| | Frt. & G. M. Walch | 30.07 |
| | Sundries | 250.00 |
| | Cement W. B. C. Co. | 68.00 |
| | Dennis Long & Co | 2,563.10 |
| | Chicago L. Co. Cement | 11.80 |
| | Stout Stone & Spades | 34.33 |
| | 2" fittings | 6.84 |
| | 45° Elbows | 11.25 |
| | G. M. Walch | 20.00 |
| | Stone Foundation | 63.75 |
| | Hauling Pipe | 18.30 |
| | Humphreys Spades | 8.05 |

9–410.

1886 (Continued).

| | | |
|---|---|---|
| Construction: | Keys & B. Stone | 51.83 |
| | Bricklayers' wages | 92.25 |
| | Stockwell on brick | 150.00 |
| | Drip boxes | 7.75 |
| | Weekly pay roll | 234.35 |
| | H. Cole | 29.50 |
| | G. M. Walch | 20.00 |
| | Sundries, wages etc | 248.95 |
| | Stockwell brick | 250.00 |
| | Keys & B. Stone | 71.35 |
| | G. M. Walch | 20.00 |
| | Zehrung & Dunn | 8.90 |
| | Korsmeyer Co. | 2.00 |
| | Citge. & Weekly wages | 130.50 |
| | " " | 104.40 |
| | R. S. Young, sand | 82.90 |
| | Zehrung, nails | 5.50 |
| | Buckstaff, lumber | 23.13 |
| | Whitebreast Co. Cement | 75.30 |
| | Fisher & Westover | 12.47 |
| | Lime & Cement | 80.62 |
| | Jno. Beardmove | 13.50 |
| | Humphrey Bros. | 7.10 |

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|---|---|
| Bricklayers | 107.00 |
| Dean & Horton | 146.70 |
| Knisely & Miller Slate | 356.00 |
| Wm. Smith, bricklayer | 4.50 |
| Sundries | 131.65 |
| Stockwell on brick | 150.00 |
| National Tube Works | 20.58 |
| Jackson & Pasby | 1.25 |
| Sundries | 258.78 |
| Ch. Lumlen Co. | 100.83 |
| Whitebreast So. | 17.00 |
| Frt. on 2" pipe | 32.90 |
| 12th St. main | 42.70 |
| Frt. on 10" pipe | 23.30 |
| J. E. Stockwell on acc | 70.40 |
| E. Kearns on acc | 50.00 |
| Slate nails | 2.80 |
| D. Baum & Sons | 8.55 |
| Henry Cole | 12.50 |
| Shickle H. & H. 10" pipe | 35.45 |
| J. J. Cummings | 7.50 |
| Dean & Horton | 84.45 |
| Hahn bricklayer | 47.25 |
| Sundries | 145.35 |
| National Tube Works | 240.95 |
| Dennis Long & Co. | 106.63 |
| Frt. on 4" pipe | 23.25 |
| E. Kearns | 50.00 |
| Sundries | 114.30 |

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| | |
|---|---|
| Sundries | $242.40 |
| Fisher & Westover | 36.90 |
| Lime & Cement | 83.80 |
| Stockwell brick acc. | 50.00 |
| Remping & Bollen | 35.25 |
| Zehrung & Hindle | 4.18 |
| Chicago Lumber Co. | 42.15 |
| D. Baum & Sons | 15.35 |
| Cooper & Cole Bros. | 52.96 |
| Zehrung & Dann | 5.75 |
| Parker R. & Co. 3 benches 6's | 1,777.69 |
| Stacey Mfg. Co. | 2,614.00 |
| Schickle H. & H. 4" pipe | 116.35 |
| R. S. Young, sand | 35.07 |
| Badger Lumber Co. | 5.00 |
| National Lumber Co. | 173.69 |
| " " " | 5.00 |
| E. Kearns, bal. | 49.08 |
| National L. W. Co. | 12.52 |
| National Lumber Co. | 19.39 |

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|---|---|---|
| | P. & A. Condenser..... | 715.00 |
| | Weekly wages to men..... | 106.00 |
| | Williams copper wire..... | 14.91 |

10–411.

1886 (Continued).

| | | | |
|---|---|---|---|
| Construction: | Stockwell on fuel..... | 26.40 | |
| | Benj. Hahn ..... | 20.60 | |
| | Frt. Washer scrubber..... | 13.45 | |
| | Sundries ..... | 99.05 | |
| | " ..... | 97.27 | |
| | C. E. Hedges..... | 8.00 | |
| | Baum & Sons..... | 8.90 | |
| | J. Roberts smoke stack etc.. | 60.52 | |
| | Young sand ..... | 6.08 | |
| | Cement ..... | 3.40 | |
| | Sundries ..... | 79.65 | |
| | National Lumber Co..... | 7.33 | |
| | Frt. on washer-scrubber.... | 165.60 | |
| | F. E. Newton..... | 10.03 | |
| | | | 15,163.34 |

1887.

| | | | |
|---|---|---|---|
| Construction: | Hackler Bros. ..... | $158.45 | |
| | D. L. Graham..... | 46.00 | |
| | Jno. Lingvall ..... | 2.40 | |
| | Frt. on 3 cars pipe..... | 267.78 | |
| | Chattanooga pipe ..... | 1,461.13 | |
| | Weekly wages to men..... | 63.35 | |
| | " " " " ..... | 174.30 | |
| | Omaha lead ..... | 210.40 | |
| | Dingess & McG..... | 50.50 | |
| | Weekly wages ..... | 142.60 | |
| | W. S. W. E. & P. Co..... | 25.50 | |
| | Dennis Long & Co..... | 1,688.27 | |
| | Weekly wages ..... | 124.75 | |
| | " " ..... | 143.25 | |
| | " " ..... | 157.67 | |
| | " " ..... | 7.50 | |
| | Shickle H. & H..... | 17.25 | |
| | Sundries ..... | 423.85 | |
| | Oakum & Pasley..... | 15.35 | |
| | Smith & Sayer bolts..... | 2.75 | |
| | Valve & Plugs..... | 22.63 | |
| | Washer scrubber ..... | 2,352.15 | |
| | Weekly wages to men..... | 142.55 | |
| | Shickle H. & H. drip boxes | 10.92 | |

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| | | |
|---|---|---|
| | Omaha Iron bolts | $2.65 |
| | Weekly wages and sundries. | 506.00 |
| | Drip boxes | 16.47 |
| | Paxton & Vierling | 13.24 |
| | Rundle & Lawlor | 27.50 |
| | Johnson & Hansen | 23.65 |
| | E. G. Pasley | 3.25 |
| | Sundries | 429.60 |
| | U. S. W. E. & P. Co. | 4.89 |
| | Weekly wages to men | 424.65 |
| | Badger Lumber Co. | 14.57 |
| | C. E. Hedges | 47.00 |
| | Stonemasons | 15.00 |
| | Jno. W. Blead | 8.75 |
| | Weekly wages to men | 160.45 |
| | Stockwell brick | 71.40 |
| | U. S. E. & P. Co. | 10.10 |
| | Frt. on Omaha Castings | 10.80 |
| | Smith bricklayer | 9.62 |
| | O. Sef Larsen | 23.45 |
| | Weekly wages to men | 166.95 |
| | Difference in boilers | 203.54 |
| | C. Vass | 9.80 |
| | Sundries and wages | 229.05 |
| | Badger Lumber Co. | 42.83 |
| | C. E. Hedges | 40.93 |
| | C. C. Munson | 27.60 |
| | Cement | 7.20 |
| | Nebr. planing Mill | 29.85 |
| | Paxton Vierling Co. | 484.50 |
| | Pattern for lids | 12.90 |
| | Smith & Sayre | 83.31 |
| | D. Smith | 12.55 |
| | Frt. on Round Retorts | 35.28 |

11–412.

1887 (Continued).

| | | |
|---|---|---|
| Construction: | Tugate & Hunt | $11.00 |
| | Sundries | 123.55 |
| | M. Wilson | 8.00 |
| | J. E. Stockwell | 78.60 |
| | Parker-Russell & Co. | 127.50 |
| | C. E. Hedges | 30.47 |
| | H. J. Bill in full | 353.50 |
| | Wm. Lawlor | 33.75 |
| | Dean & Horton | 78.64 |
| | Shickle Harrison & H. | 149.10 |

| | | | |
|---|---|---|---|
| | C. C. Munson & Co..... | 15.48 | |
| | R. L. Smith..... | 29.35 | |
| | Paxton-Vierling I. Wks..... | 59.70 | |
| | Parker R. & Co. setting bench | 371.20 | |
| | | | 12,390.47 |

1888.

| | | | |
|---|---|---|---|
| Construction: | National T. Wks. 1. Car... | 1,101.52 | |
| | Freight on pig lead..... | 3.07 | |
| | Weekly wages to men..... | 103.30 | |
| | " " " " ..... | 269.10 | |
| | Pig lead ..... | 153.30 | |
| | Dennis Long & Co..... | 161.45 | |
| | G. M. Walch..... | 15.00 | |
| | Sundries ..... | 705.55 | |
| | Jno. Rankin ..... | 7.80 | |
| | Sundries ..... | 289.10 | |
| | F. Friber ..... | 6.10 | |
| 309 | | | |
| | G. M. Walch..... | $20.00 | |
| | Sundries ..... | 541.20 | |
| | Dean & Horton..... | 79.88 | |
| | G. M. Bartlett ..... | 5.25 | |
| | G. M. Walch ..... | 20.00 | |
| | Shickle Harrison & H. ... | 58.60 | |
| | Sundries ..... | 304.95 | |
| | " ..... | 1,308.35 | |
| | Transfer Co. ..... | 13.50 | |
| | Sundries ..... | 284.95 | |
| | " ..... | 176.55 | |
| | " ..... | 483.80 | |
| | Dean & Horton ..... | 46.68 | |
| | Cooper & Cole Bros. ..... | 174.30 | |
| | Keys & Bullock ..... | 4.00 | |
| | Weekly wages to men..... | 156.85 | |
| | Sundries ..... | 498.42 | |
| | Cooper & Cole ..... | 37.92 | |
| | Keys & Bullock ..... | 11.47 | |
| | Freight on pipe ..... | 58.71 | |
| | " drip pipe ..... | 7.60 | |
| | Freight New Plant ..... | 7.80 | |
| | Dean & Horton ..... | 45.93 | |
| | Frt. on fire brick..... | 61.74 | |
| | 1¼ pipe N. T. W. Co..... | 531.89 | |
| | Frt. on Blower & Engine... | 44.24 | |
| | Hooper team scraping ..... | 10.90 | |
| | Frt. on New Plant ..... | 46.80 | |
| | Sundries ..... | 220.35 | |
| | Keys & Bullock ..... | 23.15 | |
| | H. J. Johnson ..... | 1.40 | |

| | | |
|---|---|---|
| | Frt. on New Plant..... | 84.15 |
| | Sundries ..... | 431.95 |
| | W. J. Cooper & Co..... | 263.87 |
| | Hooper team ..... | 18.30 |
| | Dean & Horton ..... | 37.53 |
| | Sundries ..... | 442.25 |
| | J. W. Hawkins ..... | 20.00 |
| | Hooper team ..... | 7.50 |
| | Pat Means, grading ..... | 84.80 |
| | Keys & Bullock ..... | 58.21 |
| | Weekly wages to men .... | 283.65 |
| | Sundries ..... | 751.82 |
| | Cooper & Cole Bros. ..... | 31.25 |
| | Dean & Horton ..... | 228.07 |
| | Neb. Planing Mill ..... | 9.10 |

12—413.

1888 (Continued).

| | | | |
|---|---|---|---|
| Construction: | R. S. Young, sand..... | 35.00 | |
| | Sundries ..... | 169.50 | |
| | " ..... | 368.35 | |
| | Crawford, mason ..... | 15.00 | |
| | George & Co. Iron Roof.... | 42.65 | |
| | Cement ..... | 37.45 | |
| | Cooper & Cole Bros. ..... | 676.29 | |
| | Badger Lumber Co. ..... | 28.52 | |
| | Neb. Planing Mill ..... | 48.02 | |
| | N. G. L. & F. Co..... | 9,000.00 | |
| | Extra moving Machinery .. | ..... | |
| | Changed plans ..... | 100.00 | |
| | Wiedeman & Rywater slates. | 200.00 | |
| | Sundries ..... | 254.45 | |
| | Walch, Carveth & Frelen... | 70.15 | |
| | Wages to men ..... | 223.25 | |
| | Sundries ..... | 3.75 | |
| | " ..... | 494.40 | |
| | R. S. Young, sand..... | 47.00 | |
| | Hammell & Dignan ..... | 5.25 | |
| | Cooper & Cole Bros. ..... | 111.18 | |
| 310 | | | |
| | Keys & Bullock ..... | $8.63 | |
| | Weekly wages to men..... | 145.45 | |
| | Hemmell & Dignan ..... | 13.50 | |
| | Stockwell, brick ..... | 233.55 | |
| | Weekly wages to men .... | 131.25 | |
| | | | 24,261.65 |

1889.

| | | |
|---|---|---|
| Construction: | Sundries | 206.00 |
| | W. J. Cooper & Cole Bros. | 88.22 |
| | Roberts pump and repairs | 130.00 |
| | Hiltner, fire repairs | 111.84 |
| | Humphrey Bros. | 8.71 |
| | Badger L. Co. | 38.78 |
| | Palmer Way | 50.80 |
| | Chicago L. Co. | 31.75 |
| | Hart Hardware Co. | 100.00 |
| | Crawford Mason | 17.00 |
| | Cooper & Cole Bros. | 49.74 |
| | Wm. Garsn | 44.00 |
| | C. C. Munson & Co. | 100.64 |
| | Fire brick | 26.15 |
| | Korsmeyer Co. | 3.60 |
| | Cooper & Cole Bros. | 27.65 |
| | Sundries | 171.40 |
| | Dean & Horton | 70.98 |
| | W. J. Cooper & Cole Bros. | 41.13 |
| | Sundries | 136.50 |
| | " | 181.25 |
| | Pig lead & Frt. | 80.74 |
| | Parker, Russell & Co. | 240.12 |
| | Patent Jointer | 3.50 |
| | Shickle H. & Howard | 610.36 |
| | Sundries | 303.20 |
| | Cooper & Cole Bros. | 78.59 |
| | E. F. Owen, caulker | 6.75 |
| | Frt. on 10 bbls. clay | 11.27 |
| | Sundries | 299.30 |
| | E. F. Owen, caulker | 1.15 |
| | Sundries | 13.30 |
| | " | 104.80 |
| | Cooper & Cole Bros. | 28.91 |
| | Shickle Harrison & Howard. | 900.00 |
| | Frt. on stop boxes | 4.95 |
| | N. G. L. & F. Co. | 47.50 |
| | Wages to men. | 122.20 |
| | D. Kitchen | 6.15 |
| | Sundries | 49.95 |
| | G. M. Walch | 20.00 |
| | New Water Grate | 20.00 |
| | Cooper & Cole Bros. | 44.90 |
| | Dean & Horton | 13.15 |
| | Weekly wages | 57.15 |
| | " " | 61.90 |
| | " " | 81.61 |

13—414.

1889 (Continued).

| | | | |
|---|---|---|---|
| Construction: | Weekly wages | 74.25 | |
| | Cooper & Cole Bros. | 254.97 | |
| | Dean & Horton | 23.55 | |
| | Smith new pump | 175.00 | |
| | Sundries | 88.45 | |
| | Weekly wages | 113.40 | |
| | Sundries | 125.90 | |
| | Cooper & Cole Bros. | 120.49 | |
| 311 | | | |
| | Sundries | $111.20 | |
| | " | 206.40 | |
| | " | 187.52 | |
| | 8" valve | 30.13 | |
| | Whitebreast cement | 6.50 | |
| | City Engineer, Guarantee | 20.00 | |
| | Dean & Horton | 83.93 | |
| | Weekly wages | 52.50 | |
| | " " | 48.75 | |
| | " " | 103.41 | |
| | W. J. Cooper & Cole Bros. | 242.18 | |
| | Door frame & valve | 16.30 | |
| | Contract for Cupola No. 2 | 2,500.00 | |
| | Weekly wages | 50.35 | |
| | | | 9,650.72 |

1890.

| | | | |
|---|---|---|---|
| Construction: | Cooper & Cole Bros | 49.51 | |
| | Dean & Horton | 8.93 | |
| | Weekly wages for men | 33.60 | |
| | Cooper & Cole Bros | 43.85 | |
| | Dean & Horton | 8.07 | |
| | Rep'g N. St. Main | 23.25 | |
| | W. J. Cooper & Cole Bros | 30.35 | |
| | Sundries | 110.25 | |
| | Cooper & Cole Bros | 18.32 | |
| | Sundries | 120.05 | |
| | N. G. L. & F. Co | 23.52 | |
| | Sundries | 251.47 | |
| | W. J. Cooper & Cole Bros | 285.88 | |
| | Sundries | 166.11 | |
| | Dean & Horton | 267.22 | |
| | Cooper & Cole Bros | 90.82 | |
| | J. W. Hedges | 8.35 | |
| | Sundries | 254.85 | |
| | Parker, 1¼ pipe | 15.20 | |
| | G. M. Walch | 25.00 | |

| | |
|---|---|
| Omaha Pig Lead..... | 95.47 |
| Sundries ..... | 97.40 |
| " ..... | 305.35 |
| Dean & Horton..... | 112.57 |
| W. J. Cooper & Cole Bros... | 242.60 |
| Nicholls Roofing Co., tar... | 6.00 |
| G. M. Bartlett, pipe..... | 7.45 |
| Sundries ..... | 196.95 |
| Jno. Boyce..... | 2.00 |
| Wages to men on St..... | 35.05 |
| Dean & Horton..... | 27.67 |
| Rose & Funke & Ogden.... | 8.55 |
| Cooper & Cole Bros..... | 192.84 |
| Nicholls, tar ..... | 6.60 |
| Smith 4., Sherman .50.... | 4.50 |
| Wages to men on street.... | 44.35 |
| Cooper & Cole Bros..... | 77.24 |
| Watkins, Jointer ..... | 23.50 |
| Voss & Kitchen..... | 15.75 |
| Bartell, Shepherd & Bartlett, C't'g ..... | 1.85 |
| Geo. Frager..... | 2.71 |
| Int. on St. Governor..... | 24.68 |
| Johnson, Clasum & Lowler.. | 14.88 |
| Wilson & Long, Ctg. & Oil.. | 1.60 |
| Wages to men on street.... | 87.80 |
| Manson, Block & C't'g..... | 16.85 |
| Dennis Long & Co..... | 1,423.10 |
| Poska, C't'g..... | .50 |
| Freight on Pig lead..... | 6.00 |

312 14–415.

1890 (Continued).

| | | |
|---|---|---|
| Construction: | City Water & Cartage..... | $5.90 |
| | Omaha Pig Lead..... | 204.40 |
| | Connelly St. Governor..... | 875.32 |
| | Dennis Long & Co..... | 506.52 |
| | " " " ..... | 356.39 |
| | Wages to men..... | 59.35 |
| | Dennis Long & Co..... | 456.43 |
| | Cooper & Cole Bros..... | 330.32 |
| | Dean & Horton..... | 38.74 |
| | Fisher & Westover..... | 16.85 |
| | Freight on Oakum..... | 2.15 |
| | Wages to men..... | 161.96 |
| | Neb. Boiler Works..... | 118.00 |
| | Dennis Long & Co..... | 459.14 |
| | Rumsey Mfg. Co..... | 56.30 |
| | Vroorman Moore & M. Co... | 13.50 |

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|---|---|
| Freight on Fire Clay..... | 2.15 |
| Dean & Horton..... | 5.60 |
| Cash to Men..... | 201.20 |
| Dennis Long & Co..... | 432.49 |
| Brown, Wilson & Hitchcock | 18.50 |
| Freight ..... | .75 |
| Weekly Wages to Men on Ditch ..... | 231.05 |
| Stephenson, cartage, telegram ..... | 1.15 |
| Dennis Long & Co..... | 450.07 |
| S. A. Woods, etc..... | 5.00 |
| Weekly wages to men..... | 249.25 |
| Hayes $9.00, Wilgarger .25 | 9.25 |
| Pomerene & Cooper..... | 2.60 |
| Weekly wages to Men..... | 212.60 |
| Cooper & Cole Bros..... | 194.97 |
| J. H. Harley..... | 5.25 |
| R. S. Young..... | 109.63 |
| Rudge & Morris..... | 17.47 |
| Neb. Boiler Works..... | 38.00 |
| Rolland & Beck..... | 16.65 |
| Parker, Russell & Co..... | 5.00 |
| Planing Mill ..... | 4.10 |
| Dean & Horton..... | 7.50 |
| R. L. Smith..... | 5.65 |
| Humphrey Bros..... | 3.70 |
| C. E. Hedges..... | 79.30 |
| Weekly wages to men..... | 246.47 |
| Carveth & McGee, Cart-ge... | 3.37 |
| Weekly wages to men..... | 235.55 |
| Fisher & Westover..... | 19.75 |
| Neb. Boiler Works..... | 119.50 |
| Rothchilds, cartage ..... | .25 |

Block 79.

| | |
|---|---|
| Hammel, men & teams..... | 187.65 |
| Men at Well & Cart'ge..... | 21.00 |
| Carey " ..... | 7.00 |
| Harsch, dirt..... | 22.85 |
| Weekly wages, teams, *tec*... | 508.65 |
| Roberts, boiler..... | 50.00 |
| Chr. Lumber Co..... | 44.78 |
| Moniere & Kifer, teams.... | 14.55 |
| Sundries ..... | 465.65 |
| " ..... | 5.75 |
| Frt. on Car Cement..... | 64.18 |
| " ..... | 73.50 |
| Wages to men..... | 224.45 |
| Henry & Coatsworth..... | 40.56 |
| Rudge & Morris..... | 20.70 |

| | | |
|---|---|---|
| | '& M. R. R. Co., Piling.... | 91.39 |
| | Dandas & Son, driving piling | 89.80 |
| 313 | W. B. Wolcott..... | $4.47 |
| | Broken Stone..... | 290.97 |
| | Sand ..... | 42.00 |
| | Humphrey Bros..... | 10.55 |
| | Wages to men..... | 137.65 |
| | Stockwell, brick..... | 1,947.68 |

15–416.

1890 (Continued).

Block 79.

| | |
|---|---|
| Wages to men..... | 296.90 |
| Wilson, dif. in boiler..... | 36.50 |
| Weekly wages to men..... | 146.85 |
| Walsh & Boyle..... | 29.50 |
| Wages to men at tank..... | 186.25 |
| Morris Wilson on acc..... | 50.00 |
| Whitebreast Co., cement.... | 576.20 |
| Chicago Lumber Co..... | 13.82 |
| Fisher & Westover..... | 56.45 |
| Henry & Coatsworth..... | 52.44 |
| Lead & Oil..... | 10.10 |
| Weekly wages to men..... | 276.40 |
| Car Cement ..... | 73.50 |
| Frt. on Car Cement..... | 59.00 |
| Pomeroy Co., " ..... | 208.35 |
| " Sand ..... | 112.00 |
| Pomerene Co..... | 5.75 |
| Dean & Horton..... | 5.60 |
| Wages to men..... | 262.75 |
| Case, F. & M. Co..... | 112.50 |
| Shean, cartage..... | .50 |
| Woocott Schmittel Basselin.. | 8.15 |
| J. P. Walton..... | 10.00 |
| Pd. Men at Tank..... | 123.50 |
| Wages to men at tank..... | 181.80 |
| H. Lathrog..... | 3.27 |
| Iron bands..... | 117.80 |
| G. M. Walsh & Oil..... | 25.25 |
| McMillan & Burk..... | 28.40 |
| Capital Machine Co..... | 2.50 |
| Cement & Sand..... | 197.50 |
| Stockwell, Brick..... | 47.36 |
| Fisher & Westover..... | 23.61 |
| Chicago L. Co..... | 28.90 |
| Whitebreast Cement..... | 317.90 |
| Young, Sand & Cement.... | 499.65 |

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|---|---|---|
| | Humphreys Hdw. Co..... | 22.65 |
| | Wages to men..... | 83.75 |
| | Templates ..... | 5.50 |
| | New boiler head..... | 33.00 |
| | Stephens Bros., cement..... | 1,325.25 |
| | Stephens Bros., Carpentering | 32.05 |
| | Stephens Bros., Gov. house.. | 102.60 |
| | Stacey Contract..... | 1,263.00 |
| | Hiltner & Woods..... | 43.90 |
| | Pomeroy, Cement..... | 54.65 |
| | Henry & Coatsworth..... | 413.93 |
| | Wilson, Repg. Boiler..... | 10.62 |
| | Construction Gas Meters since June ..... | 676.00 |
| | Desk and carpet..... | 103.38 |
| | Dennis Long & Co..... | 1,742.87 |
| | B. & M., Fence Paste..... | 35.63 |
| | J. E. Stockwell, Brick..... | 58.50 |
| | Weekly wages to men..... | 309.08 |
| | Tyler, coping stone..... | 385.31 |
| | Frt. & Cartage..... | 5.20 |
| | Morris Wilson, Bal..... | 100.00 |
| 314 | Neb. Boiler Works..... | $29.52 |
| | Weekly wages to men..... | 268.90 |
| | Stephens Bros., Setting Boiler | 43.65 |
| | Stephens Bros., Extra concreting .. | 160.00 |
| | " " Walling Well | 10.50 |
| | " " Bricking I. & O. Pipe..... | 47.30 |
| | O. W. Wilister, etc..... | 7.25 |
| | Rudge & Morris..... | 11.02 |
| | Sherman & Swanson, digging | 20.32 |
| | Cooper & Cole Bros..... | 195.84 |
| | M. L. Hiltner..... | 30.00 |
| | Fisher & Westover..... | 13.73 |
| | R. S. Young, sand..... | 23.76 |
| | Henry & Coatsworth..... | 17.60 |
| | Dean & Horton..... | 93.29 |
| | Western Mfg. Co..... | 38.88 |
| | Coal for Steamer..... | 9.55 |

16–417.

1890 (Continued).

| | | |
|---|---|---|
| Construction: | Stoughton & Hedges..... | 6.63 |
| | J. E. Nash..... | 3.25 |
| | Express on 10 lt. meters.... | 1.35 |
| | Griffin meters ..... | 194.40 |
| | I. B. Potts..... | 8.25 |

| | | |
|---|---|---|
| | 2 drip boxes | 29.40 |
| | 2/6 fence | 36.95 |
| | Frt. on pig lead | 3.05 |
| | Oil sprayer | 6.40 |
| | Weekly wages for men | 217.84 |
| | Sullivan Hauling pipe | 7.00 |
| | Burns Pump 64 days | 32.00 |
| | Turner digging | 1.60 |
| | Coal for steamer | 21.30 |
| | R. L. Smith | 1.20 |
| | Wilcox & Mohr, ctge | 3.10 |
| | Coal for steamer | 7.65 |
| | John Huberlan | 28.00 |
| | Oil for lanterns | 4.15 |
| | Freight on lead pipe | .70 |
| | Holmes brick | 64.00 |
| | Weekly wages for men | 322.46 |
| | Car tickets & engineer's fees | 1.25 |
| | Telegram & Coal Oil | 1.50 |
| | Carting service | .25 |
| | Pig lead | 101.10 |
| | Dean & Horton, pig lead | 94.12 |
| | Rothchilds etc. | 1.25 |
| | Shelcoffs & Ecks | 7.90 |
| | Hiltner building fence | 42.00 |
| | Ceiling roof | 7.00 |
| | Weekly wages to men | 323.08 |
| | Dennis Long & Co. | 1,619.07 |
| | Frt. on Oakum | 1.33 |
| | Tile Dennis Long & Co. | .90 |
| | Latham, Yonkey & Broderick | 7.00 |
| | Weekly wages to men | 205.30 |
| | H. Jansen | 1.80 |
| | Dennis Long & Co. | 434.99 |
| | Frt. on Meters | 8.45 |
| | Young, hauling, etc. | 6.00 |
| | Lord, hauling dirt | 2.00 |
| | | 43,301.28 |

315

1891.

| | | |
|---|---|---|
| Construction: | Baldwin Bros. Sullivan | $9.45 |
| | H. W. Brown, S. E. Moore | 4.35 |
| | Cooper & Cole Bros. | 257.97 |
| | Rudge & Morris | 16.08 |
| | Dean & Horton | 58.14 |
| | J. H. Harley | 11.00 |
| | Fisher & Westover | 20.15 |
| | Chicago Lumber Co. | 173.63 |
| | Coal for Steamer | 15.30 |
| | Weekly wages for men | 260.41 |

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|---|---|---|
| | Pemerone Co. & Tibball & Co. | 1.10 |
| | Telegram for D. E. T..... | .65 |
| | Pomeroy Concrete & Cement | 3.45 |
| | Paint & Color Co..... | 32.15 |
| | Funke & Ogden..... | 3.00 |
| | Wages to men..... | 20.00 |
| | Setting blocks ..... | 2.00 |
| | Freber & Hansen..... | 14.35 |
| | D. Kitchen ..... | 7.85 |
| | Eck & Voss..... | 15.40 |
| | Seafman & Rose..... | 10.10 |
| | Korsmeyer & Co., bal..... | 8.72 |
| | Mohr, cartage ..... | .25 |
| | H. C. Babcock..... | 5.00 |
| | Vaporizer N. G. L. & F. Co. | 100.50 |
| | Rumsey & Co. Frt. on meters | 12.55 |
| | Car 4" pipe..... | 433.09 |
| | Freight on lead pipe..... | 1.36 |

17–418.

1891 (Continued).

| | | |
|---|---|---|
| Construction: | Pomeroy cement & concrete. | 3.65 |
| | Cartage ..... ..... | .85 |
| | Cooper & Cole Bros..... | 52.85 |
| | Dean & H. — Mohr..... | 2.15 |
| | Rolland & Beck..... | 10.50 |
| | C. U. Whedon..... | 100.00 |
| | L. M. Rumsey, Mfg. Co..... | 36.64 |
| | J. J. Griffing & Co..... | 185.17 |
| | Oil paper & car tickets..... | .75 |
| | Pomeroy Cement & Concrete | 76.93 |
| | Kitchen & Car tickets..... | 2.00 |
| | Freight on cart'e of meters.. | 4.20 |
| | Anderson & P. Mill..... | 4.75 |
| | Voss, Kitchen, Swanson, Johnson. ..... | 12.15 |
| | Frt. 3 cars pipe..... | 161.07 |
| | " 1 " " ..... | 49.75 |
| | D. Kitchen ..... | 1.50 |
| | Cooper & Cole Bros..... | 25.26 |
| | Frt. on car pipe..... | 53.93 |
| | " " 2 cars pipe..... | 110.66 |
| | R. S. Young, concrete..... | 18.51 |
| | Frt. on pig lead..... | 9.91 |
| | McMillian & Youngey..... | 25.25 |
| | Frt. on 3 cars pipe..... | 157.74 |
| | " " 1 " " ..... | 48.09 |
| | " " 4 cars pipe..... | 199.26 |
| | " " Omaha pig lead.... | 255.02 |

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|---|---|
| J. J. Griffin & Co. | 212.27 |
| Frt. 2 cars pipe | 112.01 |
| " 1 " " | 55.99 |
| " 1 " " | 52.75 |
| Hauling pipe | 5.00 |
| Geo. McMillan | 19.50 |
| Frt. on car pipe | 43.73 |
| Poska cartage | .50 |
| Rothchilds | .25 |

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| | |
|---|---|
| Weekly wages to men | 213.83 |
| Frt. on 2 cars pipe | 94.53 |
| " " #601 Pipe | 42.43 |
| Gaston & Peterson | 5.25 |
| Frt. on 2 cars pipe | 84.42 |
| Paving brick | 12.00 |
| Kitchen & Plunger | 3.25 |
| Wages to men | 13.05 |
| Frt. #1944 pipe | 49.39 |
| Weekly wages to men | 273.08 |
| Frt. on pipe S. J. A. | 150.00 |
| " " " #4004 | 50.37 |
| Wages to men on ditch | 15.30 |

Block 79.

| | |
|---|---|
| C. E. Hedges | 36.90 |
| Poska cartage | .50 |
| Weekly wages to men | 54.06 |
| C. E. Chowins, windows &c. | 120.05 |
| Barrett cartage | .75 |
| Fred Beck | .85 |
| Redding & Cartage | 2.35 |
| John Mohr | 1.00 |
| Wages to men | 7.70 |
| P. Nolan | 1.00 |
| Fisher & Westover | 69.40 |
| Jas. Conlon | .75 |
| Chas. E. Chowins | 75.00 |
| W. H. Tyler, switching stone | 2.00 |
| B. & M. Lumber | 7.98 |
| M. L. Hiltner | 100.00 |
| Tel. about water pipe | .75 |
| Forburger & Co. | 50.00 |
| Brown & Hahn | 13.75 |
| M. L. Hiltner on account | 100.00 |
| Frt. on fire clay | 13.20 |
| Kruse & White | 28.65 |

317

18–419.

1891 (Continued).

Block 79.

| | | |
|---|---|---|
| onstruction: | G. S. Kelly & Co..... | 19.80 |
| | M. L. Hiltner..... | 75.00 |
| | Weekly wages to men..... | 61.00 |
| | Fisher & Westover..... | 382.79 |
| | Chicago L. Co. In account.. | 800.00 |
| | R. S. Young cement..... | 5.38 |
| | Parker, Russell Mfg. Co.... | 25.00 |
| | Wages to men..... | 35.75 |
| | M. L. Hiltner..... | 100.00 |
| | Chas. E. Chowins..... | 50.00 |
| | Switching boiler ..... | 3.00 |
| | Catlin & Fawell..... | 2 85 |
| | Switching boiler ..... | 3.00 |
| | W. H. Tyler cut stone..... | 237.00 |
| | Weekly wages to men..... | 61.75 |
| | Nichols Roofing Co..... | 200.00 |
| | Forbenger & Speidell..... | 35.00 |
| | Barrett, Dess, Sheffen..... | 3.60 |
| | Frank Burk ..... | 6.00 |
| | Frazer, Carveth & Mohr, cart-ge ..... | 3.10 |
| | Weekly wages to men..... | 152.10 |
| | M. L. Hiltner..... | 100.00 |
| | G. Miller ..... | 10.40 |
| | McIntyre & Leavett..... | 14.00 |
| | Poska & Barrett cartage.... | 2.00 |
| 317 | Weekly wages to men..... | $130.30 |
| | Perry Hahn..... | 4.00 |
| | C. A. Bonnell..... | 10.50 |
| | M. L. Hiltner..... | 100.00 |
| | Kreuse & White..... | 20.45 |
| | Cooper & Cole Bros..... | 34.46 |
| | Telephone ..... | 5.50 |
| | Chicago Lumber Co..... | 500.00 |
| | Hooker, & O. Weidemann & Co. ..... | 2.25 |
| | Downe & Baldwin Brothers. | 9.40 |
| | Rudge & Morris..... | 42.25 |
| | G. A. Downing..... | 43.95 |
| | Fisher & Westover..... | 59.32 |
| | Falls Rivet & M. Co..... | 14.40 |
| | Weekly wages to men..... | 90.35 |
| | Nichols Roofing Co..... | 100.00 |
| | M. L. Hiltner..... | 100.00 |
| | C. E. Hedges..... | 13.63 |

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|---|---|
| Morris Wilcon on account.. | 100.00 |
| Lin. Transfer Co..... | 4.05 |
| Mason & Barrett..... | 11.50 |
| Planing Mill & Cartage..... | 2.50 |
| Weekly wages to men..... | 98.75 |
| M-rris Wilson..... | 246.57 |
| Chas. E. Chowins..... | 136.90 |
| Weekly wages to men..... | 68.50 |
| M. L. Hiltner in full..... | 220.00 |
| Burgen, Kreuse & White.... | 23.65 |
| Wm. Leaghman..... | 25.00 |
| Nichols Roofing Co..... | 60.29 |
| Cooper & Cole Brothers..... | 94.23 |
| Rudge & Morris..... | 76.64 |
| Fisher & Westover..... | 35.60 |
| John Lanham..... | 13,289.79 |
| Chicago Lumber Co..... | 598.06 |
| Lanham cement..... | 85.00 |
| Whitebreast cement..... | 20.00 |
| Chicago Lumber Co..... | 9.60 |
| John Lanham, foundation stone ..... | 524.15 |
| L. Wm'son Hd. Oil..... | 33.55 |
| Geo. Downing, Jr..... | 6.79 |
| M. L. Hiltner..... | 72.87 |
| Eckes Stone..... | 2.52 |
| Dean & Horton..... | 56.50 |
| Water Connections..... | 86.36 |
| Methews cartage..... | .35 |

(No No. 19) 20–420.

1891 (Continued).

| | | |
|---|---|---|
| Construction: | F. Kaucer..... | 2.25 |
| | Kitchen & Coal Oil..... | 1.55 |
| | Gardner & Marshall..... | .90 |
| | 3 tons Pig lead..... | 246.70 |
| | Hough & Sakeuse..... | 9.60 |
| | E. Magee cartage..... | 1.50 |
| | Weekly wages to men..... | 262.14 |
| | A. Jensen..... | 9.19 |
| | McMillan & Miller..... | 15.45 |
| | Wittman & Co..... | 8.60 |
| | Youghey & Seaghman..... | 55.00 |
| | Cooper & Cole Bros..... | 300.00 |
| | Dean & Horton..... | 6.10 |
| | Postal Tel. Co..... | 3.00 |
| | Peterson & Shankling..... | 5.80 |
| | Kingsfather & Calsum..... | 3.65 |
| | McGrew & Kitchen..... | 4.85 |

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|---|---|---|
| | Hugh & Pierce | 3.95 |
| | Rumph & Hanson | 8.35 |
| | Geo. Downing | 125.62 |
| | Cap. Planing Mill | 11.50 |
| 318 | Bohannan Bd. 4 horse | $28.25 |
| | Brown cartage | .25 |
| | Grote & Block | 3.05 |
| | Weekly wages to men | 89.55 |
| | Oil Tickets & L. D. T | 2.30 |
| | J. Oppenheimer | 9.00 |
| | Frt. on Holden Paint | 2.58 |
| | H. O. Babcock & Co | 16.20 |
| | Shickle Harrison & H | 408.42 |
| | American Meter Co | 295.92 |
| | L. M. Rumsey Mfg. Co | 27.17 |
| | Hudson & Barrett Crge | 1.10 |
| | Coal Oil | .90 |
| | Brown, Moore & Fields | 8.60 |
| | Weekly wages to men | 112.30 |
| | Peters, Coal Oil | 1.50 |
| | Cole Cartage | 1.50 |
| | Yauney & Seaghman | 60.00 |
| | McGee Cartage | .50 |
| | Marm 1.90 S. Carveth 2.00 | 3.90 |
| | Henry Kitchen | 1.50 |
| | Weekly wages to men | 78.00 |
| | John Mohr Cartage | .25 |
| | Dun & Shaffer | 1.50 |
| | Frt. on Meters | 4.70 |
| | Anderson Mohr & Drew | 8.50 |
| | Pomeroy Coal Co | 3.40 |
| | Drew & Miller Cartage | 1.40 |
| | Weekly wages to men | 28.45 |
| | Zach Hammill | 21.00 |
| | Harding Rose Leming | 3.90 |
| | Henry Yauney | 30.00 |
| | Cooper & Cole Brothers | 100.00 |
| | Pomeroy, gravel | 2.25 |
| | Brown & Poska cartage | 1.25 |
| | State Journal Co | 1.05 |
| | Weekly wages to men | 65.50 |
| | Stephenson cartage | .25 |
| | Dean & Horton | 23.22 |
| | Drew Cartage | 1.00 |
| | Bohanan Bros | 116.50 |
| | Rep'g Paving | 2.00 |
| | Vass & Kitchen | 16.10 |
| | Frt. on car pipe | 51.89 |
| | L. M. Rumsey Mfg. Co | 9.88 |
| | H. W. Johns Mfg. Co | 49.50 |

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|---|---|---|
| | Hudson, Williams & Barrett, ctg. | 1.75 |
| | Henry Youghey | 30.00 |
| | Manse & Drew | 4.05 |
| | Weekly wages to men on St. | 72.31 |
| | Buckstaff sand | 2.50 |
| | Geo. Miller, cartage | .50 |
| | Mullen & Smith | 10.35 |
| | Weekly wages to men | 76.65 |

21–421.

1891 (Continued).

| | | |
|---|---|---|
| Construction: | Brambaugh & Van Sickle | 13.00 |
| | Root Repairing Paving | 2.00 |
| | Ven Sickle, Kitchen, Vass | 19.45 |
| | Henry Yanney | 30.00 |
| | Pomeroy Coal Co | 1.12 |
| | Paint & Color Co | .95 |
| | Wm. Brockmeyer | 1.00 |
| | Cooper & Cole Bros | 71.37 |
| | Kitchen & Vass | 20.15 |
| 319 | American Meter Co | $183.60 |
| | Shickle & Howard | 418.81 |
| | Exchange | 1.50 |
| | Frt. on sample stop box | .60 |
| | McGee & Shaffer cartage | 3.50 |
| | Freeman Cartage | 1.00 |
| | Weekly wages to men | 56.00 |
| | Drew cartage | .50 |
| | Henry Young | 30.00 |
| | Wm. Seaghman | 25.00 |
| | Drew Mohr cartage | 1.00 |
| | Weekly wages to men | 44.45 |
| | Manse Lawlor & Drew | 4.10 |
| | Frt. on gas meters | 4.55 |
| | Weekly wages to men | 72.29 |
| | Henry Yaunney | 30.00 |
| | Geo. Downing, Jr | 39.87 |
| | Cooper & Cole Bros | 31.00 |
| | Frt. on Gas Meters | 1.75 |
| | Drew Cartage | 3.00 |
| | " " | 1.25 |
| | Weekly wages to men | 82.30 |
| | Anderson, Brown & Hansen | 6.75 |
| | Rundell & Jansen | 4.50 |
| | D. Kitchen | 2.60 |
| | Weekly wages to men | 12.00 |
| | Drew cartage | 2.00 |
| | Henry Yauney | 30.00 |

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|---|---|
| Carveth, cartage | 1.25 |
| Keeptone's Mettle Co | 75.00 |
| Weekly wages to men | 140.50 |
| Drew cartage | .35 |
| Brown & Gifford | 6.15 |
| Weekly wages to men | 145.15 |
| Barrett cartage | 2.00 |
| Tel. for gas bags | .50 |
| Henry Yauney | 30.00 |
| Cooper & Cole Bros | 40.00 |
| Wages to men | 15.20 |
| Oil for lanterns | .70 |
| R. S. Young | 10.50 |
| Barrett cartage | .50 |
| Weekly wages to men | 75.45 |
| Frt. on meters | 3.70 |
| Barrett & Tubbs | 1.75 |
| J. Ruth | 4.65 |
| Mohr Hartzell & Brown | 11.00 |
| Weekly wages to men | 100.40 |
| Marshall cartage | .75 |
| Rose, Carveth & Poska | 4.05 |
| Frt. on lead pipe | 1.65 |
| Krumer, Snyder & Lawlor | 13.00 |
| Henry Yauney | 30.00 |
| J. J. Griffen & Co | 217.72 |
| Coal Oil | .50 |
| Weekly wages to men | 50.25 |
| Mohr & Drew cartage | 3.50 |
| C. Anderson & Baldwin Bros. | 2.40 |
| Knox Carlson & —— | 7.65 |
| Freight on the L. Meter | 2.20 |
| Weekly wages to men | 24.10 |
| Hudson, Fager & Drew | 1.50 |
| Drew Cartage | .25 |
| J. A. Marshall | 300.00 |

22–422.

1891.

| | | |
|---|---|---|
| Construction: | Ryan, cartage | 2.00 |
| | Henry Yauney | 30.00 |
| | City permits & cartage | 3.75 |
| 320 | | |
| | John Eck | $9.53 |
| | Frt. on lead pipe | .60 |
| | Young & Morton | 9.20 |
| | Cooper & Cole Bros | 40.00 |
| | Kitchen & Mohr | 9.00 |
| | E. B. Hyde | 4.50 |

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|---|---|---|---|
| | Car tickets & cartage | 2.50 | |
| | American Meter Co. | 234.20 | |
| | Rumsey Mfg. Co. | 39.28 | |
| | H. C. Babcock & Co. | 6.50 | |
| | Exchange | 1.60 | |
| | Dres, cartage | .50 | |
| | D. Kitchen | 7.35 | |
| | Henry Yauney | 30.00 | |
| | Barrett, Drake & Holmes, cartage | 2.00 | |
| | Exp. on 30 lt. meters | 2.00 | |
| | Furney, cartage | .35 | |
| | Kitchen & Hoppinger | 12.15 | |
| | Young, cartage | 3.75 | |
| | Frt. on create meters | 4.44 | |
| | Nedick & Barrett | 1.45 | |
| | Drake & Dres, cartage | 1.50 | |
| | Kitchen & Hopfinger | 13.50 | |
| | Potson, sand | .25 | |
| | Hartzell & Barrett | 4.15 | |
| | Henry Yauney | 30.00 | |
| | Digging & Lunches | 2.50 | |
| | Cooper & Cole Bros., set tools | 12.00 | |
| | Root & Taylor | 7.00 | |
| | Cooper & Cole Bros | 41.70 | |
| | Weekly wages to men | 21.00 | |
| | Fager & Glover, cartage | 1.75 | |
| | Weekly wages to men | 23.50 | |
| | C. E. Hedges | 29.03 | |
| | Brown & Drake, cartage | .75 | |
| | Henry Yauney | 30.00 | |
| | Weekly wages to men | 12.00 | |
| | Paving permits | 2.00 | |
| | Drake, cartage | .50 | |
| | J. Hopfinger | 6.00 | |
| | C. Vass | .75 | |
| | Drew, cartage | .50 | |
| | L. D. T. | .25 | |
| | Drake & Drew | 1.35 | |
| | | | 48,429.26 |

1892.

| | | | |
|---|---|---|---|
| Construction: | Young & Downie | 12.75 | |
| | Weekly wages to men | 33.50 | |
| | John Roberts | 4.00 | |
| | Henry Youney | 30.00 | |
| | C. E. Hedges | 15.13 | |
| | Frt. on lead pipe | .60 | |
| | Pd. by Lawlor | 1.25 | |

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|---|---|---|
| | Cooper & Cole Bros..... | 56.64 |
| | Brambrough & Drew, cartage | 2.90 |
| | City permits & Hopfinger... | 4.00 |
| | City permits ..... | 1.00 |
| | J. S. Parks..... | .75 |
| | American Meter Co..... | 199.80 |
| | Rumsey Mfg. Co..... | 6.79 |
| | Frt. on Meters and Car tickets | 7.10 |
| | Columbus Maggard ..... | 605.00 |
| | Henry Yauney ..... | 30.00 |
| | Fisher & Westover..... | 10.14 |
| | City Permits ..... | 1.00 |
| | Cooper & Cole Bros..... | 30.00 |
| | Dean & Horton..... | .60 |
| | Buckstaff, sand ..... | 2.50 |

321 23–423.

1892 (Cont'd).

| | | |
|---|---|---|
| Construction: | Henry Yauney ..... | $25.00 |
| | Frt. on lead pipe..... | .85 |
| | Henry Yauney ..... | 23.45 |
| | Fisher & Westover..... | 5.94 |
| | Cooper & Cole Bros..... | 11.36 |
| | Rudge & Morris..... | 3.00 |
| | Metal Gas Tips..... | 3.85 |
| | Lawlor Expense East..... | 55.00 |
| | D. E. Thompson expenses East | 30.00 |
| | " " " | 66.75 |
| | City Permits ..... | 1.00 |
| | Storm cartage ..... | .50 |
| | Erickson car tickets..... | 1.00 |
| | Rumsay & Co. lead..... | 12.26 |
| | Knight & Drew..... | 2.00 |
| | Drew, cartage ..... | .75 |
| | Perry Hohn ..... | 6.00 |
| | Henry Yauney ..... | 25.00 |
| | Shaffer, cartage ..... | .75 |
| | Drew, cartage ..... | .50 |
| | Lawlor expenses to Dayton.. | 55.00 |
| | Drew, cartage ..... | .75 |
| | Henry Yauney ..... | 25.00 |
| | Postal Tel. Co..... | 6.80 |
| | C. E. Hedges..... | 5.65 |
| | Whitebreast Coal Co. cement | 3.40 |
| | Express on Rubber bags.... | .25 |
| | Weekly wages to men..... | 69.25 |
| | Cooper & Cole Bros..... | 50.00 |
| | Drew & Barrett, cartage.... | 1.20 |
| | Drew cartage ..... | .75 |

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|---|---|
| Weekly wages to men..... | 116.15 |
| Frt. on one beam W. L..... | 20.00 |
| Drew cartage ..... | .50 |
| Frt. on car pipe..... | 78.32 |
| American Meter Co..... | 208.08 |
| Goodrich Rubber Co..... | 5.04 |
| Lawlor car tickets..... | .50 |
| D. E. T. Expenses..... | 34.40 |
| Weekly wages to men..... | 73.35 |
| Henry Yauney ..... | 25.00 |
| Barrett, cartage ..... | 1.00 |
| Weekly wages to men..... | 148.21 |
| Wilson & Drew, cartage.... | 2.95 |
| Frt. on meters..... | 3.90 |
| E. B. Hyde..... | 22.50 |
| Wages to men..... | 26.80 |
| " " ..... | 8.80 |
| Weekly wages to men..... | 26.80 |
| Postal Tel. Co..... | 2.45 |
| Chr. Lumber Co..... | 6.05 |
| Humphrey Bros ..... | 5.80 |
| Henry Yauney ..... | 25.00 |
| Fisher & Westover..... | 17.00 |
| R. S. Young..... | 52.09 |
| Cooper & Cole Bros..... | 99.30 |
| C. H. Mann oil..... | .35 |
| Fager, cartage..... | 1.00 |
| Weekly wages to men..... | 102.75 |
| Graham horse ..... | 6.00 |
| Shickle Harrison & H..... | 381.28 |
| D. J. Topley 17. Exchange 1.70 ..... | 18.70 |
| Gleason & Bailey 82¢ Exchange 20¢..... | 1.02 |
| Weekly wages to men..... | 48.25 |
| Korsmeyer & Co..... | .85 |
| Henry Yauney ..... | 27.50 |
| Drew Clark Drug Co..... | 1.60 |
| E. Casteel ..... | 2.25 |

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|---|---|
| Weekly wages to men..... | $59.25 |
| Fager cartage ..... | .75 |
| Fager, cartage ..... | 1.00 |
| Cooper Radiator Co..... | 500.00 |
| Weekly wages to men..... | 105.05 |
| J. Armstrong ..... | 1.65 |
| C. & F. Wolcott..... | 4.30 |

24–424.

1892 (Continued).

| | | |
|---|---|---|
| Construction: | Moore & Humphrey B..... | 13.46 |
| | H. Yauney ..... | 27.50 |
| | Chi. Lumber Co..... | 33.65 |
| | R. S. Young..... | 45.75 |
| | Postal Tel. Co..... | 2.17 |
| | Dean & Horton..... | 11.12 |
| | Rudge & Morris..... | 6.25 |
| | Weekly wages to men..... | 99.35 |
| | C. Johnson ..... | 3.00 |
| | Cooper & Cole Bros..... | 106.52 |
| | House & Graham..... | 7.50 |
| | McDonald Meter ..... | 129.80 |
| | Fager, cartage ..... | 1.55 |
| | Fisher & Westover..... | 15.60 |
| | Weekly wages to men..... | 169.25 |
| | Gas Tips ..... | 7.40 |
| | Fisher & Westover..... | 100.00 |
| | J. Waginor ..... | 6.00 |
| | Carbeth, cartage..... | .75 |
| | B. & M. R. R. iron..... | 9.33 |
| | Frt. on gas meters..... | 5.05 |
| | Wm. Leaghman ..... | 5.00 |
| | Henry Launey ..... | 27.50 |
| | Telegram & Wire..... | 2.20 |
| | Weekly wages to men..... | 201.85 |
| | Strom, cartage ..... | .35 |
| | Lin. News Co..... | 14.75 |
| | Frt. on concrete..... | 10.97 |
| | Rice & Coldwell..... | 8.35 |
| | Frt. car Concrete..... | 9.27 |
| | Cummins, cartage ..... | .35 |
| | Frt. on Concrete..... | 8.60 |
| | Weekly wages to men..... | 191.40 |
| | Fisher & Westover..... | 400.00 |
| | Frt. on 2 cars concrete..... | 20.42 |
| | Frt. on lead pipe..... | .98 |
| | Geo. McMillan ..... | 6.50 |
| | Wages to men..... | 56.55 |
| | R. S. Young..... | 152.93 |
| | Frt. 2 cars rubber..... | 21.54 |
| | H. M. Leavett, stone..... | 21.65 |
| | Chicago Lumber Co..... | 45.78 |
| | Henry Launey ..... | 27.50 |
| | C. B. Kaven & Co..... | 20.75 |
| | F. A. Graham..... | 18.00 |
| | Frt. on Car Cement..... | 57.05 |
| | Frt. on 2 cars concrete..... | 21.72 |

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|---|---|---|
| | Frt. on rubber | 18.67 |
| | Weekly wages to men | 96.10 |
| | Postal Tel. Co. | 5.70 |
| | Frt. on Stockwell brick | 6.00 |
| | Whitebreast Coal Co | 24.00 |
| | Humphrey Bros | 25.80 |
| | Telegram to Graham | .75 |
| | McDonald Meters | 162.00 |
| | Exchange | .40 |
| | Cooper & Cole Bros. | 167.45 |
| 323 | Rumsey & Co. | $11.14 |
| | Car Cement | 28.82 |
| | H. C. Babcock & Co. | 4.91 |
| | E. C. Brown | 1.00 |
| | Exchange | 1.40 |
| | Atwood & Co. | 29.03 |
| | Barrett, cartage | .25 |
| | Weekly wages to men | 147.89 |
| | Cooper Radiator Co. | 500.00 |
| | City permit, G. St. | 1.00 |
| | Atwood & Co. | 111.19 |
| | Frt. on car iron | 79.24 |
| | Fager & Eddy, cartage | 2.00 |
| | Erickson, car tickets | 1.45 |
| | Frt. on inlet & outlet | 7.00 |
| | Frt. on meters | 4.80 |
| | Frt. on Stockwell brick | 3.00 |
| | Frt. on 2 cars rubber | 16.67 |

25–425.

1892 (Continued).

| | | |
|---|---|---|
| Construction: | Car Cement, Freight | $57.05 |
| | Henry Yauney | 27.50 |
| | Weekly wages to men | 237.57 |
| | Lynch & Eacs, cartage | 1.05 |
| | Telegram to D. O. N. G. | .76 |
| | Frt. on cement | 57.05 |
| | Frt. on 2 cars concrete | 20.14 |
| | 2 cars cement | 59.92 |
| | Stone masons | 371.45 |
| | Carveth, Barrett & Mohr | 5.10 |
| | Buck & Jacobs | 6.40 |
| | Frt. on Stockwell brick | 6.00 |
| | Weekly wages to men | 221.50 |
| | Buck & Pierce | 6.40 |
| | Raismen, Brick | 200.00 |
| | Fisher & Westover | 500.00 |
| | Frt. on Stockwell Brick | 6.00 |
| | Calvert, cartage | .50 |

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|---|---|---|
| | Frt. on brick | 6.00 |
| | Wm. Oberman | .96 |
| | Chas. E. Chowins | 100.00 |
| | Weekly wages to men | 143.19 |
| | L. Mesin, oil | 5.95 |
| | Postal & A. Alias | 7.55 |
| | Frt. on 16" ells | 7.10 |
| | Frt. on pig lead | 6.62 |
| | Frt. on lead pipe | 1.99 |
| | Chicago Lumber Co | 72.01 |
| | W. B. Wolcott | 19.82 |
| | Henry Yauney | 27.50 |
| | Paint & Color Co | 48.15 |
| | F. A. Graham | 20.00 |
| | Frt. on Brick | 3.00 |
| | Humphrey Bros | 3.15 |
| | State Journal Co | .75 |
| | R. L. Smith | .15 |
| | John Mohr, cartage | 1.25 |
| | Pig lead, 4¢ per wt | 160.40 |
| | Fisher & Westover | 122.79 |
| | Weekly wages to men | 286.00 |
| | Frt. on drip boxes | 10.15 |
| | John Roberts | 5.90 |
| | Barrett, cartage & telegram | 1.75 |
| | Rumsey & Co | 29.03 |
| | McDonald, Metes & Ex | 162.30 |
| | Cooper & Cole Bros | 179.14 |
| | Western Gas Const. Co | 660.33 |
| 324 | Cooper Radiator Co | $19.07 |
| | B. & M. Buckstays | 46.80 |
| | G. A. Rayner, brick | 300.00 |
| | Chas. E. Chowins | 431.00 |
| | Chicago Lumber Co | 414.06 |
| | Wages to men | 287.60 |
| | Frt. on meters | 6.00 |
| | Lin. Transfer Co | 5.30 |
| | Frt. on brick, Stockman | 3.00 |
| | Expense of 333 bonds | 618.31 |
| | Com. on 333 bonds sold | 16,397.50 |
| | Brown, cartage | .75 |
| | Chas. E. Chowins | 62.18 |
| | Henry Yauney | 27.50 |
| | Frt. on Brick | 3.00 |
| | Jartner & Shaffer | 2.00 |
| | Hohn & Hartzell | 29.08 |
| | Weekly wages to men | 237.00 |
| | Frt. on car cement | 57.05 |
| | Posky, cartage | .50 |
| | Frt. on Stockwell, brick | 3.00 |
| | Wages to men | 207.45 |

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|---|---|
| John Lanham, brick | 10.00 |
| Fisher & Westover | 100.00 |
| Lanham, brick, stone, lime | 36.50 |
| Barrett, cartage | 1.00 |
| Wages to men | 17.46 |
| L. Wilson, oils | 2.25 |
| Rudge & M. & Telegram | 2.29 |
| Humphrey Bros | 5.50 |

26–426.

1892.

| | | |
|---|---|---|
| Construction: | H. M. Leavett, sand | $14.00 |
| | Henry Yauney | 27.50 |
| | J. H. Curley | 9.98 |
| | Paint & Color Company | 36.45 |
| | Chicago Lumber Co | 120.84 |
| | R. S. Young | 224.80 |
| | Frt. on car lime and 2 rubber | 27.12 |
| | Neb. Planing Mill | 437.83 |
| | G. H. Atwood & Co | 46.99 |
| | Frt. on 3591 concrete | 10.10 |
| | Dean & Horton | .12 |
| | Weekly wages to men | 184.85 |
| | W. B. Wolcott | 11.35 |
| | B. & M. Buckstays | 20.03 |
| | A. Fullerinton | 4.20 |
| | Exchange on N. Y. draft | 1.80 |
| | Frt. on # 565 rubber | 9.37 |
| | Whitebreast cement | 9.00 |
| | Crow & Lind | 9.85 |
| | Frt. on car rubber & Cement | 66.20 |
| | " " 2 cars " " | 18.27 |
| | Two cars cement | 62.42 |
| | McDonald, Meters | 372.42 |
| | F. A. Graham | 22.00 |
| | Weekly wages to men | 155.49 |
| | Frt. on Stockwell brick | 3.00 |
| | Frt. on meters | 4.45 |
| | Frt. on cupola brick | 72.07 |
| | Wages to men | 5.75 |
| | J. E. Stockwell, brick | 245.00 |
| | Wm. Dubois | 3.75 |
| | Seghman & Yauney | 52.50 |
| | Weekly wages to men | 189.60 |
| | Laclede Fire Brick Co | 3,215.00 |
| | " " " | 513.58 |
| 325 | Fire clay & G. Brick | 19.75 |
| | Frt. on car pipe | $19.75 |
| | Frt. on car pipe | 85.80 |

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|---|---|
| Frt. on cupola brick | 53.65 |
| John Mohr, cartage | 2.25 |
| Cooper & Cole Bros | 100.52 |
| R. Simmons | 6.75 |
| Frt. on meters | 7.05 |
| Frt. lead pipe & solder | 1.22 |
| A. Peterson & Shaffer, cartage | 5.50 |
| Weekly wages to men | 225.30 |
| Frt. on Hyd. Main Extension | 2.10 |
| Laclede Fire Brick Co | 22.10 |
| Barrett & Mohr, cartage | 2.00 |
| Dybbro, horse | 90.00 |
| Blufus & Payne | 9.60 |
| John Lanham | 6,419.46 |
| Yauney & Seaghman | 52.50 |
| H. M. Leavett | 48.90 |
| Burks & Cadman, Buggy | 68.00 |
| Chas. E. Chowins | 49.50 |
| J. H. Harley | 2.60 |
| Weekly wages to men | 239.05 |
| Candlewick | .40 |
| Hooker & Orr | .75 |
| Humphrey Bros | 6.30 |
| Frt. on car pipe | 11.50 |
| H. M. Leavet | 15.70 |
| W. B. Wolcott | 29.84 |
| R. S. Young | 31.34 |
| Rel. Omaha | 1.35 |
| Cooper & Cole Bros | 93.27 |
| Camp Bros | 7.50 |
| Frt. on Meters | 1.80 |
| Paint & Color Co | 62.32 |
| F. A. Graham | 18.00 |
| G. P. Smith | 5.00 |
| Chicago Lumber Co | 241.13 |
| Weekly wages to men | 258.35 |
| Frt. on pig lead | 6.70 |

27–427.

1892 (Continued).

| | | |
|---|---|---|
| Construction: | Lanham, car footings | 36.63 |
| | Omaha pig lead | 162.00 |
| | Shickle, Harrison & H | 473.24 |
| | Rumsey & Co | 25.29 |
| | Exchange | 1.80 |
| | John Grass | 7.50 |
| | Geo. Pierce | 1.50 |
| | Exchange on drafts | 4.00 |
| | Morris Wilson | 27.20 |

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|---|---|
| Gaston & Barrett | 7.05 |
| Weekly wages to men | 234.08 |
| Dean & Horton | 2.13 |
| R. Woombrodt | 5.00 |
| Yauney Stockwell, brick | 3.00 |
| City permit 17th St | 1.00 |
| Fisher & Westover | 132.12 |
| Poska & Warmbrodt | 4.50 |
| Weekly wages to men | 188.40 |
| Chas. E. Chowins | 100.00 |
| Raymen, brick | 400.00 |
| Barrett, cartage | .85 |
| Express on gauges | 1.35 |
| Frt. on meters | 7.70 |
| D. Brittenstein | 1.50 |
| Stockwell, brick | 154.00 |
| B. & M., Coal shed, lumber | 148.23 |
| Frt. on car brick | 3.00 |

326

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|---|---|
| Weekly wages to men | $157.45 |
| Frt. on P. & A. Drum | 1.13 |
| Western Gas Const. Co. | 13,125.00 |
| " | 1,724.00 |
| W. W. Laoimer, wick | .35 |
| M. Bushnell | 10.00 |
| H. Yaumey & Seagham | 52.50 |
| S. E. Moon | 5.85 |
| Davis, carpet for office | 36.80 |
| Leavett, sand | 28.25 |
| H. J. Whitmore | 18.00 |
| Young, cement | 191.00 |
| Paint & Color Co. | 33.02 |
| Wittman & Co. | 3.65 |
| Hyman, cartage | .50 |
| Postal Tel. Co. | 4.22 |
| Parker & Wilson | 1.00 |
| C. E. Hedges | 38.17 |
| Cooper & Cole Bros. | 325.08 |
| Dean & Horton | 23.47 |
| John Roberts | 17.25 |
| Weekly wages to men | 136.10 |
| E. P. Gleason & Co. | 20.38 |
| American Meter Co. | 162.00 |
| Bouton Fdry. Co. | 20.00 |
| Copperas H. F. C. Co. | 108.59 |
| S. H. Atwood & Co. | 127.49 |
| Wilson, barrows | 30.00 |
| Chi. Lumber Co. | 669.65 |
| Korsmeyer Co. | 1.40 |
| Baldwin Bros. | 9.80 |
| Weekly wages to men | 175.45 |

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|---|---|
| Gloor, cartage | .50 |
| Barrett, cartage | 1.00 |
| Yauney & Seaghman | 52.50 |
| Cunham & Hansen | 14.10 |
| T. J. Thorpe & Co. | 1.50 |
| Mathias & Drake, cartage | 1.50 |
| John Eck | 6.00 |
| Chowins, bal. on coal shed | 240.00 |
| C. Vass | 10.97 |
| Weekly wages to men | 191.07 |
| Stockwell, brick | 77.00 |
| Baker | 2.70 |
| Add. Frt. on Exhauster | 22.44 |
| Generator contract | 1,000.00 |
| Wall, beams & columns | 178.50 |
| Tees, reducer & columns | 100.25 |

28–428.

1892 (Continued).

| | | |
|---|---|---|
| Construction: | Exhauster and condenser connections | $226.00 |
| | J. Lanhan 3 cars sand | 42.00 |
| | Jones & Laughlin, order | 1,400.00 |
| | Wages to men | 21.40 |
| | Weekly wages to men | 141.05 |
| | C. O. Whedon | 500.00 |
| | Fisher & Westover | 36.07 |
| | D. Dennis, cartage | .75 |
| | F. A. Anderson | 3.20 |
| | Hooker & Dubois | 12.40 |
| | Simmons & B | .60 |
| | Baldwin Bros. | 26.00 |
| | Western Gas Cons. Bolts | 3.50 |
| | Elec. W. Steam for syphon. | 79.50 |
| | R. S. Young, cement | 60.59 |
| | Mrs. Withington, order | 16.50 |
| | Henry Yauney | 27.50 |
| | Wm. Seaghman | 25.00 |
| 327 | | |
| | Hargreaves Bros. | $2.13 |
| | Chicago Lumber Co. | 55.58 |
| | Humphrey Bros. | 15.00 |
| | Car Saw dust | 20.00 |
| | Wages to men | 40.50 |
| | Weekly wages to men | 212.90 |
| | New Stock Book | 75.00 |
| | Adv. was going to move | 19.60 |
| | Whitebreast lime | 9.00 |
| | H. M. Leavitt | 57.35 |

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|---|---|---|
| | Chandler, Drake & Co..... | 17.60 |
| | Recording amended articles. | 2.50 |
| | Postal Tel. Co. ..... | 3.66 |
| | Chas. E. Chowins ..... | 262.56 |
| | Sec'y of State fees..... | 3.50 |
| | Paint & Color Co..... | 9.48 |
| | Bronson & Mains ..... | 2.70 |
| | Dean & Horton ..... | 4.10 |
| | Korsmeyer Co. ..... | 1.10 |
| | Weekly wages to men..... | 279.60 |
| | Fisher & Westover ..... | 50.79 |
| | Frt. on retort cement..... | 1.20 |
| | Wages to men laid off..... | 33.15 |
| | Frt. on crate meters..... | 4.70 |
| | Babcock coke forks ..... | 6.38 |
| | McDonald & Co. ..... | 25.75 |
| | H. F. Clark Drug Co. .... | 119.28 |
| | Cleveland & Garretson .... | 9.50 |
| | Yauney & Drake ..... | 3.00 |
| | Cooper & Cole Bros. ..... | 363.27 |
| | Yauney & Seaghman ..... | 50.00 |
| | Hardner & Ward ..... | 22.75 |
| | Weekly wages to men..... | 236.45 |
| | John Roberts ..... | 2.00 |
| | Frt. on Fire clay & brick... | 10.69 |
| | Samuel Hartzell ..... | 2.50 |
| | O. W. Vanderver ..... | 15.00 |
| | Lanham Cementing foundation ..... | 78.00 |
| | Hargreaves Brooms ..... | 2.13 |
| | Wages to men laid off..... | 42.25 |
| | W. C. Jones..... | 6.00 |
| | Frt. on scales..... | 1.90 |
| | Frt. on leadpipe..... | 2.15 |
| | Weekly wages to men..... | 144.55 |
| | Morris Wilson ..... | 52.64 |
| | Barrett, cartage ..... | .50 |
| | Wages to men laid off..... | 43.80 |
| | R. S. Young..... | 21.75 |
| | Express on gauges..... | 1.10 |
| | Drake, cartage ..... | .50 |
| | Weekly wages to men..... | 213.35 |
| 328 | | 71,284.59 |

429.

1893.

| | | |
|---|---|---|
| Construction: | Seaghman & Yauney..... | 57.50 |
| | Chas. E. Chowins..... | 121.65 |
| | Ward & Kelly Co. ..... | 29.76 |

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|---|---|
| Cap. City Planing Mill.... | 55.00 |
| Moore, Loomis & Williams Co. ..... | 9.20 |
| Tricky & Co. ..... | 6.00 |
| Pomerene & Co. ..... | 1.65 |
| Barrett & Wilson, cartage.. | 1.10 |
| Postal Tel. Co. ..... | 4.40 |
| Chicago Lumber Co. ..... | 139.31 |
| Humphrey Bros. ..... | 11.25 |
| W. B. Wolcott ..... | 110.40 |
| Field & Holmes, Att'ys.... | 50.00 |
| Baldwin Bros. ..... | 3.30 |
| P. Hahn ..... | 100.00 |
| C. E. Hedges ..... | 46.66 |
| City Testing Apparatus.... | 200.00 |
| Laclede Fire Brick Mfg. Co. | 72.50 |
| L. M. Rumsy Mfg. Co..... | 24.21 |
| H. W. Johnson Mfg. Co.... | 11.25 |
| D. McDonald & Co..... | 201.76 |
| John Roberts ..... | 7.60 |
| Weekly wages of men..... | 228.05 |
| Frt. on meters..... | 4.57 |
| R. L. Smith..... | 13.20 |
| D. E. Thompson exp. East.. | 13.00 |
| C. E. Chowins..... | 100.00 |
| W. J. Cooper & Cole Bros.. | 238.39 |
| Fisher & Westover ..... | 70.45 |
| Weekly wages to men..... | 164.62 |
| Dubois cartage ..... | 11.25 |
| Henry Yauney ..... | 27.50 |
| Morris Wilson ..... | 210.71 |
| Weekly wages to men..... | 202.65 |
| C. D. Mullen..... | 36.30 |
| Wages to men..... | 20.25 |
| James Young ..... | 3.00 |
| Weekly wages to men..... | 142.80 |
| Wm. Berry ..... | 3.75 |
| Frt. on crates fire brick.... | 3.43 |
| S. E. Moore..... | 3.15 |
| Wm. Seughman ..... | 27.50 |
| H. J. Harley ..... | 12.00 |
| Chicago Lumber Co. ..... | 60.75 |
| Fisher & Westover..... | 28.00 |
| Cooper & Cole Bros. ..... | 92.50 |
| R. S. Young..... | 17.17 |
| Wages to men laid off..... | 22.40 |
| Express on tips..... | .75 |
| C. D. Dubois..... | 15.25 |
| Humphrey Bros. & R. L. Smith ..... | 4.25 |
| State Journal Co. ..... | 44.55 |

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|---|---|---|
| | Morris Nelson ..... | 158.78 |
| | Baldwin Bros. ..... | .55 |
| | Weekly wages to men..... | 113.75 |
| | Mullen stamps ..... | .70 |
| | Dean & Horton ..... | .60 |
| | Cement ..... | 14.25 |
| | Hertman & Keyser ..... | 4.85 |
| | Roberts & O'Neill ..... | 18.55 |
| | Plastering Meter Room J. E. Phelps ..... | 44.00 |
| | Weekly wages ..... | 120.95 |
| | Clow & Son ..... | 12.06 |
| | Fairbanks scales ..... | 65.00 |
| | McDonald Meters ..... | 162.00 |
| | City Permit ..... | 1.00 |
| 329 | | |
| | Wm. Berry ..... | 3.00 |
| | Wm. Seaghman ..... | 27.50 |
| | Forge & Forks ..... | 24.90 |
| | Frt. on " ..... | 1.25 |
| | Weekly wages to men..... | 108.35 |
| | Exchange N. Y. draft..... | 5.70 |

30–430.

1893 (Continued).

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|---|---|---|
| Construction: | Wm. Berry ..... | 5.25 |
| | Frt. on fire clay ..... | 5.91 |
| | Barrett, cartage ..... | .75 |
| | Frt. on meters ..... | 4.55 |
| | Weekly wages to men..... | 191.75 |
| | Carrier, Loomis ..... | 10.25 |
| | Moore & Tabk Line..... | 1.90 |
| | Postal Tel. Co. ..... | .40 |
| | Rudge & Morris Co. ..... | 6.00 |
| | Wm. Seighman ..... | 27.50 |
| | Chicago Lumber Co. ..... | 17.61 |
| | Journal Co. ..... | 20.00 |
| | Humphrey Bros. ..... | 5.65 |
| | Recording Deed Block 79.. | 1.00 |
| | Smith & Pomerene & Co... | 8.35 |
| | Hartzell & Cunningham.... | 28.00 |
| | Lincoln News Co. ..... | 16.80 |
| | Dean & Horton ..... | 1.30 |
| | Weekly wages to men ..... | 107.50 |
| | Berry & Biggs ..... | 9.25 |
| | W. B. Wolcott ..... | 23.62 |
| | Cooper Radiator Co. ..... | 200.00 |
| | Raymonds Brooms ..... | 2.25 |
| | Wm. Berry ..... | 4.05 |
| | Weekly wages to men..... | 91.90 |

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|---|---|
| Laclede Fire Clay Co. ..... | 13.50 |
| Wages to men..... | 23.50 |
| Burs & Berry ..... | 5.40 |
| Shickle Harrison & H. I. Co. | 500.00 |
| Cooper & Cole Bros. ..... | 49.65 |
| Wm. Seaghman ..... | 27.50 |
| Frt. on valves ..... | 3.55 |
| Hartman & Coon..... | 9.45 |
| Weekly wages to men..... | 60.70 |
| Express on —..... | .70 |
| Poska & Barrett, cartage ... | 1.50 |
| Weekly wages to men .... | 75.30 |
| Morris Wilson ..... | 129.87 |
| Transfer Co. ..... | 21.90 |
| Frt. on lead pipe..... | 2.95 |
| Moore & Camp Bros. ..... | 4.75 |
| The News ..... | 18.90 |
| Weekly wages to men..... | 91.00 |
| Wm. Seighman ..... | 27.50 |
| Pmerene & Cooper ..... | 11.36 |
| Chicago Lumber Co. ..... | 9.00 |
| Express & Fisher & Westover. | 14.89 |
| Postal & E. Motz..... | 8.90 |
| Humphrey Bros. & Oakey.. | 4.20 |
| John Lawlor ..... | .75 |
| Hartshorn & Paint & C. Co. | 6.80 |
| Herdelemen ..... | 2.70 |
| Seighman Car tickets ..... | .25 |
| State Journal Co. ..... | 20.50 |
| Chas. E. Chowins..... | 23.00 |

330

| | |
|---|---|
| Shaffer & Maggard, cartage. | 1.00 |
| Mayer Bros. ..... | 3.00 |
| Barrett, cartage ..... | .75 |
| Weekly wages to men..... | 94.30 |
| Cooper & Cole Bros. ..... | 81.54 |
| D. McDonald & Co. ..... | 164.88 |
| Gas Light Journal ..... | 3.00 |
| Cahill Collins & Co. ..... | 51.20 |
| Rumsey & Co. ..... | 34.64 |
| Tank Line ..... | 2.55 |
| Frank Berkley ..... | 2.25 |
| Barrett, cartage ..... | 1.25 |
| Wm. Lawlor ..... | 100.00 |
| Weekly wages to men..... | 163.05 |
| A. J. Kaufman..... | 27.50 |
| Wm. Seighman ..... | 3.75 |
| Jas. Dorobrasky ..... | 3.00 |
| Weekly wages to men..... | 101.50 |
| Kitchen & Barrett..... | 5.40 |
| Frt. on meters ..... | 6.25 |

31–431.

1893 (Continued).

| | | |
|---|---|---|
| Construction: | Frt. on H. Stone..... | 2.05 |
| | Snider & Trenkamp..... | 14.40 |
| | Kitchen & J. Lawlor..... | 7.50 |
| | Weekly wages to men..... | 119.70 |
| | Tehlaender & Postal . .... | 1.95 |
| | Moore & Berry..... | 9.10 |
| | Taylor & Barrctt ..... | 12.50 |
| | Chi. Lumber Co. Dean & H. | 8.20 |
| | State Journal Co. ..... .. | 20.50 |
| | News Publg. Co. ..... | 18.20 |
| | Wm. Seaghman ..... .. | 27.50 |
| | Cap. City Courier..... | 20.00 |
| | R. S. Young..... | 41.88 |
| | Kelly Corrugated Iron..... | 27.77 |
| | Sharp & Desota..... | 4.85 |
| | Tank Line ..... | 1.35 |
| | Sueter & Mayer Bros..... | 3.75 |
| | C. E. Hedges..... | 6.40 |
| | Frt. on 4″ pipe..... | 58.25 |
| | Dubois with team..... | 22.50 |
| | Weekly wages to men..... | 272.41 |
| | Robart, Barten & Sons..... | 19.42 |
| | C. Snell & D. Snell..... | 2.29 |
| | Sack cement ..... | .40 |
| | A. Shone ..... | .90 |
| | Cooper & Cole Bros. ..... | 235.38 |
| | Cook & More..... | 1.00 |
| | Weekly wages to men..... | 385.42 |
| | Wages to men laid off..... | 31.44 |
| | Wm. Seaghman ..... | 27.50 |
| | Fisher & Westover ..... | 19.47 |
| | E. Motz ..... | 6.28 |
| | Wages to men laid off..... | 35.75 |
| | J. Nedwick ..... | 5.35 |
| | Morris Wilson ..... | 43.00 |
| | Weekly wages to men..... | 388.75 |
| | Tannery Publics ..... | 3.00 |
| | Frt. on meters..... | 5.05 |
| | Rothschilds, cartage ..... | .25 |
| | Wages to men laid off..... | 31.30 |
| | J. Hodwick ..... | 1.80 |
| | Brown & Barrett, cartage... | 1.00 |
| 331 | | |
| | Weekly wages to men..... | 309.30 |
| | Cooper Radiator Co. ..... | 33.25 |
| | Cap. City Courier ..... | 10.00 |
| | Governor & Boiler works... | 5.00 |

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|---|---|
| Baldwin Bros. & Mayer Bros. | 7.90 |
| Motz & Humphrey Bros.... | 2.96 |
| Pomerene & Cooper..... | 7.35 |
| Chicago Lumber Co..... | 49.81 |
| R. S. Young..... | 134.32 |
| Wm. Seighman ..... | 27.50 |
| Lincoln News Co. ..... | 18.90 |
| Fisher & Westover..... | 9.00 |
| State Journal Co. ..... | 30.00 |
| Wages to men laid off..... | 51.90 |
| Rudge & Morris..... | 4.07 |
| Weekly wages to men..... | 360.10 |
| Paint & Color Co. ..... | 33.42 |
| Whitebreast Coal Co. ..... | 3.60 |
| Morris & Wilson..... | 55.00 |
| A. D. Kelly..... | 30.99 |
| Mann & Cleveland, cartage.. | 1.00 |
| McDonald Meters ..... | 221.40 |
| Cooper & Cole Bros..... | 505.83 |
| Dean & Horton..... | 27.80 |
| Weekly wages to men..... | 257.00 |
| Fisher & Westover..... | 100.00 |
| Shickle H. & H. in full... | 470.57 |
| Fisher & Westover..... | 72.70 |
| Wages to men laid off..... | 27.25 |
| Fisher & Westover, bal. floor. | 81.50 |
| Tyler Coping Stone..... | 20.00 |

32–432.

1893 (Continued).

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|---|---|---|
| Construction: | Wm. Seighman ..... | 27.20 |
| | Weekly wages to men..... | 109.50 |
| | 15 copies of Gas Journal... | 1.50 |
| | Finney & Glover, cartage... | .60 |
| | Wm. McCline..... | 10.50 |
| | Frt. on meters ..... | 4.81 |
| | Rothschilds cartage ..... | .25 |
| | Weekly wages to men..... | 135.60 |
| | " " " ..... | 130.50 |
| | Jasnch & Wittman Co..... | 13.95 |
| | Seighman, Kelly & Chowins. | 128.07 |
| | Postal & Camp Bros..... | 3.50 |
| | R. L. Smith..... | 45.00 |
| | R. S. Young..... | 190.88 |
| | Whitebreast Coal Co. ..... | 15.90 |
| | Paint & Color Co. ..... | 8.40 |
| | Weekly wages to men..... | 43.75 |
| | Progressive Age ..... | 4.00 |
| | McDonald Meter Co. ..... | 183.60 |

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|---|---|---|
| | H. T. Clark Drug Co..... | 57.17 |
| | Dubois & Schultz..... | 11.00 |
| | Cooper & Cole Bros..... | 213.08 |
| | Brown, cartage ..... | .25 |
| | Express on pump repairs... | .65 |
| | Weekly wages to men..... | 68.60 |
| | Chas. O. Whedon Att'y Fees. | 250.00 |
| | Wm. Seighman ..... | 27.50 |
| | Dean & Horton..... | 32.97 |
| | J. Schultz ..... | 6.00 |
| | Alias & Poska, cartage..... | 1.00 |
| 332 | | |
| | Weekly wages to men..... | 54.10 |
| | Express on Sturdevant En. Repairs ..... | 2.65 |
| | City Permit ..... | 1.00 |
| | Weekly wages to men..... | 61.50 |
| | John Barret cartage..... | 1.00 |
| | Pomerene & Cooper..... | 1.86 |
| | Harley & F. McKee..... | 18.70 |
| | Rehlaender & Humphrey Bros. ..... | 3.55 |
| | Wm. Seighman ..... | 27.50 |
| | Kenny Boiler Works ..... | 18.60 |
| | Fisher & Westover..... | 5.80 |
| | Poska & Thorp ..... | 3.20 |
| | Weekly wages to men..... | 73.75 |
| | Chas. Kruger ..... | 9.00 |
| | Worthington Pump repairs. | 5.44 |
| | Rumsey & Co. ..... | 3.08 |
| | McDonald & Co. ..... | 162.00 |
| | Cooper & Cole Bros..... | 106.05 |
| | Poska & City permit..... | 2.00 |
| | Express on driving area.... | 1.15 |
| | Weekly wages to men..... | 61.00 |
| | John Gray ..... | 4.20 |
| | Wm. Seighman ..... | 27.50 |
| | Schall, cartage ..... | .75 |
| | Shaffer, cartage ..... | 1.00 |
| | Broom and glass cutter.... | .50 |
| | Weekly wages to men..... | 57.75 |
| | The Call adv..... | 90.50 |
| | Frt. on meters..... | 4.85 |
| | Wages to men laid off..... | 28.00 |
| | Weekly wages to men..... | 33.75 |
| | Telegram for meters..... | .40 |
| | Rudge & Morris..... | 1.85 |
| | Camp Bros. & Griswold.... | 6.50 |
| | Wm. Seighman ..... | 27.50 |
| | Weekly wages to men..... | 59.75 |
| | D. McDonald & Co..... | 162.00 |

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|---|---|---|
| | Cooper & Cole Bros..... | 188.95 |
| | Weekly wages to men..... | 37.00 |
| | Frt. on meters..... | 10.64 |
| | Weekly wages to men..... | 45.00 |
| | Wm. Seighman ..... | 27.50 |
| | Parks, cartage ..... | 1.00 |
| | Wages to men laid off..... | 66.75 |
| | Weekly wages to men..... | 40.50 |
| | Kruse & Girdy..... | 4.35 |

433.

1893 (Continued).

| | | |
|---|---|---|
| Construction: | W. H. Beebee..... | 9.00 |
| | News Printing Brief..... | 27.90 |
| | Weekly wages to men..... | 58.45 |
| | Fred Dybbro ..... | 11.50 |
| | Dean & Horton..... | .70 |
| | Wm. Seighman ..... | 27.50 |
| | Whitebreast Coal Co. ..... | 1.95 |
| | Ambrose Kitchen ..... | 4.50 |
| | Geo. Cox, cartage ..... | .50 |
| | Dees & Ray..... | 10.50 |
| | Weekly wages to men..... | 45.30 |
| | Barret & Shaffer, cartage... | 1.25 |
| | Frt. on meter..... | .80 |
| | John Freass ..... | 9.00 |
| | Cooper & Cole Bros..... | 214.89 |
| 333 | Rumsey & Co..... | 17.31 |
| | Weekly wages to men..... | 28.40 |
| | Wm. Seighman ..... | 23.75 |
| | Frease & Boyd..... | 10.50 |
| | Wm. Seighman..... | 3.75 |
| | Brown, cartage..... | .50 |
| | Weekly wages to men..... | 43.50 |
| | Carveth, cartage..... | .35 |
| | Dybbro & Barrett, car'ge.... | 6.25 |
| | Rothschilds, cartage ..... | .25 |
| | Weekly wages to men..... | 46.50 |
| | Dean & Horton..... | 1.55 |
| | Rudge & Morris..... | 5.61 |
| | Wm. Seighman ..... | 27.50 |
| | A. S. Kelly..... | 5.19 |
| | Weekly wages to men..... | 69.75 |
| | John Holtz..... | 1.20 |
| | Rothschilds, cartage..... | .25 |
| | Weekly wages to men..... | 29.00 |
| | D. McDonald & Co..... | 162.00 |
| | Fairchild, cartage ..... | .25 |
| | Cooper & Cole Bros..... | 200.00 |

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|---|---|---|---|
| | Wm. Seighman | 23.75 | |
| | " cartage | 4.00 | |
| | Frt. on meters | 5.05 | |
| | Frt. on scoops | 2.28 | |
| | Weekly wages to men | 40.00 | |
| | Hooker & Rudge & M | 3.25 | |
| | Chi. Lumber Co | 18.35 | |
| | Wm. Seighman | 27.50 | |
| | W. H. Beebee | 7.00 | |
| | Fisher & Westover | 7.85 | |
| | Weekly wages to men | 26.70 | |
| | Pomerene & Cooper | 12.76 | |
| | Geo. Downing | 5.10 | |
| | Wages to men | 42.00 | |
| | McDonald & Co | 162.00 | |
| | L. M. Rumsey Mfg. Co | 16.05 | |
| | Cooper & Cole Bros | 53.09 | |
| | Wm. Seighman | 17.59 | |
| | " | 9.91 | |
| | Wages to men | 21.75 | |
| | " | 57.30 | |
| | Poska, cartage | 1.25 | |
| | Weekly wages to men | 52.65 | |
| | Dinien Sts | 909.45 | |
| | | | 17,345.41 |

434.

1894.

| | | | |
|---|---|---|---|
| Construction: | A. Chandler | 1.20 | |
| | Chicago Lumber Co | 37.67 | |
| | W. B. Wolcott | 11.04 | |
| | Wm. Seighman | 27.50 | |
| | H. T. Clark Drug Co | 38.85 | |
| | Cunningham, Kitchen & Hopfinger | 3.60 | |
| | Rehlaender & Harley | 4.70 | |
| | Cunham & Karben | 2.45 | |
| | Hooker & Orr | .20 | |
| | Whitebreast, smithy coal | 2.70 | |
| | Cooper & Cole Bros | 24.16 | |
| | Weekly wages | 23.25 | |
| | Dean & Horton | 4.12 | |
| 334 | Weekly wages | 26.55 | |
| | D. McDonald & Co | 172.80 | |
| | Wm. Seighman | 23.75 | |
| | " | 3.75 | |
| | Weekly wages to men | 31.95 | |
| | " | 25.05 | |
| | Wm. Seighman | 27.50 | |

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|---|---|
| Wages to men | 42.15 |
| Jordan Meter Co | .75 |
| Polly & Cunham | 7.80 |
| Wages to men | 21.45 |
| Cooper & Cole Bros | 24.19 |
| D. McDonald & Co | 23.76 |
| E. P. Gleason Mfg. Co | 10.00 |
| Wm. Rumsey Mfg. Co | 3.50 |
| John Shotts | 1.20 |
| Wm. Seighman | 27.50 |
| Wages to Gray & Shotts | 10.65 |
| City Permit | 1.00 |
| Wages to men | 17.30 |
| Poska, cartage | 1.00 |
| Carbon & St | 3.00 |
| Wm. Seighman | 27.50 |
| Wages to men | 40.45 |
| Whitebreast, brick | 39.00 |
| Cooper & Cole Bros | 47.20 |
| Wm. Seighman | 27.50 |
| City Permit | 1.00 |
| Weekly wages to men | 120.00 |
| Garretson | 4.50 |
| Rothschilds, cartage | .25 |
| Weekly wages to men | 113.40 |
| " " " laid off | 25.35 |
| " " " " " | 18.45 |
| Wages to men | 11.25 |
| Cemahaw & Humphreys | 4.40 |
| Wages to men | 37.35 |
| Harley & Transfer Co | 5.65 |
| Wm. Seighman | 27.50 |
| 4" pipe | 300.00 |
| Thus Canaham | 1.80 |
| Weekly wages to men | 22.35 |
| Dennis Long & Co | 250.00 |
| Frt. on pipe | 50.00 |
| Barrett, cartage | .50 |
| Cooper & Cole Bros | 44.20 |
| J. Adolph | 4.05 |
| Clark Drug Co | 27.25 |
| Weekly wages to men | 26.25 |
| Olsen & Shafer, cartage | 1.50 |
| Wm. Seighman | 27.50 |
| Frt. on pipe | 37.00 |
| Wages to men | 25.65 |
| " | 22.80 |
| Weekly wages to men | 36.00 |
| Fager & Shafer | 2.25 |
| Rothschilds & Fager, cartage | .75 |
| " cartage | .50 |

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|---|---|---|
| | Weekly wages to men..... | 72.70 |
| | Merchants Transfer Co..... | 2.00 |
| | Wm. Seighman..... | 27.50 |
| | Dean & Horton..... | 47.84 |

35–435.

1894 (Continued).

| | | |
|---|---|---|
| | Paint & Color Co..... | 4.88 |
| 335 | Wages to men..... | 23.85 |
| | Cooper & Cole Bros..... | 105.06 |
| | Weekly wages to men..... | 26.25 |
| | Goldstein & Curber..... | 5.85 |
| | Wages to men laid off..... | 72.65 |
| | Rothschilds, cartage..... | .75 |
| | Wm. Seighman..... | 27.50 |
| | Wages to men..... | 47.75 |
| | E. D. Metsell..... | .75 |
| | Weekly wages to men..... | 90.70 |
| | Burke, cartage..... | .50 |
| | Waker & Cartage..... | 2.75 |
| | Weekly wages to men..... | 69.95 |
| | Kitchen, cartage..... | 2.50 |
| | W. B. Wolcott..... | 3.82 |
| | Wilson & Chilson..... | 48.25 |
| | Wm. Seighman..... | 27.50 |
| | W. B. Wolcott..... | 6.08 |
| | Weekly wages..... | 51.00 |
| | Dierks Bros..... | 3.30 |
| | Jno. Radley, cartage..... | .35 |
| | Poska, cartage..... | .35 |
| | Dean & Horton..... | 7.34 |
| | H. Wittman & Co..... | 1.25 |
| | Weekly wages to men..... | 60.25 |
| | Cooper & Cole Bros..... | 439.85 |
| | Postka, cartage..... | .60 |
| | Radley, cartage..... | .50 |
| | Weekly wages to men..... | 81.60 |
| | Wm. Seighman..... | 27.50 |
| | Frt. on lead pipe..... | 1.35 |
| | " crate meters..... | 4.05 |
| | Peter Peterson..... | 3.00 |
| | Weekly wages to men..... | 65.40 |
| | Weekly wages to men..... | 64.55 |
| | Dierks & Fisher & W..... | 12.50 |
| | Baldwin Bros. & Call..... | 11.20 |
| | Wm. Seighman..... | 27.50 |
| | Whitebreast Coal Co..... | 17.50 |
| | Clark Drug Co..... | 67.60 |
| | L. M. Rumsey Mfg. Co.... | 15.06 |

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|---|---|---|
| | Weekly wages to men..... | 47.85 |
| | Cooper & Cole Bros..... | 66.17 |
| | Henry Furn..... | 1.80 |
| | Cook & Moore..... | 1.75 |
| | Weekly wages to men..... | 66.00 |
| | Wm. Seighman..... | 27.50 |
| | Weekly wages to men..... | 23.20 |
| | Carveth, cartage..... | .25 |
| | C. E. Hedges..... | 15.05 |
| | Weekly wages to men..... | 36.15 |
| | Rothschilds, cartage..... | .50 |
| | Carveth, cartage..... | .50 |
| | Wm. Seighman..... | 27.50 |
| | Kenny, new boiler..... | 278.00 |
| | Clark Drug Co..... | 43.56 |
| | Wages to men laid off..... | 9.75 |
| | Weekly wages to men..... | 16.50 |
| | McDonald & Co..... | 140.76 |
| | Cooper & Colge Bros..... | 94.55 |
| | Dean & Horton & Color Co.. | 8.04 |
| | The Coll, in full..... | 100.00 |
| | Fisher & Westover..... | 6.20 |
| | R. L. Smith..... | 2.00 |
| | Wm. Seighman..... | 27.50 |
| | Carveth, cartage..... | .25 |
| | Weekly wages to men..... | 15.95 |
| 336 | John Gray..... | 6.75 |
| | W. G. Carveth..... | .25 |
| | Baker, cartage..... | .25 |
| | Weekly wages to men..... | 28.95 |
| | W. D. Seighman..... | 27.50 |

36–436.

1894 (Continued).

| | | |
|---|---|---|
| Construction: | Cooper & Cole Bros..... | 110.05 |
| | Carveth, cartage..... | .50 |
| | Weekly wages to men..... | 46.60 |
| | Tilton, cartage..... | .75 |
| | Bert Betts & Cartage..... | **2.25** |
| | Frt. on meters..... | 5.10 |
| | Fisher & Westover..... | 7.25 |
| | Weekly wages to men..... | 26.00 |
| | Wm. Seighman..... | 27.50 |
| | Carveth & Rothschilds..... | .50 |
| | Graham, buggy..... | 2.00 |
| | R. S. Young, cement..... | 23.00 |
| | Rothschilds, cartage..... | .25 |
| | Weekly wages to men..... | 32.10 |
| | Weekly wages to men..... | 23.40 |

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|---|---|
| W. D. Seighman..... | 27.50 |
| Frt. on lead pipe..... | 1.92 |
| Weekly wages to men..... | 52.65 |
| Drith & Hedges..... | 3.10 |
| Cooper & Cole Bros..... | 101.84 |
| D. McDonald & Co..... | 178.20 |
| Wages to men..... | 12.00 |
| James Givens..... | 2.00 |
| John Gray..... | 6.75 |
| Weekly wages to men..... | 27.80 |
| Wm. Seighman..... | 27.50 |
| Cart-ge, Nedwick..... | 3.00 |
| Weekly wages to men..... | 20.45 |
| 4″ pipe, J. P. M..... | 50.00 |
| Weekly wages to men..... | 77.20 |
| John Holtz..... | 9.00 |
| More & Baldwin Bros..... | 7.60 |
| Helser & Nelson..... | 6.75 |
| Paint & Color Co..... | 10.90 |
| W. D. Seighman..... | 27.50 |
| John Lendholm..... | 7.50 |
| Clark Drug Co..... | 52.81 |
| Wages to men..... | 3.95 |
| Weekly wages to men..... | 60.75 |
| Whitebreast Coal Co..... | 4.40 |
| Cooper & Cole Bros..... | 108.00 |
| Rumsey Mfg. Co..... | 20.42 |
| Gullick, cartage..... | .25 |
| Weekly wages to men..... | 63.00 |
| Geo. Kuben..... | 5.55 |
| Frt. on meters..... | 6.20 |
| W. D. Seighman..... | 27.50 |
| John Lindholm..... | 5.50 |
| " ..... | 2.00 |
| Weekly wages to men..... | 36.00 |
| Mason, cartage..... | .75 |
| Weekly wages to men..... | 32.85 |
| " ..... | 24.45 |
| W. D. Seighman..... | 27.50 |
| John Lindholm..... | 7.50 |
| 337 | |
| Dierks Bros. ..... | 2.45 |
| Paint & Color Co..... | 3.20 |
| Clark Drug Co..... | 11.00 |
| Carveth, cartage ..... | .25 |
| " ..... | .50 |
| Cooper & Cole Bros..... | 52.72 |
| Wages to men..... | 13.20 |
| H. Keibert ..... | 2.70 |
| Weekly wages to men..... | 43.20 |
| D. McDonald & Co. meters. | 205.20 |

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|---|---|---|
| Jas. B. Glow & Son | 11.40 | |
| Baker, cartage | 2.00 | |
| Weekly wages to men | 40.40 | |
| W. D. Seighman | 27.50 | |
| John Lindholm | 7.50 | |
| Nelson & Karber | 2.70 | |
| Weekly wages to men | 42.18 | |
| " | 20.25 | |
| | | $6,534.89 |

437.

1895.

| | | | |
|---|---|---|---|
| Construction: | W. D. Seighman | 9.51 | |
| | W. D. Seighman | 17.99 | |
| | John Lindholm | 7.50 | |
| | Weekly wages to men | 21.90 | |
| | Cooper & Cole Bros. | 67.87 | |
| | Weekly wages to men | 38.85 | |
| | W. D. Seighman | 31.95 | |
| | Weekly wages to men | 36.80 | |
| | Dierks Bros. | 7.70 | |
| | W. D. Seighman | 27.50 | |
| | Rudge & Morris | 4.65 | |
| | Fisher & Westover | 3.15 | |
| | Whitebreast, fire brick | 10.50 | |
| | Taxes | 200.00 | |
| | Weekly wages to men | 41.40 | |
| | Hooker & Paint Co. | 3.70 | |
| | Weekly wages to men | 32.50 | |
| | Cooper & Cole Bros. | 33.78 | |
| | W. D. Seighman | 2.00 | |
| | Weekly wages to men | 84.65 | |
| | W. D. Seighman | 25.50 | |
| | Weekly wages to men | 93.50 | |
| | W. G. Bruell | 39.90 | |
| | Frt. on test meter | 3.80 | |
| | Cash to men | 50.00 | |
| | " | 26.25 | |
| | Rudge & Morris | 6.95 | |
| | W. D. Seighman | 27.50 | |
| | Copperas | 72.39 | |
| | Whitebreast Coal Co. | 19.00 | |
| | Weekly wages to men | 50.05 | |
| | Humphrey Bros. | 7.60 | |
| | Frt. on Furnace & Tickets | 1.10 | |
| | Cooper & Cole Bros. | 43.72 | |
| | Chicago Lumber Co. | 28.00 | |
| | Cook & Moon | .65 | |
| | Weekly wages to men | 43.20 | |

| | | |
|---|---|---|
| | Iron pipe | 500.00 |
| | American Meter Co. | 3.20 |
| | Gas Light Journal | 3.00 |
| | Wages to men laid off | 50.00 |
| | S. Hartzel | 6.50 |
| 338 | | |
| | W. G. Seighman | 26.30 |
| | W. D. Seighman | 1.20 |
| | Weekly wages to men | 37.85 |
| | Frt. on — | 41.48 |
| | Cast Iron Pipe | 500.00 |
| | Weekly wages to men | 45.40 |
| | O. W. Olson | .25 |
| | Weekly wages to men | 48.90 |
| | Crane & Baldwin Bros. | 3.59 |
| | Wittman & Co. Rudge & Morris | 5.80 |
| | W. D. Seighman | 27.50 |
| | 2″ pipe | 200.00 |
| | Karber & Greeley | 4.50 |
| | Dennis Long & Co. | 500.00 |
| | Chicago Lumber Co. | 6.25 |
| | Weekly wages to men | 36.00 |
| | Clark & Co. | 1.43 |
| | John Sansky | 2.00 |
| | Wm. Manchester | 45.00 |
| | Weekly wages to men | 79.90 |
| | W. D. Seighman | 27.50 |
| | Cooper & Cole Bros. | 41.42 |
| | Noldi, cartage & Oil | 1.25 |
| | Wages to men laid off | 35.05 |
| | Weekly wages to men | 139.10 |
| | Car tickets to Rolen | 1.40 |
| | G. W. Bonnell | 28.80 |
| | Snyder, cartage | .50 |
| | Wages to men laid off | 16.80 |
| | Weekly wages to men | 58.85 |
| | Frt. Transfer Co. | 2.70 |
| | W. D. Seighman | 27.50 |
| | Weekly wages to men | 124.35 |
| | Paint & Color Co. | 16.48 |

38–438.

1895 (Continued).

| | | |
|---|---|---|
| Construction: | Cooper & Cole Bros. | 349.64 |
| | J. Graney | .90 |
| | Weekly wages to men | 100.90 |
| | Frt. on gas meters | 6.45 |
| | Seighman & E. Anderson | 36.85 |

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|---|---|
| Weekly wages to men..... | 91.75 |
| Wages to men..... | 31.50 |
| Weekly wages to men..... | 66.00 |
| Henry H— 1..... | 15.00 |
| Car sawdust ..... | 20.00 |
| Weekly wages to men..... | 44.95 |
| W. D. Seighman..... | 27.50 |
| Standard Glass Co..... | 8.00 |
| S. E. Moore..... | 5.00 |
| Copperas ..... | 40.95 |
| E. Anderson ..... | 7.50 |
| Moving stock room..... | 1.50 |
| Hardy Furn. Co..... | 17.00 |
| W. R. Hooker..... | 6.00 |
| Carveth, cartage ..... | .35 |
| R. S. Young..... | 104.50 |
| Merchants Trans. Co..... | 2.75 |
| Weekly wages to men..... | 93.50 |
| Cooper & Cole Bros..... | 200.02 |
| ½ Carpet in #108..... | 63.84 |
| McDonald & Co. meters.... | 200.08 |
| F. Shriner ..... | .75 |

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|---|---|
| Weekly wages to men..... | 70.55 |
| Nails for Supply Room.... | .50 |
| W. G. Seighman..... | 27.50 |
| Tickets, oil & lumber..... | 1.30 |
| Bal. Frt. on car saw-dust.. | 2.00 |
| Weekly wages to men..... | 66.15 |
| " ..... | 40.50 |
| Davis & Son & Pomerene... | 7.00 |
| Baldwin Bros. & Healy.... | 10.25 |
| Merchants Trans. Co..... | 2.25 |
| Wittman & Co..... | 4.50 |
| W. D. Seighman..... | 27.50 |
| Clark Drug Co. copperas... | 35.19 |
| Whitebreast cement ..... | 12.00 |
| R. S. Young..... | 5.25 |
| Chas. E. Chownins..... | 5.00 |
| B. & M. Moving Boxes..... | 145.20 |
| Wm. Cunningham ..... | 4.50 |
| M. L. Turner..... | 1.00 |
| Cooper & Cole Bros..... | 120.26 |
| Weekly wages to men..... | 43.45 |
| Hardy Furn. Co..... | 6.50 |
| Cook & M J. Nailey..... | 9.00 |
| Carveth cartage, car tickets. | .50 |
| Weekly wages to men..... | 56.55 |
| Exp. on gauges..... | 1.00 |
| Seighman & R. Lawlor..... | 40.00 |
| Weekly wages to men..... | 54.00 |

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|---|---|
| Poska cartage | .50 |
| Weekly wages to men | 64.60 |
| C. E. Hedges | 16.02 |
| Seighman & R. Lawlor | 40.00 |
| R. S. Young | 2.55 |
| Whitebreast Brick | 4.00 |
| Cooper & Cole Bros | 32.54 |
| Weekly wages to men | 71.80 |
| Turner, cartage | .50 |
| Weekly wages to men | 55.30 |
| M. L. Turner | .75 |
| McDonald & Co | 8.00 |
| Wm. Lawlor | 33.00 |
| Robt. Lawlor | 6.65 |
| Wm. Seighman | 27.50 |
| Weekly wages to men | 33.75 |
| Wm. Lawlor | 35.00 |
| Weekly wages to men | 30.50 |
| McLean, cartage | .25 |
| M. L. Turner | 2.00 |
| Weekly wages to men | 35.10 |

39–439.

1895 (Continued).

| | | |
|---|---|---|
| Construction | W. D. Seighman | 27.50 |
| | Whitebreast Co. | 22.00 |
| | R. L. Smith | 2.51 |
| | Robt. Lawlor | 12.50 |
| | Weekly wages to men | 58.65 |
| | Cooper & Cole Bros | 48.11 |
| | Cook & More | 2.75 |
| | Frt. on meters | 5.10 |
| | Frt. on scoops | .88 |
| | ½ chairs, table, etc | 22.66 |
| | Weekly wages to men | 66.10 |
| | W. D. Seighman | 27.50 |
| 340 | | |
| | John Gray | 4.50 |
| | 4" pipe | 300.00 |
| | Weekly wages to men | 77.00 |
| | Frt. on lead pipe | 1.65 |
| | Emery, cartage | .25 |
| | David Sell | 2.00 |
| | Weekly wages to men | 47.75 |
| | W. D. Seighman | 27.50 |
| | Clark Drug Co., copperas | 40.73 |
| | Clark Drug Co | .90 |
| | Paint & Color Co | 2.50 |
| | Fisher & Westover | .15 |

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|---|---|
| Weekly wages to men..... | 26.55 |
| Cook & Moore..... | 1.75 |
| Frt. on gas meters..... | 44.93 |
| Rumsey & Co..... | 16.76 |
| McDonald & Co..... | 180.00 |
| Chisholm & Sons..... | 9.25 |
| Weekly wages to men..... | 30.80 |
| M. L. Turner..... | .95 |
| Cooper & Cole Bros..... | 85.63 |
| W. D. Seighman..... | 27.50 |
| Weekly wages to men..... | 57.60 |
| " ..... | 64.25 |
| W. D. Seighman..... | 27.50 |
| Lincoln Drug Co..... | 36.19 |
| Whitebreast Coal Co..... | 2.40 |
| S. K. Masten & Rudge & Morris ..... | 13.15 |
| Jos. Neswick ..... | 3.75 |
| Fisher & W. & Hedges.... | 8.07 |
| Weekly wages to men..... | 37.10 |
| Cooper & Cole Bros..... | 141.23 |
| Wages cleaning box..... | 23.40 |
| Dierks Bros. ..... | 18.80 |
| McDonald & Co..... | 160.00 |
| R. S. Young..... | 9.53 |
| Weekly wages to men..... | 56.90 |
| W. D. Seighman..... | 3.00 |
| Weekly wages to men..... | 40.75 |
| W. D. Seighman..... | 24.50 |
| Gray & Mitter..... | 17.70 |
| Frt. on New Brooms..... | .60 |
| A. Bloom ..... | 3.00 |
| Henry Voorman ..... | 2.70 |
| Weekly wages to men..... | 37.80 |
| " ..... | 21.25 |
| Wages to men..... | 29.55 |
| R. S. Young..... | 2.53 |
| W. D. Seighman..... | 5.30 |
| " ..... | 22.30 |
| Lin. Drug Co..... | 24.34 |
| Dierks Bros. ..... | 26.55 |
| Weekly wages to men..... | 34.80 |
| Whitebreast Coal Co..... | 7.50 |
| Cooper & Cole Bros..... | 46.90 |
| Lee Broom Co..... | 4.25 |
| Phœnix Broom Co..... | 9.00 |
| Weekly wages to men..... | 83.70 |
| W. D. Seighman..... | 27.50 |
| Weekly wages to men..... | 55.15 |
| Frt. on copperas..... | 8.00 |

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|---|---|---|---|
| | Weekly wages to men..... | 80.35 | |
| | Baldwin Bros. 9.60 G. Dreith 2.55 ..... | 12.15 | |
| | | | 9,081.63 |

341 40–440.

1896.

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|---|---|---|---|
| Construction: | W. D. Seighman..... | 27.50 | |
| | Weekly wages to men..... | 61.50 | |
| | Copperas..... | 10.83 | |
| | Cooper & Cole Bros. ..... | 54.98 | |
| | Korsmeyer Co..... | 2.10 | |
| | Grote & Miller..... | 3.30 | |
| | Express on tips and pillars.. | .85 | *We* |
| | Weekly wages to men..... | 24.30 | |
| | Smith Dierks ..... | 4.60 | |
| | W. D. Seighman..... | 27.50 | |
| | Weekly wages to men..... | 32.75 | |
| | Cleaning boxes ..... | 18.75 | |
| | Weekly wages to men..... | 27.75 | |
| | W. D. Seighman..... | 26.25 | |
| | Dierks Bros. ..... | 121.61 | |
| | Straw & Cartage ..... | 4.50 | |
| | Cooper & Cole Bros..... | 33.29 | |
| | Whitebreast fire clay etc.... | 22.90 | |
| | C. E. Hedges..... | 3.25 | |
| | Weekly wages to men..... | 44.00 | |
| | J. B. Clow & Son..... | 14.70 | |
| | L. K. Holmes..... | 8.00 | |
| | Frt. on copperas ..... | 16.35 | |
| | Weekly wages to men..... | 27.60 | |
| | W. D. Seighman..... | 26.25 | |
| | Weekly wages to men..... | 79.20 | |
| | Thos. Greeley ..... | 3.75 | |
| | Weekly wages to men..... | 24.75 | |
| | W. D. Seighman..... | 26.25 | |
| | Cooper & Cole Bros..... | 20.00 | |
| | Whitebreast Coal Co..... | 8.00 | |
| | R. S. Young..... | 12.25 | |
| | Gas Lt. Journal ..... | 3.00 | |
| | Morrison Plummer & Co... | 22.15 | |
| | Weekly wages to men..... | 32.75 | |
| | 2″ pipe ..... | 300.00 | |
| | Morris Wilson ..... | 32.55 | |
| | Weekly wages to men..... | 26.00 | |
| | W. D. Seighman..... | 26.25 | |
| | Weekly wages to men..... | 40.70 | |
| | M. L. Turner..... | .50 | |
| | Weekly wages to men..... | 40.50 | |

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|---|---|---|
| | Wages cleaning box..... | 20.70 |
| | Goldstein & Hoch ..... | 3.90 |
| | Weekly wages to men ..... | 43.70 |
| | S. Shrine ..... | 3.75 |
| | W. D. Seighman..... | 26.25 |
| | Cooper & Cole Bros..... | 27.96 |
| | Whitebreast fire brick..... | 40.40 |
| | Vroorman & Hansen..... | 8.25 |
| | Weekly wages to men..... | 19.46 |
| | Men cleaning boxes..... | 150.00 |
| | Leading & Cunningham.... | 19.50 |
| | Menke & Co..... | 39.00 |
| | Whitebreast, lime ..... | 100.00 |
| | Cooper & Co. ..... | 25.00 |
| | Hansen & Sell..... | 5.25 |
| | Weekly wages to men ..... | 28.50 |
| | M. L. Turner..... | 33.75 |
| | W. D. Seighman..... | 26.25 |
| | Weekly wages to men..... | 29.25 |
| | Wm. Lawlor ..... | 130.00 |
| | Weekly wages to men..... | 58.20 |
| | W. D. Seighman..... | 26.25 |
| | Cooper & Cole Bros..... | 192.05 |
| | Whitebreast Co. ..... | 8.75 |
| | Weekly wages to men..... | 130.25 |
| 342 | Paint & Color Co..... | 1.50 |
| | Humphrey Bros. ..... | .70 |
| | Jas. Nedwick ..... | .95 |
| | Weekly wages to men..... | 81.25 |
| | Scott, cartage ..... | 1.00 |
| | Weekly wages to men..... | 46.40 |
| | W. D. Seighman..... | 26.25 |
| | Weekly wages to men..... | 84.65 |
| | John Hansen ..... | 1.05 |
| | Peter Coch ..... | 1.05 |

41–441.

1896 (Continued).

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|---|---|---|
| Construction: | Frt. on Retort Cement..... | 1.56 |
| | Weekly wages to men..... | 51.90 |
| | Fisher & W. & Turner..... | 12.00 |
| | W. D. Seighman..... | 26.25 |
| | Lin. Drug Co..... | 11.35 |
| | Whitebreast Coal Co. ..... | 14.25 |
| | Kenny Boiler Works..... | 25.80 |
| | Cooper & Cole Bros..... | 147.82 |
| | Morris & Willson..... | 20.95 |
| | Roberts & Smith..... | 11.15 |
| | Exp. on crank shaft..... | 4.65 |

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|---|---|---|
| | Scott & Turner cartage..... | 1.75 |
| | Weekly wages to men..... | 45.00 |
| | W. J. Johns Mfg. Co..... | 11.03 |
| | Express on meter ..... | .70 |
| | Western Supply Co..... | 12.20 |
| | John Way ..... | 4.50 |
| | Frt. on lead pipe..... | 2.48 |
| | Weekly wages to men..... | 16.75 |
| | W. D. Seighman..... | 26.25 |
| | Dales, stge ..... | .25 |
| | John Hilent ..... | 1.75 |
| | Weekly wages to men..... | 54.75 |
| | " ..... | 30.00 |
| | W. D. Seighman ..... | 26.50 |
| | R. L. Smith..... | .25 |
| | Weekly wages to men..... | 32.25 |
| | Cooper & Cole Bros..... | 62.63 |
| | John Roberts ..... | 10.50 |
| | R. S. Young ..... | 3.20 |
| | Whitebreast Coal Co..... | 3.75 |
| | Rumsey & Co..... | 27.91 |
| | P. H. & F. M. Roots Co.... | 36.00 |
| | McDonald & Co..... | 5.40 |
| | Progressive Age ..... | 3.00 |
| | Weekly wages ..... | 19.50 |
| | W. D. Seighman ..... | 26.25 |
| | Weekly wages ..... | 39.75 |
| | Cock & Kesler..... | 3.00 |
| | D. Sell ..... | 1.50 |
| | Weekly wages ..... | 42.00 |
| | M. L. Turner..... | 5.50 |
| | Fisher & Westover..... | 2.50 |
| | Weekly wages to men..... | 86.35 |
| | Merling 7 R. & Morris..... | 14.20 |
| | W. D. Seighman..... | 26.25 |
| | Cooper & Cole Bros..... | 29.16 |
| | Brown, cartage ..... | .25 |
| | Weekly wages to men..... | 38.75 |
| | W. D. Seighman..... | 26.25 |
| | Weekly wages to men..... | 33.00 |
| | Wages to men..... | 28.20 |
| | Weekly wages to men..... | 31.25 |
| | Thos. Greeley ..... | .75 |
| | Weekly wages to men..... | 28.25 |
| 343 | Westover Drug Co..... | 15.05 |
| | W. D. Seighman ..... | 26.25 |
| | Cooper & Co..... | 47.41 |
| | Weekly wages to men..... | 25.75 |
| | Wages to men..... | 5.25 |
| | Weekly wages to men..... | 24.25 |
| | W. D. Seighman ..... | 26.25 |

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|---|---|---|
| | Weekly wages to men..... | 18.75 |
| | Wages to men..... | 7.00 |
| | Weekly wages to men..... | 25.05 |
| | Frt. on crate meters..... | 5.00 |
| | W. D. Seighman..... | 25.25 |
| | Whitebreast Co. ..... | 21.00 |
| | Weekly wages to men..... | 25.95 |
| | John Hiber ..... | 1.95 |
| | Dierks Bros..... | 10.77 |
| | Thorp & Westover..... | 4.55 |
| | Paint & Color Co. ..... | 9.30 |
| | Cooper & Cole Bros. ..... | 48.92 |
| | Weekly wages to men..... | 42.25 |
| | Testing mains ..... | 100.00 |

42–442.

1896 (Continued).

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|---|---|---|
| Construction: | Express on Engine Repairs. | 1.30 |
| | W. D. Seighman ..... | 26.25 |
| | Weekly wages to men..... | 20.35 |
| | " ..... | 27.25 |
| | Frt. on meters..... | .60 |
| | Frt. on governor..... | 1.00 |
| | Weekly wages to men..... | 25.65 |
| | W. D. Seighman..... | 26.25 |
| | Westover & Co..... | 4.50 |
| | Baldwin Bros. ..... | 7.66 |
| | Whitebreast Coal Co. ..... | 26.45 |
| | Cooper & Cole Bros. ..... | 18.83 |
| | Weekly wages to men..... | 32.70 |
| | Maryland Meter Co. ..... | 11.00 |
| | D. McDonald & Co. ..... | 161.00 |
| | Radford & Cook & Moore... | 6.35 |
| | Dierks Bros..... | 11.60 |
| | Weekly wages to men..... | 37.30 |
| | W. D. Seighman..... | 26.25 |
| | Frt. on meters ..... | 4.50 |
| | Weekly wages to men..... | 29.50 |
| | " ..... | 54.45 |
| | W. D. Seighman..... | 26.25 |
| | Cooper & Cole Bros. ..... | 15.73 |
| | Baldwin Bros. ..... | 1.50 |
| | Kenny Boiler Works..... | 2.70 |
| | Weekly wages to men..... | 66.60 |
| | Whitebreast Coal Co..... | 7.00 |
| | Exp. on governor valve..... | 1.60 |
| | Governor valve ..... | 21.83 |
| | Weekly wages to men..... | 26.85 |



396

| | | | |
|---|---|---|---|
| | W. D. Seighman | 26.25 | |
| | H. Vroorman | 3.75 | |
| | Weekly wages | 34.10 | |
| | Weekly wages | 24.75 | |
| | | | 5,327.06 |

344 1897.

| | | | |
|---|---|---|---|
| Construction: | W. D. Seighman | 26.25 | |
| | Weekly wages to men | 39.25 | |
| | Whitebreast Coal Co. | 20.00 | |
| | Cooper & Cole Bros. | 19.06 | |
| | P. H. & F. M. Roots Co. | 15.00 | |
| | D. McDonald & Co. | 150.00 | |
| | Dierks Bros. | 26.65 | |
| | Weekly wages to men | 59.40 | |
| | Digging Services | 25.00 | |
| | Weekly wages to men | 46.35 | |
| | W. D. Seighman | 26.25 | |
| | Weekly wages to men | 18.00 | |
| | " | 12.00 | |
| | W. D. Seighman | 26.25 | |
| | Whitebreast Coal Co. | 8.75 | |
| | N. Westover | .40 | |
| | C. D. Mullen | 59.82 | |
| | Kenny Boiler Works | 12.60 | |
| | Weekly wages to men | 12.25 | |
| | Telegram & Cartage | 2.25 | |
| | Cooper & Cole Bros. | 13.60 | |
| | Weekly wages to men | 19.50 | |
| | " | 15.00 | |
| | 4" pipe | 25.00 | |
| | Weekly wages to men | 17.00 | |
| | Keens, Kale & Sharp | 5.50 | |
| | A. M. Davis Co. | 3.50 | |
| | Whitebreast Coal Co. | 14.00 | |
| | S. Caldwell | 60.00 | |
| | John Dorgan | 100.00 | |
| | Weekly wages to men | 24.50 | |
| | Cooper & Cole Bros. | 15.30 | |
| | C. D. Mullen | 150.00 | |
| | Frt. on meters | 5.75 | |
| | Frt. on coal | 200.00 | |
| | Wages to men | 17.10 | |

43–443.

1897 (Continued).

| | | | |
|---|---|---|---|
| Construction: | Weekly wages to men | 36.75 | |
| | C. D. Mullen | 275.00 | |
| | Wages to men | 22.50 | |

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|---|---|---|
| | Weekly wages to men..... | 37.80 |
| | G. W. Bonnell..... | 14.40 |
| | Weekly wages to men..... | 101.40 |
| | Candle wicks & Oil..... | 1.25 |
| | Cleaning boxes & S..... | 125.00 |
| | John Hansen..... | 5.00 |
| | B. D. Granger..... | 1.75 |
| | Weekly wages to men..... | 128.50 |
| | Whitebreast Coal Co..... | 15.00 |
| | Cooper & Co..... | 87.80 |
| | Edwards & Co..... | 4.08 |
| | Acme Boiler Comp..... | 24.48 |
| | State Journal Co..... | 27.73 |
| | Frt. On O Cutter..... | .35 |
| | Lin. Drug Co..... | 21.30 |
| | Christensen cartage..... | .25 |
| | B. D. Granger..... | .96 |
| | Adams Mfg. Co..... | 9.65 |
| 345 | Baldwin & Holland..... | .90 |
| | Weekly wages to men..... | 77.80 |
| | Baker cartage..... | .25 |
| | Att'y Fees..... | 200.00 |
| | Hedlund & Cartage..... | 1.75 |
| | 2" Pipe..... | 250.00 |
| | Weekly wages to men..... | 74.25 |
| | Frt. on meters..... | 2.80 |
| | Murphy & Gridly cartage.. | .50 |
| | Holland, cartage..... | .35 |
| | Weekly wages to men..... | 161.80 |
| | " ..... | 111.80 |
| | Frt. on lead pipe..... | 1.45 |
| | Whitebreast Coal Co. lime... | 5.50 |
| | Murry & Smith..... | .60 |
| | Ike Cresse..... | 1.75 |
| | Cooper & Cole..... | 305.71 |
| | Weekly wages to men..... | 99.25 |
| | E. Crhistensen..... | .50 |
| | McDonald & Co..... | 138.36 |
| | L. M. Rumsey Mfg. Co..... | 15.69 |
| | Grt. Wst. Mfg. Co..... | 11.50 |
| | A. Vroorman..... | 1.25 |
| | Cartage ..... | .35 |
| | Weekly wages to men..... | 55.05 |
| | Frt. on scoops..... | .60 |
| | C. E. Magoon, Att'y Fees... | 100.00 |
| | Holland, cartage..... | .25 |
| | " ..... | .65 |
| | Weekly wages to men..... | 40.50 |
| | Frt. on crate meters..... | 5.60 |
| | Weekly wages to men..... | 22.35 |
| | Thos. Fanil..... | .25 |

| | | |
|---|---|---|
| | H. H. Barth | 14.30 |
| | Baldwin Bros. | 4.63 |
| | Transfer Co. & C. A. Adams. | 1.90 |
| | Whitebreast Coal Co. | 17.65 |
| | Cooper & Cole Bros. | 107.92 |
| | Holland, cartage | .25 |
| | H. C. Babcock & Co. | 10.00 |
| | Cunningham & Twner. | 16.50 |
| | Lawlor & Virgual | 20.60 |
| | Wages to men | 37.75 |
| | S. F. Holland | .25 |
| | E. L. Baker | .25 |
| | Wages to men | 40.25 |
| | S. F. Holland | .25 |
| | Thos. Farrell | .35 |
| | Hansen & Dorman | 10.00 |
| | Gray & Newick | 8.75 |
| | Cunningham & Turner | 17.25 |
| | R. & J. Lawlor | 15.00 |
| | Baker, cartage | .25 |
| | Weekly wages to men | 64.65 |
| | Dierks Bros. | 30.72 |
| | Cooper & Cole Bros. | 73.04 |

44–444.

1897 (Continued).

| | | |
|---|---|---|
| Construction: | Block, Weber & Poop | 6.25 |
| | Kenny Boiler Works | 1.80 |
| | Weekly wages to men | 65.90 |
| | McDonald meters | 180.00 |
| 346 | Holland, cartage | .75 |
| | John Wile | 2.50 |
| | Wages to men | 73.35 |
| | John Weber | 4.25 |
| | Wages to men | 50.63 |
| | " | 41.45 |
| | Whitebreast Coal Co. | 24.50 |
| | Dierks Bros. | 8.44 |
| | Cooper & Cole Bros. | 61.79 |
| | Weekly wages to men | 36.25 |
| | Baldwin Bros. | 1.00 |
| | Lincoln Drug Co. | 12.55 |
| | Frt. on meters | 3.45 |
| | Weekly wages to men | 28.65 |
| | P. L. Kenny | 3.15 |
| | Weekly wages to men | 34.40 |
| | Frt. on lead pipe | 1.65 |
| | W. E. McKnight | 2.10 |
| | Weekly wages to men | 40.65 |

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|---|---|
| C. J. Roman | 4.25 |
| G. W. Wilcox | 15.80 |
| Tolmer & Journal Co. | 1.20 |
| Dierks Bros. | 7.36 |
| Minick Adams | 27.10 |
| Cook Witmann | 14.35 |
| Cooper & Cole Bros. | 60.09 |
| Weekly wages to men | 32.50 |
| Baker cartage | .25 |
| Rumsey & Co. | 23.06 |
| D. McDonald & Co. | 110.00 |
| Weekly wages to men | 48.30 |
| John Hansen | 3.15 |
| Kenny Boiler Works | 4.20 |
| Holland, cartage | 1.50 |
| J. Barrett | 1.25 |
| Weekly wages to men | 38.15 |
| " | 48.00 |
| A. H. Baker | .25 |
| Whitebreast Coal Co. | 14.00 |
| Lincoln Drug Co. | 21.84 |
| Cooper & Cole Bros. | 58.86 |
| Weekly wages to men | 46.30 |
| A. H. Baker | .35 |
| Humphrey Bros. | 6.00 |
| Menke Co. | 48.75 |
| Frank Holland | 1.00 |
| Smith & Baker | 1.85 |
| C. A. Adams | 4.40 |
| Weekly wages | 44.85 |
| Carveth, cartage | .75 |
| Granger, cartage | 2.00 |
| Weekly wages to men | 45.75 |
| Frt. on meters | 6.45 |
| Holland, cartage | 1.00 |
| J. L. Baldwin, cartage | .35 |
| Weekly wages to men | 71.50 |
| " | 48.50 |
| Whitebreast Coal Co. | 47.25 |
| Cooper & Cole Bros. | 67.60 |
| A. H. Baker | .25 |
| C. E. Hedges | 21.77 |
| Weekly wages to men | 44.00 |
| D. McDonald & Co. | 200.00 |
| Dierks Bros. | 7.94 |
| Kenny Boiler Works | 41.60 |
| Weekly wages to men | 69.95 |
| Ducking for tank | 2.12 |
| 347 Weekly wages for men | 37.50 |
| " | 48.75 |
| Kenny Boiler Works | 20.00 |

45–445.

1897 (Continued).

| | | | |
|---|---|---|---|
| Construction: | Weekly wages to men..... | 42.40 | |
| | Cooper & Cole Bros..... | 90.00 | |
| | Baldwin Bros..... | 1.85 | |
| | Whitebreast Coal Co..... | 7.00 | |
| | W. G. Wilcox..... | 6.65 | |
| | G. W. Bags..... | 2.00 | |
| | Weekly wages to men..... | 42.75 | |
| | C. A. Adams..... | .50 | |
| | Hauling cinders to 29th & Q | .50 | |
| | Pt. & Color Co..... | 2.00 | |
| | Weekly wages to men..... | 49.00 | |
| | Weekly wages to men..... | 54.65 | |
| | | | 6,810.45 |

1898.

| | | | |
|---|---|---|---|
| Construction: | Wm. Gergie..... | 5.00 | |
| | Weekly wages to men..... | 58.95 | |
| | Kenny Boiler Works..... | 36.25 | |
| | Cooper & Cole Brothers..... | 23.54 | |
| | Weekly wages to men..... | 36.50 | |
| | Drug Co. 4.52, Matter 4.50.. | 9.02 | |
| | Harley Baldwins..... | 3.60 | |
| | Harmer & Winchester..... | 3.50 | |
| | C. E. Magoon, Att'y Fees... | 100.00 | |
| | Weekly wages to men..... | 38.15 | |
| | L. Austen..... | 25.00 | |
| | Weekly wages to men..... | 55.80 | |
| | " ..... | 41.50 | |
| | Whitebreast Coal Co..... | 17.50 | |
| | Cooper & Cole Bros..... | 8.88 | |
| | Baldwin Bros..... | 3.85 | |
| | Weekly wages to men..... | 12.75 | |
| | C. A. Adams..... | 1.75 | |
| | Weekly wages to men..... | 21.50 | |
| | " ..... | 25.25 | |
| | G. W. Folman..... | .35 | |
| | Weekly wages to men..... | 35.25 | |
| | G. W. Wilcox..... | 11.25 | |
| | Cooper & Cole Bros..... | 56.24 | |
| | Weekly wages to men..... | 43.40 | |
| | Whitebreast fire brick..... | 32.00 | |
| | C. A. Adams..... | 3.65 | |
| | Weekly wages to men..... | 74.50 | |
| | S. F. Holland..... | 1.50 | |
| | Frt. Car Sawdust..... | 10.40 | |
| | Weekly wages to men..... | 55.00 | |
| | " ..... | 56.75 | |

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|---|---|---|
| | John Gray | 1.50 |
| | Frt. on crate meters | 3.72 |
| | B. & M. car sawdust | 4.00 |
| | F. Holland, cartage, & cinders | 2.25 |
| | Whitebreast Coal Co | 25.43 |
| | Lincoln Drug Co | 82.24 |
| | Weekly wages to men | 69.05 |
| | Dybbro & Echhart | 8.75 |
| 348 | Dierks Bros | 5.40 |
| | Cooper & Cole Bros | 76.77 |
| | D. McDonald & Co | 120.00 |
| | Oster Die | 1.90 |
| | Clow & Son | 12.00 |
| | Weekly wages to men | 49.65 |
| | Frt. on gas meters | 3.25 |
| | Weekly wages to men | 30.25 |
| | Car Pusher | 10.00 |
| | Hauling Blocks | 2.50 |
| | Frt. on Gilison Fixtures | 3.35 |
| | Weekly wages to men | 94.10 |
| | Frt. on Gibson Fixtures | 1.34 |
| | Frt. on Prepair Meters | .85 |
| | Men hunting leaks | 23.00 |
| | Weekly wages to men | 72.30 |
| | " | 15.05 |
| | Terrel, cartage | .50 |

46–446.

1898 (Continued).

| | | |
|---|---|---|
| Construction: | Western Supply Co | 17.06 |
| | Cooper & Cole Bros | 77.39 |
| | Folman & Wilcox | 13.40 |
| | Harmon & Worchester | 2.75 |
| | Weekly wages to men | 59.00 |
| | A. L. Shader | .90 |
| | Carting, Dierks | .50 |
| | McDonald & Co | 70.67 |
| | Prepaid meters | 32.50 |
| | Nat'l Tube Works | 484.00 |
| | Weekly wages to men | 104.25 |
| | Kimball & Baldwin Bros | 2.20 |
| | Billmeyer & Co | 40.00 |
| | Sam Hartzell | 18.00 |
| | Weekly wages to men | 102.60 |
| | B. & M" | 59.80 |
| | Bacon, cartage | .50 |
| | Pt. & C. Co., Baker, c't'g | 6.35 |
| | G. A. Folmer | 9.30 |

| | | |
|---|---|---|
| | Harmer & Winchester..... | 1.00 |
| | Baker, Schrine & Block.... | 1.75 |
| | Whitebreast Coal Co..... | 28.00 |
| | Menke & Co..... | 48.75 |
| | Gibson Gas F. Co..... | 196.06 |
| | Weekly wages to men..... | 60.15 |
| | Western Supply Co..... | 9.12 |
| | Frt. on rate meters..... | 4.15 |
| | Cooper & Cole Brothers..... | 181.66 |
| | Weekly wages to men..... | 42.50 |
| | Hedges & Pierce..... | 4.82 |
| | Hansen, cartage..... | .35 |
| | Weekly wages to men..... | 63.20 |
| | D. W. Camp & Son..... | 40.00 |
| | Frt. on gas meters..... | 4.92 |
| | M. Murphy, cartage..... | 1.00 |
| | Weekly wages to men..... | 45.00 |
| | " ..... | 42.50 |
| | Frt. on lead pipe..... | 1.44 |
| | Merchants Trans. Co..... | .50 |
| | Whitebreast Coal Co..... | 32.25 |
| | Cooper & Cole Bros..... | 205.94 |
| | Weekly wages to men..... | 48.75 |
| 349 | J. C. Chase, cartage..... | 2.50 |
| | C. C. Clements, cartage..... | .50 |
| | G. W. Folmar..... | 7.05 |
| | Rumsey & Co..... | 19.08 |
| | Gibson Fix. Co..... | 12.13 |
| | Baldwin Bros..... | 1.56 |
| | Hauling dirt 26th & R..... | .75 |
| | Frank Luck..... | 1.90 |
| | Holland & Chase, cartage... | 2.50 |
| | Weekly wages to men..... | 51.90 |
| | Fitzgerald, ducking..... | 3.10 |
| | McDonald & Co..... | 270.00 |
| | Weekly wages to men..... | 35.75 |
| | Frt. on meters..... | 5.45 |
| | Weekly wages to men..... | 43.75 |
| | M. Janowitz..... | 9.00 |
| | Holland & Pierce, cartage.. | 2.00 |
| | Baldwin Bros..... | 4.62 |
| | H. Bauer..... | 3.50 |
| | Paint & Color Co..... | 3.20 |
| | Rudge & Morris..... | 8.00 |
| | D. W. Camp..... | .50 |
| | Geo. Pierce, cartage..... | 1.50 |
| | Weekly wages..... | 71.50 |
| | Hansen, cartage ..... | .25 |
| | Cooper & Cole Bros..... | 149.75 |
| | Holland, cartage..... | 1.45 |

| | | |
|---|---|---|
| | Weekly wages to men..... | 45.65 |
| | Thos. Greeley..... | 1.25 |
| | Frank Holland, cartage.... | 1.00 |
| | Weekly wages to men..... | 52.35 |
| | Telegram for meters..... | .40 |
| | Weekly wages to men..... | 57.50 |
| | Frt. on meters..... | 2.30 |

47–447.

1898 (Continued).

| | | |
|---|---|---|
| Construction: | G. N. Folmar..... | 4.70 |
| | Transfer Co..... | 3.75 |
| | Frt. on meters..... | 4.16 |
| | Weekly wages to men..... | 74.45 |
| | G. N. Follmar..... | 1.50 |
| | Chris. Overton..... | .75 |
| | Cooper & Cole Bros..... | 100.00 |
| | Weekly wages to men..... | 95.50 |
| | " ..... | 87.15 |
| | McDonald, Meters..... | 360.00 |
| | Weekly wages to men..... | 39.45 |
| | Express on Oster Dies..... | .45 |
| | Frt. on lead pipe..... | 1.65 |
| | Frt. on gas meters..... | 4.75 |
| | Weekly wages to men..... | 43.75 |
| | Adams Mfg. Co..... | 10.05 |
| | Rumsey & Co..... | 24.69 |
| | Oster Dies ..... | 5.25 |
| | Wire Brooms..... | 21.00 |
| | McDonald & Co..... | 150.00 |
| | Weekly wages to men..... | 26.90 |
| | Cooper & Cole Bros..... | 225.52 |
| | A. H. Baker..... | .25 |
| | Weekly wages to men..... | 74.55 |
| 350 | G. N. Follmar..... | 4.35 |
| | Weekly wages to men..... | 37.25 |
| | Frt. on meters..... | 3.31 |
| | Murphy, cartage..... | .50 |
| | Weekly wages to men..... | 68.55 |
| | M. Janowitz..... | 22.50 |
| | W. N. Rehlaender..... | 1.95 |
| | Rep'y Scales..... | 25.00 |
| | Whitebreast Coal Co..... | 19.75 |
| | Humphrey & Rudge & M... | 30.10 |
| | A. B. Baker, cartage..... | .25 |
| | A. L. Shader..... | 1.00 |
| | Cooper & Cole Bros..... | 62.90 |

| | | | |
|---|---|---|---|
| | Weekly wages to men..... | 61.40 | |
| | " ..... | 43.75 | |
| | " ..... | 78.00 | |
| | " ..... | 49.25 | |
| | Martin Lumber Co..... | 6.22 | |
| | Lincoln Drug Co..... | 15.00 | |
| | J. O. Buck..... | 7.20 | |
| | Pt. & Color Co..... | 21.81 | |
| | Weekly wages..... | 39.00 | |
| | Sam Hartzell..... | 10.00 | |
| | Whitebreast Coal Co..... | 7.40 | |
| | R. L. Smith..... | .20 | |
| | D. McDonald & Co..... | 100.00 | |
| | Cooper & Cole Bros..... | 40.80 | |
| | Weekly wages to men..... | 30.95 | |
| | " ..... | 16.50 | |
| | " ..... | 22.80 | |
| | " ..... | 40.60 | |
| | M. Janowitz..... | 59.11 | |
| | | | 6,427.28 |

1899.

| | | | |
|---|---|---|---|
| Construction: | Adams ..... | 2.75 | |
| | C. E. Hedges..... | 7.36 | |
| | H. W. Exley..... | 2.95 | |
| | Wittman & Co..... | 5.60 | |
| | Whitebreast Coal Co..... | 27.99 | |
| | Cooper & Cole Bros..... | 79.00 | |
| | Weekly wages to men..... | 71.80 | |
| | " ..... | 35.70 | |
| | " ..... | 102.80 | |
| | " ..... | 113.00 | |
| | Baldwin Bros..... | 13.09 | |
| | Weekly wages to men..... | 44.00 | |



1899 (Continued).

| | | |
|---|---|---|
| Construction: | W. H. Exley..... | 21.70 |
| | Dierks Bros. & H. Bros..... | 4.75 |
| | Lincoln Drug Co..... | 19.95 |
| | Cooper & Cole Bros..... | 38.83 |
| | Weekly wages to men..... | 38.05 |
| | C. A. Adams..... | 28.65 |
| | Weekly wages to men..... | 30.25 |
| | A. L. Shader..... | 1.30 |
| | Weekly wages to men..... | 39.00 |

| | | |
|---|---|---|
| | Whitebreast Coal Co..... | 5.25 |
| 351 | Weekly wages to men..... | 63.85 |
| | Cooper & Cole Bros. ..... | 43.42 |
| | Dierks Bros. ..... | 15.98 |
| | Harris, cartage ..... | .75 |
| | Weekly wages ..... | 54.80 |
| | " ..... | 50.25 |
| | " ..... | 36.65 |
| | " ..... | 55.75 |
| | John Vergaal ..... | 16.00 |
| | Pt. & Color Co. ..... | 4.37 |
| | W. H. Exley ..... | 12.45 |
| | Cooper & Cole Bros..... | 51.72 |
| | Weekly wages to men..... | 41.50 |
| | R. Williamson & Co. ..... | 26.60 |
| | Weekly wages ..... | 56.50 |
| | " ..... | 98.40 |
| | Cartage ..... | 1.00 |
| | Weekly wages to men..... | 131.90 |
| | Frt. on meters..... | 4.60 |
| | W. H. Exley ..... | 8.60 |
| | Weekly wages ..... | 112.75 |
| | Adams Mfg. Co. ..... | 23.90 |
| | D. N. Camp ..... | 125.00 |
| | Cooper & Cole Bros. ..... | 242.33 |
| | Weekly wages ..... | 105.25 |
| | Thos. Graham ..... | 1.50 |
| | Weekly wages ..... | 117.00 |
| | Frt. on meters ..... | 4.50 |
| | Smelting Co. lead ..... | 100.00 |
| | Frt. on lead pipe..... | 2.76 |
| | Weekly wages to men..... | 198.00 |
| | Brown, cartage ..... | .35 |
| | C. S. Hart ..... | 347.25 |
| | Dirks Bros. R. S. Young.... | 3.53 |
| | Rehlaender Cook & Co..... | 1.95 |
| | Rudge & Morris ..... | 4.97 |
| | Lincoln Drug Co. ..... | 20.13 |
| | Weekly wages to men..... | 137.90 |
| | Cooper & Cole Bros. ..... | 491.00 |
| | Whitebreast Coal Co. ..... | 6.75 |
| | Clark Meter Prover ..... | 10.00 |
| | Rumsey & Co. ..... | 38.01 |
| | McDonald & Co. ..... | 310.10 |
| | Weekly wages to men..... | 117.75 |
| | West. Supply Co. ..... | 50.00 |
| | Weekly wages to men..... | 178.25 |
| | Fagan, cartage ..... | 1.50 |
| | Telegram for meters ..... | .40 |
| | M. Murphy, cartage ..... | .40 |

| | | |
|---|---|---|
| | Weekly wages to men..... | 165.75 |
| | Frt. on gas meters ..... | 5.15 |
| | Nyant & Mohr. ..... | 1.50 |
| | Cartage, Drug Co. ..... | 5.41 |
| | Weekly wages ..... | 110.00 |
| | Western Supply Co. ..... | 163.64 |
| | R. S. Young, sand..... | 4.00 |
| | Cartage ..... | .75 |
| | Whitebreast Coal Co. ..... | 47.90 |
| | Cooper & Cole Bros. ..... | 468.61 |
| | W. H. Exley ..... | 13.25 |
| | Weekly wages ..... | 90.25 |
| | Adams Mfg. Co. ..... | 3.75 |
| | Weekly wages to men..... | 137.50 |
| | " ..... | 165.00 |
| | Chas. Reis cartage ..... | 3.25 |
| | Weekly wages to men ..... | 161.85 |



1899 (Continued).

| | | |
|---|---|---|
| Construction: | Mayer Bros..... | 11.45 |
| | Whitebreast Coal Co..... | 18.55 |
| | Fotch & Co..... | 9.90 |
| | Lincoln Drug Co..... | 12.41 |
| | W. H. Exley..... | 12.95 |
| | Blador, cartage..... | .50 |
| | Cooper & Cole Bros..... | 228.44 |
| | V. Carrigan..... | 1.50 |
| | R. S. Young..... | 24.25 |
| | C. E. Hedges..... | 55.76 |
| | Weekly wages to men..... | 246.50 |
| | Transfer Co..... | 1.50 |
| | Wittman & Co..... | 1.50 |
| | Landers, carting dirt..... | 1.25 |
| | Platt, cartage..... | .25 |
| | Cartage and freight on meters | 6.10 |
| | McDonald & Co. meters.... | 157.50 |
| | D. Broadrich..... | .90 |
| | W. J. Gardner..... | .30 |
| | Weekly wages to men..... | 189.00 |
| | " ..... | 148.50 |
| | " ..... | 100.50 |
| | R. S. Young..... | 39.75 |
| | Weekly wages to men..... | 125.85 |
| | Wittman & Co..... | 4.65 |
| | Western Supply Co..... | 7.30 |
| | Pt. & Color Co..... | 6.17 |
| | Dierks Bros..... | 54 82 |
| | Whitebreast Coal Co..... | 36.00 |

| | | | |
|---|---|---|---|
| | Weekly wages to men..... | 96.35 | |
| | McDonald & Co..... | 157.50 | |
| | Cooper & Cole Bros..... | 236.10 | |
| | W. H. Exley..... | 13.20 | |
| | Frt. on crate meters..... | 5.35 | |
| | Weekly wages..... | 92.75 | |
| | " ..... | 76.35 | |
| | Frt. on lead pipe..... | 2.20 | |
| | Weekly wages to men..... | 92.25 | |
| | Western Supply Co..... | 5.28 | |
| | Frt. on Gas Meters..... | 4.33 | |
| | Pt. & Color Co..... | 2.60 | |
| | Cooper & Cole Bros..... | 203.87 | |
| | R. S. Young..... | 20.00 | |
| | Weekly wages to men..... | 102.00 | |
| | American Meter Co..... | 325.50 | |
| | Rumsey & Co..... | 34.65 | |
| | Weekly wages to men..... | 139.50 | |
| | Dennis Long & Co..... | 200.00 | |
| | Weekly wages to men..... | 122.25 | |
| | " ..... | 53.25 | |
| | Farrel, cartage..... | .50 | |
| | Frt. on gas meters..... | 4.85 | |
| | Lincoln Drug Co..... | 20.10 | |
| | Weekly wages to men..... | 53.25 | |
| | C. A. Adams..... | 6.25 | |
| | Cooper & Cole Bros..... | 246.36 | |
| | Weekly wages to men..... | 42.00 | |
| | " ..... | 102.00 | |
| | " ..... | 47.25 | |
| | Laclede Fire B. Mfg. Co.... | 865.80 | |
| | Weekly wages to men..... | 67.50 | |
| | Cooper & Cole Bros..... | 164.44 | |
| 353 | McDonald & Co..... | 168.00 | |
| | Weekly wages to men..... | 81.90 | |
| | Car saw-dust..... | 22.00 | |
| | Weekly wages to men..... | 155.30 | |
| | Ed Snyder..... | 4.80 | |
| | Fotch & Co..... | 26.40 | |
| | Weekly wages to men..... | 115.36 | |
| | Frt. on meters..... | 4.33 | |
| | Weekly wages to men..... | 68.50 | |
| | | | 11,480.62 |

50–450.

1900.

| | | | |
|---|---|---|---|
| Construction: | Searle & Chapen..... | 5.05 | |
| | Lincoln Drug Co..... | 24.83 | |

| | |
|---|---|
| Dierks Lumber Co..... | 18.00 |
| Weekly wages to men..... | 56.60 |
| Cooper & Cole Bros..... | 91.40 |
| Becker Bros..... | 35.00 |
| Williamson & Co..... | 19.30 |
| Weekly wages to men..... | 53.40 |
| Laclede Slip Grates..... | 9.00 |
| Weekly wages to men..... | 79.95 |
| Rivets ..... | .55 |
| Weekly wages to men..... | 65.70 |
| F. E. Parks..... | 6.00 |
| R. Lentka..... | 18.00 |
| Frt. on solder..... | .60 |
| Weekly wages to men..... | 72.60 |
| Cooper & Cole Bros..... | 48.84 |
| McDonald & Co..... | 131.25 |
| Rumsey & Co..... | 17.93 |
| Weekly wages to men..... | 90.15 |
| " ..... | 30.60 |
| R. L. Smith..... | 25.50 |
| Weekly wages to men..... | 97.25 |
| " ..... | 89.40 |
| R. Lentka..... | 20.00 |
| C. E. Hedges..... | 78.86 |
| Cooper & Cole Bros..... | 43.12 |
| Weekly wages to men..... | 55.70 |
| Frt. retort cement..... | .60 |
| Babcock & Co..... | 9.50 |
| Weekly wages to men..... | 63.15 |
| " ..... | 117.40 |
| " ..... | 158.15 |
| Lincoln Hardware Co..... | 1.90 |
| Humphrey Bros..... | 10.95 |
| R. Lentka..... | 18.91 |
| Weekly wages..... | 193.20 |
| R. L. Smith..... | .80 |
| R. Williamson..... | 38.57 |
| Baum Hardw'e Co..... | 1.00 |
| J. H. McKee & Co..... | 3.60 |
| Cooper & Cole Bros..... | 173.03 |
| R. S. Young..... | 21.00 |
| Frt. on meters..... | 4.50 |
| Weekly wages to men..... | 118.80 |
| " ..... | 72.75 |
| Dray and freight on lead pipe ..... | 3.11 |
| Weekly wages to men..... | 69.00 |
| Young and Lincoln Hardware Co..... | 7.40 |
| C. E. Hedges..... | 44.97 |

| | | |
|---|---|---|
| | W. C. Woore, cartage..... | 1.00 |
| 354 | Weekly wages to men..... | 96.00 |
| | Frt. on meters..... | 4.07 |
| | Cooper & Cole Bros..... | 225.75 |
| | Rumsey & Co..... | 33.40 |
| | D. McDonald & Co..... | 147.00 |
| | Weekly wages to men..... | 132.75 |
| | " ..... | 4.50 |
| | Weekly wages to men..... | 205.00 |
| | " ..... | 150.00 |
| | Whitebreast Coal Company. | 2.80 |
| | Weekly wages to men..... | 190.50 |
| | Cooper & Cole Bros..... | 387.97 |
| | McDonald & Co..... | 131.25 |
| | American Meter Co..... | 147.00 |
| | Frt. on meters..... | 4.16 |
| | Weekly wages to men..... | 212.55 |
| | Lawlor, Expense to St. Louis. | 50.00 |
| | Weekly wages to men..... | 285.75 |
| | Cartage ..... | .50 |

51–451.

1900 (Continued).

| | | |
|---|---|---|
| Construction: | Weekly wages to men..... | 363.85 |
| | F. Skinner..... | 3.15 |
| | Frt. on lead pipe..... | 1.45 |
| | Weekly wages to men..... | 215.15 |
| | Frt. on gas meters..... | 5.52 |
| | Humphrey Bros..... | 5.83 |
| | C. A. Ad-ms..... | 28.40 |
| | N. Y. Safety Repairs..... | 5.33 |
| | American Meter Co..... | 189.00 |
| | McDonald & Co..... | 136.50 |
| | Cooper & Co..... | 1,356.23 |
| | Frt. on meters..... | 5.10 |
| | J. C. Van Riper..... | 47.50 |
| | C. E. Hedges..... | 58.83 |
| | J. C. Van Riper..... | 28.80 |
| | Express on rubber bags.... | .30 |
| | Weekly wages to men..... | 448.25 |
| | J. C. Van Riper..... | 50.00 |
| | Lincoln Hardware Co..... | 11.20 |
| | R. L. Caper..... | 2.55 |
| | Frt. on meters and lead pipe. | 7.20 |
| | J. C. Van Riper..... | 50.00 |
| | Cartage and Freight on Meters ..... | 3.10 |
| | C. Bauer..... | 4.05 |

| | | |
|---|---|---|
| | Baker, cartage | .25 |
| | Weekly wages to men | 545.10 |
| | Stephen Carveth | 1.25 |
| | Steve Evans | 5.25 |
| | Chas. Johnson | 6.00 |
| | Weekly wages to men | 693.30 |
| | Wages to men | 14.65 |
| | Wages to men laid off | 30.75 |
| | Lincoln Drug Co. | 26.63 |
| | Wages to men laid off | 30.00 |
| | D. W. Camp | 12.00 |
| | Merchants Transfer | 10.50 |
| | Frt. on meters, Geo. Else | 9.70 |
| | C. A. Adams | 51.82 |
| | G. N. Folmer | 12.40 |
| | Weekly wages to men | 738.30 |
| | Little & Hayes | 25.10 |
| | G. W. Wilcox | 7.90 |
| | Lincoln Hardware Co. | 16.90 |
| 355 | Dierks Bros. | 17.19 |
| | Humphrey Bros. | 27.65 |
| | Ruge & Co. | 26.65 |
| | Western Tel. Co. | 12.72 |
| | Western Supply Co. | 599.40 |
| | Wages to men laid off | 23.15 |
| | McDonald & Co. | 453.21 |
| | American Meter Co. | 189.00 |
| | Goodrich Gas Bags | 3.00 |
| | Rumsey & Co. | 44.23 |
| | P. Sennie | 5.25 |
| | Weekly wages to men | 637.10 |
| | Marks & Hagenow | 45.00 |
| | Frt. on car retorts | 60.00 |
| | R. S. Young | 353.20 |
| | Cooper & Cole Bros. | 1,291.70 |
| | Sundried | 517.45 |
| | " | 525.04 |
| | Munson & K. Tel. Co. | 1.50 |
| | Freight on retorts &c | 83.30 |
| | Sundries | 15.51 |
| | Hunter Printing Co. | 7.50 |
| | Wakefield & Hammell | 24.00 |
| | Frt. on meters | 5.80 |
| | Wages to men | 9.25 |
| | Oil and care fare | 1.00 |
| | Weekly wages to men | 540.85 |
| | R. A. Luedtke | 13.75 |
| | Brown Lumber Co. | 19.20 |
| | R. S. Young | 38.25 |
| | Labor | 200.00 |

52–452.

1900 (Concluded).

| | | | |
|---|---|---|---|
| Construction Work: | Whitebreast Coal Co.. | 17.50 | |
| | Weekly wages to men..... | 549.40 | |
| | R. H. Lawlor..... | 4.00 | |
| | B. W. Richards..... | 55.00 | |
| | C. A. Adams..... | 173.92 | |
| | C. E. Hedges..... | 19.31 | |
| | Chas. Dorman..... | 10.50 | |
| | Wages to men..... | 22.75 | |
| | Weekly wages to men..... | 464.50 | |
| | Frt. on gas meters..... | 6.05 | |
| | Cooper & Cole Bros..... | 1,948.04 | |
| | D. McDonald & Co..... | 456.75 | |
| | L. M. Rumsey Mfg. Co..... | 30.06 | |
| | Frt. on gas meters..... | 4.75 | |
| | Johnson, cartage..... | .75 | |
| | H. Kriger, laid off..... | 2.25 | |
| | Wages to men laid off..... | 21.00 | |
| | Johnson & Platt, cartage.... | 1.50 | |
| | Weekly wages to men..... | 521.95 | |
| | Wages to men laid off..... | 49.10 | |
| | " ..... | 16.00 | |
| | " ..... | 26.95 | |
| | Weekly wages to men..... | 181.85 | |
| | Frt. on lead pipe..... | 2.88 | |
| | | | $22,538.31 |

1901.

| | | | |
|---|---|---|---|
| Construction: | New Mains..... | 12,187.31 | |
| | New Services..... | 17,311.20 | |
| | New Tar Well..... | 708.44 | |
| | New Scrubber..... | 1,914.76 | |
| | New Benches..... | 6,278.80 | |
| | New Imps..... | 1,945.17 | |
| | New Meters & Conns..... | 7,731.56 | |
| | New Office Furn. & Fix..... | 120.00 | |
| | New Gauge..... | 54.00 | |
| | New Works..... | 5,092.61 | |
| | | | 53,343.85 |

356

1902.

| | | | |
|---|---|---|---|
| Construction: | New Water Gas Set | 7,466.57 | |
| | Station Meter | 5.75 | |
| | Gas Works Wiring | 84.83 | |
| | Coke Screen | 110.47 | |
| | New Tar Well | 193.28 | |
| | Street Mains | 23,954.47 | |
| | New Services | 15,672.61 | |
| | Meters & Connections | 6,811.22 | |
| | Fuel Connections | 1,125.35 | |
| | | | 55,424.53 |

1903.

| | | | |
|---|---|---|---|
| Construction: | New Mains | 5,619.78 | |
| | New Services | 8,979.50 | |
| | New Meters & Connections | 6,311.03 | |
| | New Tar Plant | 255.37 | |
| | New Office | 1,466.18 | |
| | New Foul Main | 23.39 | |
| | New Well | 42.75 | |
| | Gas Works Wiring | 10.09 | |
| | New Storeroom | 380.49 | |
| | Gas Works Addition | 65.00 | |
| | Fuel Appl. Connections | 511.09 | |
| | | | 23,664.67 |

1904.

| | | | |
|---|---|---|---|
| Construction: | Gas Works | 1,895.64 | |
| | New Mains | 4,198.09 | |
| | New Services | 7,874.45 | |
| | New Meters & Connections | 4,957.62 | |
| | Office Furn. & Fix | 269.57 | |
| | Gas Works Wiring | 49.31 | |
| | New Blower | 677.76 | |
| | New Sewer | 272.72 | |
| | Economizer | 143.93 | |
| | | | 20,359.09 |



1905.

| | | |
|---|---|---|
| Construction: | Gas Works | 1,569.70 |
| | New Mains | 8,524.30 |
| | New Services | 8,042.30 |
| | New Meters & Connections | 241.42 |
| | Office Furn. & Fix | 305.39 |
| | Gas Works wiring | 70.87 |

357

| | | | |
|---|---|---|---|
| | New Blower | 433.46 | |
| | Economizer | 1,033.57 | |
| | Coke Shutes | 695.23 | |
| | | | $20,916.24 |

1906.

| | | | |
|---|---|---|---|
| Construction: | Gas Works | 2,556.57 | |
| | New Mains | 6,341.56 | |
| | New Services | 4,866.26 | |
| | New Meters & Conns | 546.43 | |
| | Office Furn. & Fix | 321.50 | |
| | | | $14,632.32 |

1907.

| | | | |
|---|---|---|---|
| Construction: | Gas Works additions | $522.23 | |
| | Street Main Extensions | 1,844.02 | |
| | New Service pipes | 2,537.36 | |
| | Meters and Connections | 887.02 | |
| | Office Furniture and Equipment | 359.51 | |
| | | | $6,150.14 |

358 Page 579, Printed Record.

EXHIBIT #130.

| | | | |
|---|---|---|---|
| 150. | Undivided Profits | $110,040.00 | |
| 286. | To Interest on Bonds | ..... | $110,040.00 |
| 287. | Sundries: To Profit & Loss | ..... | 246,840.71 |
| 150. | Undivided Profits | $117,365.03 | |
| 135. | Western Gas Construction Co | 475.68 | |
| 3. | Inventory | 129,000.00 | |
| 287. | Profit & Loss: To Sundries | 626,775.75 | |
| 56. | Capitol National Bank | ..... | 11,775.75 |
| 139. | Additional Stock | ..... | 450,000.00 |
| 300. | Bond Dividend | ..... | 165,000.00 |
| 395. | Gas Stoves | 378.30 | |
| 397. | To Stove Rent | ..... | 378.30 |

472. In the Circuit Court of the United States for the District of Nebraska, Lincoln Division.

THE LINCOLN GAS & ELECTRIC LIGHT COMPANY, Complainant,

vs.

THE CITY OF LINCOLN, NEBRASKA; FRANCIS W. BROWN, Mayor, et al., Defendants.

UNITED STATES OF AMERICA,
*District of Nebraska,*
*Lincoln Division, ss:*

I, Myron E. Wheeler, Examiner, hereby certify that the foregoing testimony in the above entitled case was taken before me, at the times and places in the record thereof indicated; that before testifying, each of the several witnesses was by me severally and duly sworn to tell the truth, the whole truth, and nothing but the truth; that said testimony was taken in short-hand, and by me transcribed, and by consent of parties the signatures of the respective parties to their extended depositions, was waived.

MYRON E. WHEELER,
*United States Examiner.*

Chgs. $76.20.

Endorsed on cover: File No. 21,744. Nebraska C. C. U. S. Term No. 83. The Lincoln Gas & Electric Light Company, appellant, vs. The City of Lincoln et al. Filed July 3, 1909. File No. 21,744.

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359 HENRY I. LEA, being first duly sworn, testified on behalf of the plaintiff as follows: Page- 20 to 513, Volume 1, Original Record.

Direct examination by Mr. Strode:

I live in Chicago. I am a consulting gas engineer, and have been since the Spring of 1907. I have been in the gas engineering business continually since 1896. My first experience was with the Gas Company at Madison, Wisconsin. The first year my duties were of a clerical nature. The second year I was works foreman, and the next year I was works superintendent. I was next at Peoria, Illinois. I was superintendent of construction of a new plant. I went there in the latter part of 1899, and built a new plant and was turning out gas the following spring. Before we could start construction we had to tear down a whisky distillery. I was in charge of that work until all of the new work was installed, and the plant was actually making gas. I did not put in the distribution system. I next went to Fon Du Lac, Wisconsin. I was superintendent and manager of the company there. The capacity of that plant was 100,000 to 150,000 cubic feet a day. After four or five months there I next went to Ottumwa, Iowa to extend a distribution system and to do some remodeling. While there I also had charge of some minor alterations at Keokuk, Iowa. I was next sent to Evanston, Illinois, by the same people as superintendent of distribution the first year. The second year I was general superintendent and the third year I was made manager and remained manager until a change of ownership. The capacity of the Evanston property was 650,000 cubic feet per day. I next went to the Division Street Station of Chicago, one of the plants owned by the People's Gas, Light & Coke Company. Their capacity was between 9,000,000 and 10,000,000 feet per day. It was all water gas. At Evanston the plant was coal and water gas. After leaving Chicago I have been connected with producing gas compan-*ys* until I opened my office in Chicago in 1907. I went to

360 Fort Wayne, Indiana, as Assistant to the President and Chief Engineer of the Western Gas & Construction Company, which was devoted exclusively to building gas works apparatus for coal and water gas and coke oven gas plants. There they had shops employing about 450 men for this work. I remained there about two years and then went to Pittsburg for George Westinghouse. I was placed in charge of an experimental gas house which had been in use for seven years, put up for the purpose of developing gas producers to be used in the place of steam engines. This plant had not reached any successful commercial stage, and I was placed in charge of the work. I had to build my own organization, and had no limit on men, methods or money. While there I brought out three types of producers that are now being sold by the Westinghouse Machine

Company. When I left Pittsburg, we had eleven producers gas plants of my design in successful operation outside of Pittsburg. After leaving these people, I opened my office as Consulting Engineer in Chicago.

I have made valuations for banks, bond houses, Gas Compan-*ys* and individuals of properties having reproduction cost today of more than $110,000,000. My work has been in something over seventy different cities. I have also made other examinations for companies who were having operating difficulties. The difficulties in their plants, and I have made examination of properties to determine whether changes in method of equipment would be advisable. I have designed equipment for manufacture of gas apparatus. I have designed gas plants and have constructed them. I am constructing one now. I have prepared designs for plants which are not in course of construction this year. This work has not only covered manufacturing plants but the distribution system as well, in a number of cases. My work also has covered oil gas, coal gas, water gas, coke ovens and I have done considerable work in connection with natural gas properties. I have been employed here in connection with the property of the Lincoln Gas Company. I first came here February 18th for the purpose of determining what property was here in the service of the public and arriving at its valuation. I first made a general inspection of the gas plant while I was here and outlined with Mr. Broadnax the general scheme for the preparation of a detailed inventory of all the physical equipment of the Company. In making the detailed inventory I had them go over
361 the plans specifically, taking each building and measuring it and determining the materials from which it was made and had them arrive at the actual quantity of brick, concrete and lumber in each building. The plan was to determine the kind, size and number of the various types of gas equipment. The plan was to determine the number of feet of each kind and size of pipe used for street mains, together with the nature of the soil and kind of pavement, if any, over each main. The total number of house services was ascertained, their average length, size and the number of service, and under which kind of pavement. The number of stub services, their average leng*h*th and diameter and whether or not under pavement. The number, size and kind of pressure regulators, and all service boxes, stop cocks, valves and drip pots, railway and steam railroad crossings. The number, size and kinds of meters both in use and in stock. In fact the plan was to make as complete a list as possible of all the items of physical equipment. This data was assembled from the property itself. This work was done by Mr. Broadnax and the men working under him from the general plan that he and I agreed upon when I was here.

The data furnished by Mr. Broadnax was in considerable detail, for instance each building submitted was described and the quantities of brick work, concrete and footings, if any, the number of feet of lumber or other material that entered into the building was all given in great detail. These quantities were worked out in this way on each building. The equipment and foundation were all minutely

described and by me identified. The distribution system was handled the same way. I also made an investigation of the gross receipts, operating expenses and net receipts from the records of the Gas Company for the past ten years and have examined carefully all of the details of income and operating expenses. Mr. Broadnax furnished the details of the property and I placed the value upon it. In determining the value and extent of the property I make a practice of dividing the property in four groups. These four groups are real estate, buildings, works equipment and distribution system. These four groups will cover all of the physical equipment except that which goes into working capital. We have prepared a report showing the valuation of all the physical properties of this company, including the valuation of the real estate but I did not prepare
362 the value of the real estate myself. I have no knowledge of local real estate value, and I have not submitted what I think local real estate is worth, except that I have made inquiries and have put in the valuation at what I think it is worth, and have put in figures subject to correction. In the valuation of the buildings I applied to the units of quantity, such prices as I found through local inquiry and experience in surrounding cities to be fair.

In view of the question here, which is from my standpoint, a reproduction of a new plant, I have taken into consideration what you would have to pay for material of a given kind throughout the period of construction for reproducing this property. As to valuation on works equipment there is no concern in Lincoln manufacturing it, and my views are governed by the sale price of buying or manufacturing the equipment around the country. My figures are based on the present day valuation with a reasonable period required for construction. In valuing the distribution system we can get closer to the local prices for a guide as there is pipe sold in Lincoln. As to the element of labor, I have inquired into local labor conditions and have given my estimates accordingly. I have first determined what I call the net construction cost, which is the cost of the contractor to the company, for instance if he sells you a wagon for $100, then $100 is the net construction cost of that wagon. I have next determined the reproduction cost. That is the net construction cost, plus the overhead charges incident to the construction. The items of engineering, supervision, loss of interest during construction, taxes during construction, casualty, liability, ommissions and contingencies all come between the net construction and the total reproduction cost. I next arrived at the present value of the property. The present value is always less than the reproduction cost. The present value takes into account the depreciation which should be taken from the reproduction cost. I have determined the amount of going value that is to be added to the physical properties on account of their being a going concern. I have also determined the amount of depreciation in detail. I have also prepared and have here in this report a list of the real estate. It is found under Exhibit G. In one instance there is a small cottage included with the real estate as a part of its value but this list does not include any improve-
363 ments such as the gas plant itself or other buildings. The overhead as I use it is not added to the real estate net con-

struction cost, but a fair and reasonable present value of the real estate is $21,700. This is shown in Subdivision "G", identified here as Exhibit "7-*a*." The net construction cost of the buildings is in my report in the pages following Exhibit "H" extending to Exhibit "I". It is identified as Exhibit "7-*b*." Exhibit "7-*b*" and the pages following to the parts marked "I" gives the net construction cost of all of the buildings of the gas department of the company. It gives the dimensions and the details of the cost of materials, labor and excavation, showing the kind of material and everything pertaining to the construction of the buildings. The total construction cost of the purifying house is $16,620.00, Exhibit "7-*b*2"; of the generator house, $3,739.00, Exhibit "7-*b*3"; Retort, $7,689.00, Exhibit "7-*b*4": The meter shop and booster house, $2,616.00, Exhibit "7-*b*5"; Coal shed $1,793 Exhibit "7-*b*6"; Oil tank house $1,558.00 Exhibit "7-*b*7"; Oxide shed $60.00, Exhibit "7-*b*8"; Stable and blacksmith shop $818, Exhibit "7-*b*9"; booster house at district holder $721.00, Exhibit "7-*b*10". The booster house is the building housing machinery there at the gas holder for reinforcing the pressure. It is a pressure booster. The total net construction cost of all of the buildings is $35,614.00, Exhibit "7-*b*11."

I have also made a valuation of what I term the works equipment of the property. Under that head I have included all of the machinery and appliance at the gas plant used and useful in the manufacture of gas and the office furniture and fixtures and the small tools, works tools, as they are called, in the plant. I have not included under this head the tools of the distribution department. They are found under that department. The details of the works equipment valuation is found in plaintiff's Exhibit "7-I". This shows all of the items which makes up the works equipment. I have given the net construction cost of these items by grouping together such items as go to make up a piece of the equipment, for instance a water gas set is made up of several different shells. They all go to make up the one set, and I have given the cost of that set as a whole, without giving the cost of the different parts of it. Their value is determined by sets. I have shown what each piece of equipment is made up of in detail, but have given the value of the thing as a whole. This includes the cost of installation and excavating,
364 and is the net construction cost as follows: One 7′ 6″ water gas set in place and ready to use, $8,477.00, Exhibit "7-I-12"; Another set, a duplicate of the first one, $8,477.00, Exhibit "7-I-3"; One water gas condenser and scrubber, $1,219.00, Exhibit "7-I-4"; One operating floor and water gas floor, $2,052.00, Exhibit "7-I-5"; One 6′ 6″ water gas set, built by the Western Gas and Construction Company $8,072.00, Exhibit "7-I-6"; One 6′ 6″ gas set of the Springer type, $4,991.00, Exhibit "7-I-7;" Operating floor, $1,871, Exhibit "7-I-8"; One No. 7 Belted Sturdevant blower on foundation $272.00, Exhibit "7-I-9"; One No. 7 Sturdevant blower, belted on foundation $279.00. Exhibit "7-I-10"; One No. 1 Root's positive blower on foundation $273.00, Exhibit "7-1-11"; One No. 8 Sturdevant Turbo Blower, Type C-3, $1,435.00, Exhibit "7-I-12; One No. 8 Sturdevant blower belted on foundation, $453.00, Exhibit "7-I-13";

One No. 6 Root's Exhauster, $791.00, Exhibit "7-I-14"; One No. 6 fan type Sturdevant belted exhauster $346.00, Exhibit "7-I-15"; One 10" McKenzie exhauster, $440,00, Exhibit "7-I-16"; One 4" by 5" Greenfield vertical steam engine, $240.00, Exhibit "7-I-17"; One 5" by 5" Sturdevant vertical high speed automatic engine, $270.00, Exhibit "7-I-18"; One 7" by 6' Sturdevant high speed automatic steam engine with foundation, $367.00, Exhibit "7-I-19;" There is one 40 H. P. General Electric Company direct current motor, $655.00, Exhibit "7-I-20"; One 35 H. P. Fort Wayne, D. C. Motor Compound wound type, $566.00, Exhibit "7-I-21"; Four 15" cast iron table hangers, $77.00, Exhibit "7-I-22." Six benches of 6's ¾ depth, $17,993.00, Exhibit "7-I-23"; Charging floor containing 1418" cast iron framing and 9149 steel framing, and 1284 Sq. ft. of ½ inch cast iron plates, $2,440.00, Exhibit "7-I-24"; Coal gas condenser 4' 6" diameter by 25' high, $761.00, Exhibit "7-I-25". Coal gas scrubber 5' 6" by 31' high $411., Exhibit "7-I-26"; one 4' 6" by 5" Smith & Sayre Rotary Scrubber, $2,121.00, Exhibit "7-I-27"; Four purifying boxes 20' by 24' be 4' $13,088.00, Exhibit "7-I-28"; one 10' McDonald Station meter with Hindman drum, $3,901.00, Exhibit "7-I-29"; One 6' American Station meter with Parkinson drum, $1,358.00, Exhibit "7-I-30"; One 500,000 Cu. ft. 3 lift Gas holder in steel tank, $43,985.00, Exhibit "7-I-31"; One
365 200,000 Cu. ft. 2 lift gas holder in brick tank, $25,119.00, Exhibit "7-I-32"; One 50,000 cu. ft. single lift gas holder in brick tank, $10,409.00, Exhibit "7-I-33;" One 20" Conoway automatic governor, $840.00, Exhibit "7-I-34"; One 12" Reynolds station governor, $415.00, Exhibit "7-I-35"; One 6" by 10" by 5" by 10" Knowles compound pump, $360.00, Exhibit "7-I-36"; one 3" by 4" vertical plunger pump $160.00, Exhibit "7-I-37"; One 3½" by 4" by 6" Gardner Duplex Pump, $90.00, Exhibit "7-I-38"; One 4½" by 2¾" by 4" Gardner Duplex Pump, $95.00, Exhibit "7-I-39"; One 4½" by 3¾" by 4" Worthington Duplex pump, $100.00, Exhibit "7-I-40"; One 4½" by 2¾" by 4" Worthington Duplex pump, $95.00, Exhibit "7-I-41"; One 3" by 2" by 3" Worthington Duplex pump, $85.00, Exhibit "7-I-42"; One 6" by 4" by 6" Warren Simplex pump $160.00, Exhibit "7-I-43"; There is one [illegible] by 3" by 4" in Marsh Simplex pump, $80.00, Exhibit "7-I-44"; Otis Elevator Electrically operated, $1,060.00, Exhibit "7-I-45"; One Fairbanks Platform Scales, $60.00, Exhibit "7-I-46"; One 60" American Bar Photometer, $450.00; Exhibit "7-I-47"; One Younger's Calorimeter complete with meter in duplicate, $210.00, Exhibit "7-I-48".

Under the heading "Shop tools and Miscellaneous" I show items having a net construction cost of $462.00, Exhibit "7-I-49"; Four steel boiler shells 63" in diameter, $760.00, Exhibit "7-I-50;" One tar separator 5' by 17' by 10' $179.00, Exhibit "7-I-51"; One 3' 3" by 3' 10' tar wall, $104.00, "7-I-52"; One 6' by 20' by 12' tar wall; $472.00, Exhibit "7-I-53"; Two steel tar tanks $1,587.00, Exhibit "7-I-54"; Two additional steel oil tanks, $1,855.00, Exhibit "7-I-55"; Two oil tanks 8' by 24' $1,220.00, Exhibit "7-I-56"; One oil tank 10 ft. by 10 ft. $228.00, Exhibit "7-1-57"; One 100,000 cu.

ft. single lift gas holder $18,675.00, Exhibit "7-1-58"; Water piping at works above ground and water piping below the ground at the manufacturing plant $732.00 Exhibit "7-I-59": The water piping plus the valves on that piping make a total of $821.00; Drain piping at the works, $1,583.00, Exhibit "7-I-60"; Oil piping at the works above and below ground and valves, $443.00, Exhibit "7-I-61"; Gas piping at the works above and below ground, $6,750.00, Exhibit "7-I-62"; Steam piping at the works above ground covered and above ground uncovered, and valves, $2,657.00, Exhibit "7-I-63";

366 Tar piping at the works above and below ground, $586.00, Exhibit "7-I-64". The miscellaneous small tools used around the works have a net construction cost of $600.00, Exhibit "7-I-65". I have an itemized list of all of these tools, but I did not have time to copy them into this Exhibit. The items, office furniture and fixtures consist of 4½ pages which is shown in Exhibit "7-I-66"; their net construction cost is $13,039.00, two-thirds of which I have charged to the gas department, which is $8,606.00. Water pipe and valves at the district gas holder are shown in Exhibit "7-I-67"; their net construction cost is $177.00. The gas pipe above and below ground at the district holder station is shown in Exhibit "7-I-68"; their net construction cost is $463.00; Four manholes at the district holder station, net construction cost $1,533.00 Exhibit "7-I-69"; One, 25 H. P. General Electric motor of the induction type, net construction cost, $423.00, Exhibit "7-1-70"; 1, 5 H. P. General Electric Company induction type 3 phased 220 volt, 1200 R. P. M. Motor having a net construction of $160.00, Exhibit "7-I-71"; 1 No. 5 belted Sturdevant blower on foundation, having net construction cost of $180.00, Exhibit "7-I-72"; One No. 5 Sturdevant blower positive blower geared, having a net construction cost of $210.00, Exhibit "7-1-73"; The total net construction of the works equipment I have enumerated, shown in detail in these Exhibits above specified is $218,358.00.

367 The net construction cost of the distribution system as given by me will be found under Exhibit J of Exhibit 7. In it is shown a tabulation of all of the street mains, of all of the drip pots, then of the valves, then of the district governors, and a listing of the number of the railroad crossings, and of the distribution tools and minor items with the tools, and the listing of the gas appliances alone, and then a tabulation of all of the house services and then of the stub services. Then are given the number of the service governors and of service boxes and stop cocks and of meters, all of which comprize the distribution system of the property. In determining the net construction cost of the distribution system I have followed the same general plan that I used in determining the net construction cost of the works equipment except that in determining the cost of laying the pipe I placed more dependence upon information obtained locally than in dealing with the works equipment which is not handled locally. A statement was furnished me by Mr. Brodnax of the number of feet and miles and the size of mains and the showing of this is in my report.

Exhibit J-2 is a map of the city of Lincoln with the distribution

system as to mains, indicated by red and green colors, the red denoting the cast iron and the green denoting the wrought iron pipe. On this map there is no attempt made to indicate the various sizes of the mains. The sole purpose being to indicate in a general way how the city is piped. Exhibit J-3 shows the extent and character of the street paving over the mains. There is a key in the lower right-hand corner that gives the meaning of the different colors better than I can state it. Each color indicates a kind of paving. This does not indicate the size or extent of mains under this paving. It simply shows the location. The total net construction cost of the 1¼ inch, 2258 ft., under paved and unpaved streets is $1,334. There are 359,601 ft. of 2-inch wrought iron pipe and the total net construction cost of that is $138,762. These are all in Lincoln. There are also
368 in Lincoln 406 ft. of 3-inch cast iron pipe having a total net construction cost of $386. There is a total of 94274 ft. of 4-inch cast iron pipe in Lincoln under paved and unpaved streets having a total net construction cost of $89,140. There are a total of 25,873 ft. of 6-inch cast iron pipe in Lincoln having a total net construction cost of $31,825. There are a total of 4568 ft. of 8-inch cast iron pipe in Lincoln having a total net construction cost of $6,977. There are a total of 9810 ft. of 10-inch cast iron pipe having a total net construction cost of $15,508. There are a total of 3613 ft. of 12-inch cast iron pipe in Lincoln having a total net construction cost of $7,458. There are a total of 1269 ft. of 16-inch cast iron pipe in Lincoln having a total net construction cost of $3,827. There are a total of 1472 ft. of 20-inch cast iron pipe in Lincoln having a total net construction cost of $4,978. The total length of gas mains in Lincoln is 503,144 ft. and the total net construction cost is $300,195. This does not include such items as street mains miscellaneous, such as drips and valves.

The number of feet of mains and their size and the net construction cost outside of Lincoln is given separately but they are taken into account when I give the whole value of the property shown on the first sheet of part J of my report. Outside of Lincoln there are 62640 ft. of 2-inch and 4-inch mains having a total net construction cost of $22,066, which brings the total distribution system up to 565784 ft. with a total net construction cost of $322,261. The letters WI and CI at the top of the second column in this subdivision of my report indicates the kind of pipe, whether cast iron or wrought iron. The first column indicates the size of the pipe, the third indicates the length in feet, and the next column, the kind of pavement. The next two columns are a division of the extra cost on account of pavement. The first column, net construction cost of pipe laid in unpaved streets, indicates the cost of laying the piece of mains specified in a street having no pavement, and the next column gives the cost
369 of tearing up the pavement and replacing it over that particular piece of main. Where there is no pavement over a given piece of main there is no addition made in that last column and in that case the total net construction cost is the same as the net construction cost of the pipe laid in the unpaved streets. Immediately following the sheets showing the mains is a sheet marked Exhibit

J-5, showing the number, sizes, kinds and net construction cost of the street main drips in Lincoln. A street main drip is a cast iron pot or pipe or a wrought iron pipe laid alongside of the main and connected with the main by a small pipe tapped into it at the bottom so that the condensation collecting in the main at a low point will run out of the main into the drip pot. From this drip pipe or pot it is removed by a pump. The drip is so arranged that the gas cannot escape even when the drip is opened. The water forms a seal which retains the gas and allows the water to be pumped out to a certain point. These are scattered all over the system wherever there is a low point which would otherwise become a trap. There are a total of 181 street main drips of different sizes in Lincoln and the total net construction cost is $1,113. In addition there are a total in Lincoln of 22 valves and their total net construction cost is $328. There is also one 4-inch district governor having a total net construction cost of $225.

The fact that a railway crosses a gas main increases the cost of reproducing the main. The item in my report entitled Railway Crossings does not at all refer to the cost of building the railway. It refers solely to the additional cost which is necessarily met in reproducing a main crossed by a railway. It has not been included in the total cost of the mains heretofore given. There are in Lincoln a total of 349 railroad crossings and the total net construction cost represented by them is $6,220. This item is here regardless of whether the railroad was built before or after the main was put in. Outside of Lincoln there are 19 railroad crossings over existing gas mains and their total net construction cost is $290. The total number inside and outside of Lincoln is 368 with the net construction cost of
370 $6,510. These miscellaneous items, being street main drips, and the main valves, district governor, and railroad crossings, are all shown on Exhibit J-5 in detail. Those that are given as being outside of Lincoln are the only ones that are not required in Lincoln. Those in use in Lincoln were there and required to be there before the mains were built outside. The same is true with the tools. The items listed on Exhibit J-6, consisting of two or three pages, consist of small tools and appliances required by the workmen in the distribution department. An actual detailed inventory of these tools was made and furnished to me by Mr. Brodnax. The net construction cost of these tools shown on Exhibit J-6 is shown in a column in that report but I have omitted the heading of net construction cost. I have the figures there representing that cost. The total net construction cost is $6,210.

In addition to this there is another group of items classed with the street mains miscellaneous, which is composed of the gas appliances loaned by the company and in use. It is customary to do this by gas companies and it is good business from the standpoint of the consumer as well as the company. They consist of gas arcs, pot plates, second-hand gas ranges, water heaters, broilers, and burners, in all having a net construction cost of $3,791. The total net construction cost of the street mains miscellaneous composed of drips, valves, district governor, railroad crossings, tools, and gas appliances loaned is $18,177.

The next subdivision of the distribution system is the services. In this subdivision I have included house services as well as stub services inside as well as outside of Lincoln. It is shown in Exhibit J-8. A house service is the pipe which extends from the gas main to the meter in the house. A stub service is a service which the company lays from the main to just inside of the curb line. This is done when it is notified by the city that certain pavement is to be laid and in order to provide for its business and to avoid tearing up the pavement later the stub service is laid to just inside the curb line
371 before the pavement and before it is needed. The service is capped and left until at some future date it is extended into a house when it becomes a house service. The average length of house services in Lincoln is 73 ft., determined from an examination of something over 2000 separate records. There are a total of 8201 house services in Lincoln under paved and unpaved streets having a total net construction cost of $125,250. The stub services average 23 ft. in length and 1¼-inch in diameter. There are a total in Lincoln of 114 stub services having a total net construction cost of $1,006. Outside of Lincoln there are no stub services but there are 338 house services outside having a total net construction cost of $4,583. The total number of house and stub services inside and outside of Lincoln is 8653, and the total net construction cost is $130,839. This is all shown in detail in the exhibit.

The column in this exhibit headed Net Construction Cost of pipe laid under unpaved streets and *and* net construction cost of tearing up and replacing pipe means the same as it did in respect to street mains. Exhibit J-9 is a statement of the service governors. It shows the number, size, and net construction cost. A service governor is a device placed on each service pipe for the control of the gas pressure in that service. The total number of service governors in use in Lincoln is 7000, with net construction cost of $19,340. 34-144 inch governors (P. 91-92) having net construction cost of $96,000; and ½ inch service governor having cost of $600. Total number in Lincoln is 319 with net construction cost of $562.00. Outside Lincoln there are at State Farm 3-¾ inch governors at cost of $8.00, one two inch having cost $8.00. At University Place there are 149-¾ in. services at cost of $4.05. In Havelock there are 17-¾ inch at cost of $46.00. Total number outside are 170 at cost of $467.00. Total number in use inside and outside of Lincoln, 7,170, at cost of $19,807.00. The total number of service governors in use and in stock in Lincoln and outside of Lincoln on this system on January 1913 was 7489, with a total net construction cost of $20,369.

The next subdivision marked Exhibit J-10 shows the service boxes and cocks. On each service pipe just inside of the curb line it is customary to place a stop cock and over this stop cock leading from the pipe to the surface of the ground is placed a cast iron stop box or service box, which has an adjustible cast iron top, and in case of fire or other emergency you can go to this box, open the top by a wrench, and shut off the gas. Exhibit J-10 shows the number of such boxes and cocks and their net construction cost. In Lincoln there are 6149 service boxes and cocks having a net construction cost of $11,068.

J-11 is the subdivision of the distribution system showing the
372 number, size, and net construction cost of the meters of the distribution system in Lincoln. The total number in use in Lincoln is 8068, with a net construction cost of $61,552. There are less meters than there are services for the reason that some of the services are temporarily out of use and when this occurs the meters are taken out. There are also less service boxes and cocks than services as all of the services do not have boxes. In addition to the meters in use there are 243 meters in stock with a total net construction cost of $1,892, and in addition to these there are the meters in use and in stock outside of Lincoln shown on the following page. The total number of meters in use and in stock in Lincoln and outside of Lincoln is 8816, and their net construction cost is $66,017. Total meters outside of Lincoln is 305 with net construction cots of $2,573.00. (p. 96). The total net construction cost for the distribution system is shown in my report on the first page following the letter J, and is $568,731.

Exhibit F, marked Exhibit 7-B shows the net construction totals of the four divisions of this property; real estate, buildings, works equipment, and distribution system. The total net construction cost of these four divisions is $844,403. The item of working capital does not enter into this total.

Exhibit 7-C is headed Engineering, etc. This indicates the percentages which combined have been added to all of the net construction costs of physical equipment just gone over, except the items of real estate and working capital. The basis for the item, Engineering and Supervision, 6%, is the current price among engineers and business men generally for the preparation of plans and specifications, the taking of competitive bids and placing the contracts, and over-seeing the construction and paying on the fulfillment of contracts. It is entirely in addition to any expenses which the contractors incur and it is largely preliminary and partly co-incidental with operation of the contract. If I were to replace this property or
build one like it, after having made a preliminary examina-
373 tion to determine its feasibility, it would then be necessary to work out the details and to do that I would have to have money to make a survey of the ground available for the plant as well as the town in order to determine the distribution system. I would have to make detailed drawings of all the buildings, a very large part of the works equipment, and make detailed drawings of the distribution system, and would have to make a lot of calculations as to various kinds of pipe and pressure to use, and it is all work that requires considerable time, practice, ability, and skill. After having prepared detailed plans and specifications I would have to submit those plans and specifications to a number of contractors whom I would consider competent to handle that class of work. The distribution system I would not submit to a contractor, but the buildings and the works equipment I would submit to contractors who make a specialty of that kind of work. They would submit their bids to me with their specifications and proposals. I would then go over all of these propositions and their detailed specifications and tabulate their

propositions and parallel them to determine which is the proposition that should be accepted on a given point. I would then advise my client that such and such a contract should be entered into, and the contract would be made any my representative or myself would go to the site of the work or to the shop of the builders of equipment as often and for as long as might be necessary to see that everything was being done in full accord with the specifications, and then I would oversee the construction of the plant and would pass upon the fulfillment of the various portions of the plant to determine what payments are to be made by the owner to the contractor, and finally I would have to pass upon the acceptance of the constructed property as a whole where contracts were involved, and would have to direct the construction of the system under the company's own control where the work is not under contract. The customary and proper charge for this service is extremely variable, depending upon the volume of work and its character, and character of the engineering. The range is anywhere from five
374 to fifteen per cent, and I believe that six per cent would be a proper charge in a property like this on a location like this. That is the fee that I would expect if I were asked to handle work of this character. If it is a large property it would be a smaller percentage, and if a smaller property the per cent would be larger. I am doing work now in which the fee is ten per cent. It is smaller than this property.

In addition to the engineering expenses one of the items which any prudent man would provide against is the casualty liability. In this instance it involves and covers all of the liability that might be charged against the owner of the property during its construction, and covering not only the men at the works but the citizens of the community. Damage might result from openings left in the streets as construction of the property involves opening many of them and there is a hazard to the owner of the property. This would be covered by liability insurance. The figures that are generally found to me-t this kind of liability are 2% of the net construction cost of the equipment covered. That would be variable depending upon the amount. If you were spending the entire amount of money here involved on a greater hazard than the property as a whole involves, the 2% might be altogether too low. I think 2% would be fair for the construction of this property as a whole. I do not put it in here at all in the way of reimbursing the owner. It is here only as one of the necessary elements in determining the reproduction cost of the property. If the owner of the property took care of this liability by insurance he would have to pay for it. In addition to the engineering expense of 6%, and casualty liability of 2%, I have grouped taxes and loss of interest during construction, with a total of 4% for the two. This is included because the man who is building this property is necessarily losing the interest on the money tied up, prior to the date of operation of the plant, and he is also subject to some taxes. Three years would be required in reproducing this property as a whole.

The period of time during which the owner would have
375 to invest in the property without any return varies with different portions of the investment. If the reproduction of the

property was commenced on January 1, 1913, at the end of that year a portion of the equipment would be actually in use, but still a larger part of the investment would have been made without actually being in use, and, as an average, on the loss of interest on the unused portion of property plus the taxes on the unused portion prior to the time of operation, 4% of the net cost of construction of the property covered might be taken as a fair and reasonable figure. In some instances they compute one-half of the investment as ideal for the entire period of construction. If that was done in this case it would take three years to build the property and 6% for the three years on one-half of the investment would be 9% of the whole, which is too much. The 4% is a fixed sum on the net construction cost. It is just used once. In addition there are the 4% allowance on the net construction cost for omissions and contingencies.

In the building of a plant it is customary to allow a great deal more than 4% for omissions and contingencies because of the well-known fact that construction expenses nearly always exceed the original estimate due to the fact that the estimates are not made as complete through one reason or another as they might be. Here, however, we have a detailed inventory of the property and the chances of omissions are very much less than they would be if we were making up a list of elements in building a new property and we had no inventory and no physical equipment by which to guide ourselves. And yet the element of contingencies remains and if they were to reproduce this property today they would not be able to avoid that, and no matter how complete your inventory figures may be, 4% is a safe and conservative figure to allow. That gives a total of 16% for the four items which should be added to the net cost of construction. This 16% is added in Exhibit marked 7-D, which is headed Reproduction totals, and is a summary of the detailed infor-
376 mation contained in pages Exhibit E of my report. It shows the total reproduction cost of the work, the present per cent condition, and the present value. Also shows the depreciation annuities on both straight line and sinking fund basis of the four major classes of physical equipment, viz., real estate, buildings, works equipment, and distribution system. The net construction cost of the real estate is $21,700. 16% is not added to this, consequently the total reproduction cost and the net construction cost of the real estate is the same.

In Exhibit F is shown the net construction cost of the buildings, at $35,614. In Exhibit D the 16% is added, making $41,312, which is the reproduction cost. The net construction cost of the works equipment is $218,358, and adding the 16% gives $253,198, for the total reproduction cost. The net construction cost of the distribution system is $568,731, and in Exhibit the 16% is added, giving a total of $659,727, for the total reproduction cost. The total reproduction cost of the buildings, works equipment, and distribution system is $976,037.

Exhibit D, outside the reproduction cost of the four principal items of physical property, shows the present composite condition of the four major groups of equipment, and the present value, and the total

depreciation required on the straight line as well as on the sinking fund basis for each group, and for the total of the groups. By present per cent condition is meant the present physical condition of this property as compared with the same property when new. The real estate is 100%. It is as good as new or better. The buildings are 74.95% as good as when new. The works equipment is 77.67% as good, and the distribution system, 83.92%. I arrived at this percentage by taking each of the units considered and determining its age and then the average life of that kind of equipment, and I have done so in this report and it will be found in Exhibit 7-B, and also in Exhibit E.

Exhibit E shows first the name of the piece of equipment considered, then the total reproduction cost of that item, then its
377 age, then the average life. It is called the assumed life which is the average life of items of that kind. Then comes the present per cent condition of that item, then the present value of it, then the depreciation annuity required on straight line basis and then the depreciation required on a sinking fund basis for the same item. In order to get the present value item, having first determined the reproduction cost and then the age and the average life, we have tables which give us the present per cent condition. These are the results of observations and experience in many parts of the country by many men and are generally accepted and used. Then having determined the present per cent condition of the property the reproduction cost multiplied by that present per cent condition will give you the present value. If it has a present per cent condition of 50 its present value would be one-half of its reproduction cost. In each instance the figure shown as the total reproduction cost given opposite a given item is the result obtained by adding 16% to the net construction cost of the same item.

The age of the purifying house is given as 22 years, and the next column shows that the average life of a purifying house of this construction is 50 years. The next column shows the present per cent condition as 73. Any other piece of equipment that was 22 years old and had a life of 50 years would be in 73 per cent condition if it had the same age and same life. We do not divide the per cent condition in the middle if the piece of equipment was 25 years old because the depreciation does not work in a straight line. The depreciation accrues very much slower in the first half of the life of any equipment than it does in the last half. A piece of equipment having a life of 50 years and only 25 years old will be worth very much more than one-half its original value. On the other buildings we have treated them the same way. I have given as the present value of the purifying house, $14,074. That is arrived at by taking 73% of the reproduction cost of $19,279, 73% being the present per cent condition of that building. With reference to the purify-
378 ing house we have worked out here, first the net construction cost, second the reproduction cost, and from that and dealing with it as a separate and distinct piece of property we have worked out the amount it has depreciated on account of age and use, and have given the depreciation on that particular piece. I have not in

this report given a lump sum for the depreciation for the whole property but have given the depreciation on each piece separately. The totals shown for depreciation are those obtained by treating the items separately.

In determining the total operating expenses of a property it is necessary to know how much must be set aside each year because of depreciation. Depreciation is made up of three general heads, physical decay, obsolescence, and inadequacy. That does not include anything in the way of ordinary repair and maintenance. They are entirely separate. They are necessarily kept up out of the operating expenses whether you are laying by anything for depreciation or not. You have got to keep up your maintenance and current repair if you are going to keep your plant running, but in addition to all that there has to occur depreciation which is bound to control and must be in some way met. It has not been made in all cases in the past but it should have been, and to find out how much you should lay by on any given property you must treat them separately. You may keep on patching the flues of a boiler putting in new tubes or patching your shell and all that sort of thing. That is current repair and maintenance but the day will sometime come when you have to have a new boiler when you cannot keep it running with the ordinary current repairs, and for that time you must lay away a depreciation reserve in some way or other. That comes about, as stated, by physical obsolescence, and inadequacy.

By inadequacy in the case of a gas main I mean a case where the district grows up so rapidly around a given main that it is no longer large enough to supply the district and while it may be in perfect physical condition and good pipe, it is inadequate. Or you
379 may put in a machine at your plant or distribution equipment which is in perfect condition but has been superseded by new devices which are so much more efficient than the old that you cannot afford to use the old any longer. For instance, there is a water gas machine at this plant that you would not build a duplicate of today if you were building a duplicate set, though it is in good condition can *can* be used tomorrow and is valuable as a reserve unit, yet obsolescence has affected the value of that machine more than physical decay and more than inadequacy. I mentioned that to show that they were separate and each has its own value but they are necessarily found in arriving at the total figure to be used for depreciation because they vary from time to time with given pieces of equipment. In the case of this purifying house the straight line depreciation annuity is that amount which you must lay by each year if you lay by during each year the proportion of the amount of the reproduction cost as determined by the life of the equipment.

A piece of equipment having a life of 50 years would have a depreciation annuity on the straight line basis of one-fiftieth of its reproduction cost. You would lay by one-fiftieth of the reproduction cost each year. This is called the straight line basis because the apportionment is uniform during the life of the equipment, but that is not a fair basis for depreciation because, though it will give to the company the required amount of money at the end of the life of the

property to reproduce it, yet the public has a right to say that you are not a good business man or you wouldn't have to lay up your money that way. You wouldn't have to take a straight line amount in order to get yourself whole at the end of the life of this equipment. And they have a right to say that you do not use good business judgment or ordinary business judgment if you want to accumulate $100 at the end of 10 years by laying away $10 per year, but you may lay by an amount less than that which, when compounded annually, will yield you $100. At the end of the 10-year period you will
380 have the $100. Then the difficulty comes about with the sinking fund plan that there will be periods during the life of your plant when the money available there will not be sufficient to me-t your immediate demands. You will have to have more money at given periods than your sinking fund provides. So the straight line method is rather higher than the amount which should be set away and the sinking fund is lower. The straight line gives the company more than it has a right to claim and the sinking fund is below the legitimate allowance. The sinking fund will provide the necessary amount at the end of the fixed period but somewhere between those two points is where you should have it—where, I don't know. Somewhere between the original investment and the end of the life of the equipment the investor does not have his investment intact, or he does not have $100 worth of equipment and he should have the balance in his fund somewhere.

In the column, Straight Line Depreciation, the depreciation for the purifying house is the sum of $385.58 for straight line depreciation annuity. That means that the amount should be set aside each year on that basis. If the fund were started at the time the building was constructed and kept up annually the amount accumulated there plus the present value of the building at any particular time would give the reproduction cost of the property. The trouble with that is that the public has a right to say that you should not lay money by that way, that you should compound it. You can lay by a smaller amount than by the straight line method and compound it and have the required amount at the required time. I do not show a smaller return on the amount set apart for depreciation than I would allow on the physical property itself. You will get your full property back by the sinking fund basis at the end of the life of the property. In the meantime you have no use for the fund except to replace the building. You are not going to use it for 50 years because the building will live 50 years, and consequently the public has a right to say that you shall lay by only that amount which will enable you
381 to reach the reproduction cost at the end of the life of the building.

The figures, $197.80 shown under the column Depreciation Sinking Fund Basis, represent the amount that I think you are really entitled to set by because that sum compounded annually reproduces at the end of 50 years the same sum that $385.58 will reproduce, not compounded. If the $197.80 is paid annually and put out on good security and your interest collected promptly and compounded, at the end of 50 years it will produce $19,279 for the purifying house, the

amount that you started with. The Gas company could put the money into their own property and do that. That is the usual practice. The rate of return is different depending upon the length of time. The rate varies from 2½% to 3½% on the maximum and minimum lengths. I find the total reproduction cost of the generator house in Exhibit E to be $4,337. That is the net construction cost with the 16% added. That generator house is five years old and of a type of construction having an average life of 50 years, and its present per cent condition is 95, and its present value is $4,120. On the straight line basis, $86.74 must be set aside annually for depreciation; on the sinking fund basis, $44.49.

The next item in Exhibit E is the retort house. Its reproduction cost is $8,919. It has a net construction cost of $7,689, shown in Exhibit H. Its age is 22 years, life 50 years, and present per cent condition, 73, and the present value is $6,511. $178.38 should be set aside annually on a straight line basis for depreciation and $91.50 on the sinking fund basis. The reproduction cost of the meter and booster house is $3,035.00. It is 5 years old and has a life of 50 years. Its present per cent condition is 95, and its present value is $2,883. On a straight line basis, $60.70 should be set aside annually to profide for depreciation on it, and on a sinking fund basis, $31.13. The reproduction cost of that building was $2,616. For the coal shed the reproduction cost was $20.80, the net construction cost, $1,793. It is 22 years old, and its life is 25 years. Its present per cent condition is 25, and its present value, $520. There should be set
382 apart each year as a depreciation annuity, on a straight line basis, $83.20, and on a sinking fund basis, $57.05, to provide for this building.

The reproduction cost of the oil tank house is $1,807. Its net construction cost was $1,558. It was built 15 years ago and has a life of 50 years. Its present per cent condition is 83, and present value is $1,500. $36.14 should be set aside annually to provide for depreciation on a straight line basis, and $18.53 on a sinking fund basis. The reproduction cost of the oxide shed is $70. Its net construction cost was $60. It is three years old and has a life of 20 years. Its present per cent condition is 90, and the present value is $63. $3.50 should be set aside annually to provide for depreciation on a straight line basis, and $2.60 on the sinking fund basis. The reproduction cost of the stable and blacksmith shop is $949.90. Its net construction cost is $818.00. It was built 15 years ago, and has a life of 25 years, and its present per cent condition is 52, present value, $493. The straight line annuity would be $37.96, and the sinking fund basis, $26.03. The district holder booster house reproduction cost is $836. It was built 2 years ago. The life is 40 years. Its present per cent condition is 96, and it has a present value of $803. The straight line depreciation annuity is $20.90, and the sinking fund, $12.40. The total reproduction cost of all of the buildings separate and apart from the real estate is $41,312.

The composite life of all of the buildings is 46¼ years, and is determined by dividing the total reproduction cost of all of the buildings by the total straight line depreciation annuity for all of the

buildings. Since you have taken each building and divided its reproduction cost by its life, to get the straight line annuity, then, of course, the total of the straight line annuity divided into the total reproduction cost of all of the buildings will give the composite life. You get the composite present per cent condition of all of the buildings by dividing the present value which is $30,967, by the total reproduction cost, $41,312, which gives you 74.95. Exhibit
383 E-2, being 4 pages under the head of Works Equipment, shows the reproduction cost, the age, the life, the present per cent condition, the present value, the straight line depreciation, and the sinking fund depreciation for each separate item of works equipment.

Exhibit E-2 is offered and received in evidence.

The composite life of the works equipment is 32.13 years. The composite present per cent condition of the works equipment is 77.67. It is more than 77 per cent as good as new. Some portions of it are almost worthless and some are almost new but as a whole the present per cent condition of the works equipment is 77.67. The total reproduction cost of the works equipment is $253,298. The net construction cost is $218,358, as shown in subdivision F. The present value is $196,759. The difference of something like $57,000 between the reproduction cost and the present value of it is the depreciation. The total amount of depreciation annuity on the straight line basis for the works equipment is $7,882.93, and on the sinking fund basis it is $5,166.65. I have here the reproduction cost, the present value, the life, and assumed life, and the depreciation of the distribution department.

In order to determine the composite age of the distribution system I had to make some elaborate calculations and investigations. I have made them and have them here. The age of the buildings can usually be found from somebody on the ground and from the records, and sometimes there are marks on the stones, put on them 22 years ago, but in the distribution system you have to work back over the records to find out what the true composite age of all of the mains and services of the meters. It is not safe to make a guess and where the records are available you have to use them, and in this case the records of this company were available for 40 years back. The records of this company in this case are as good as those in other places but never have I found them as good for so long a period back as here. The detailed records worked back for a con-
384 siderable number of years and the basis on which the cost price of mains, services, and meters is based run back here for 40 years. This company started to operate and supply gas 40 years ago the 12th of this month.

The distribution system is found in Exhibit E-3. Exhibit O is a chart which I prepared from a study of the records. The history of the company is written in it. I ran through the records of the company for 40 years and found only the records for 3 years missing. The lower curve in the chart shows the increase in volume of gas sales each year. At the end of 1872 *they* were no gas sales. They

began in 1873. The heading columns on the chart indicate the gas sales per thousand cubic ft. and per year. When you get up to the fifth cross-section which is marked 10,000 you are selling ten thousand thousand or one million cubic ft. of gas each year. In 1912 the sales were 234,000,000 and some odd ft., and in 1899 the sales were approximately 43,000,000 ft., and the gain from 1873 to 1899, 26 years, was only 43,000,000 ft. This is important in showing the life of the property as it shows when the property must have been installed in order to take care of this increased service.

Exhibit O also shows the growth of the street mains and meters. The three years for which I could not find the records were 1900, 1901, and 1884. Exhibit O also shows the actual growth in the number of meters in use, the growth in number of house services, and in the number of street mains back to and including the year 1903. I have worked out these curves from certain changing ratios which I know have existed throughout this period more or less accurately, and have a close relation to gas sales. I am able to state now the reproduction cost of the street mains of the company in the city of Lincoln, and in Exhibit E-3 I have the data which show that details going to make up the total reproduction cost. The total reproduction cost of the street mains alone in Lincoln is $348,224. Their net construction cost was $300,195. By adding 16% to that you get the reproduction cost. The composite age of the street mains in the city of Lincoln I have determined and it is 10.86 years.
385 The mains as a whole have been in service a little over ten years. Their composite life is 36 years. The present per cent condition of those mains is 88.78. The present per cent condition does not apply to the paving, which is not depreciable. The present value of the street mains of this company in the city of Lincoln is $309,161. The straight line depreciation annuity is $9,670.88. The sinking fund annuity is $5,905.02.

The reproduction cost of the mains outside of Lincoln is $25,597. Their present value is $24,439. Their composite age is three years, and their life is 35.18. Their present per cent condition is 95.47. The straight line annuity for depreciation is $727.84, and the sinking fund annuity is $447.94. The total reproduction cost of all of the mains inside and outside of Lincoln is $373,821, and the present value is $333,600. Their composite age is 10.32 years, and their life is 35.95 years. Their present per cent condition is 89.44, and the straight line annuity for depreciation is $10,398.72, and the sinking fund annuity is $6,352.96. The total reproduction cost of the item grouped under Street Mains Miscellaneous is $21,086. The net construction cost is $18,177.

The street main drips, street main valves, and railroad crossings have been given the composite age of the main. The district governor is 5 years old. The distribution tools have been given a composite age of three years, and the gas appliances a composite age of two years. The drips have a life of 35 years, valves, 35 years, district governor, 30 years, railroad crossings, 35 years, distribution tools, 10 years, gas appliances, 5 years, and the composite life of all of the items grouped under street mains miscellaneous is 11.26 years. The

present per cent condition of the entire group is 72.74. The present value of all of the items in street mains miscellaneous is $15,340. The straight line depreciation annuity is $1,872.20, and the sinking fund annuity, $1,599.93. The reproduction cost of the services in Lincoln is $146,457. The net construction cost is $126,256. The present value is $112,958, which I arrived at through a knowledge of the composite age, composite life, and the present per cent
386 condition. The composite age is 7.6 years, life, 25 years, and the present per cent condition is 77.12. The straight line depreciation annuity is $5,858.28, and the sinking fund is $4,017.21, making the total reproduction cost of all services in and out of Lincoln, $151,774. The present value of the services outside of Lincoln is $4,494, and the total present value of all of the house services in and out of Lincoln is $117,902. The composite age of the services outside of Lincoln is 3 years, life, 25 years, present per cent condition, 93, and composite age of all services in and outside of Lincoln is 7.4 years, life, 25, and the present per cent condition of the depreciable portion, 77.74. The depreciation straight line annuity would be $6,070.92, and the sinking fund, $4,162.12, on all of the services in and outside of Lincoln.

The reproduction cost of all the service governors in Lincoln is $23,083. The net construction cost is $19,902. The present value is $20,157. The composite age is 4.8 years, life, 25 years, present per cent condition, 87.31. Straight line depreciation annuity is $923.44, and sinking fund is $623.24. The reconstruction cost of the service governors outside of Lincoln is $542, the present value, $504, the composite age, 3 years, life 25 years, present per cent condition, 93. Straight line depreciation annuity, $21.68, and sinking fund, $14.86, giving a total reproduction cost of all service governors, $23,628. The composite age is 4.8 years, composite life, 25 years, composite present per cent condition, 87.41, present value, $20,661. Straight line annuity depreciation, $945.12, and sinking fund, $648.10. The total reproduction cost of the service boxes and cocks is $12,825. The present value is $9,886. Composite age is 7.7 years, life, 25 years, present per cent condition, 77. Depreciation annuity, straight line basis, $513.56, sinking fund basis, $352.17.

The reproduction cost of the meters in use and in stock in Lincoln and in use and in stock outside of Lincoln, and the total, the
387 present value, the composite age, the life and the present per cent condition, the depreciation annuity on the straight line basis, and sinking fund basis, is all given in the Exhibit E-3. The total reproduction cost of the distribution system, as shown in Exhibit E-3, is $6,597.27, and its present value is $553,650. Its composite life is 28.9 years. Its composite present per cent condition is 83.92. The depreciation annuity on a straight line basis is $22,-863.72 and on the sinking fund basis is $15,216.85.

Coming back to the question of the composite age of the different parts of this property: The composite age of the buildings is arrived at by determining from local information the age of each of the buildings as a separate unit. This is easily arrived at. The composite age of the street mains, services, and of the meters is obtained

from the actual records of the company since, and including, 1903, and also from the curves which I have worked out as shown on Exhibit O, which were made, as explained, from the actual records of the company as to the gas sales back to 1873.

Exhibit O can be checked out with Exhibit Q which shows in feet the gas sales as they actually appear on the records from year to year, and in Exhibit Q is also shown the per cent of the 1912 sales, the sales of a given period, and I then have shown in another column the gain for that year in the per cent of the 1912 sales. For instance, in 1873 there was 1,421,000 ft. of gas sold, which is .6% of the 1912 gas sales. The Exhibit shows also, for instance, that only one-half of the present volume of business had been reached in 1904, after 29 years of operation.

Exhibit Q-2 shows the composite age of the street mains which as I stated above is determined from the actual records of the company back to 1903, and from the curve shown on Exhibit O prior to that time. The stars shown along the right hand side indicate that the figures are obtained from the curve on Exhibit O. For instance, for the first year, 1873, I estimated that at that time at least 9,000
388 ft. of mains existed. The number of feet of mains shown here is taken from the records of the company as fully as they were kept, but to get at the composite age of the mains that is as accurate as is necessary because the percentage is very small. To determine the composite age we first multiply the number of feet of mains for any given year by the present age, which gives you the number of foot-years. This is shown in the next column to the right. Carry the same process out for the gains made for each year and then take the total number of the mains at the end of the period and divide that by the total number of foot-years, and you have the composite age of the street mains. The foot-years is 5,559,184, which, divided by the number of feet, 511,538, gives the composite age. I believe this is the most accurate way of determining and estimating this figure.

Exhibit Q-3 gives the same information with respect to the house services. Exhibit Q-4 gives the same information for the meters. My figures on the composite age of the services and meters were based on the number of services and meters shown by the records of the company. These have since been gone over and there are some errors but for the purpose of determining the composite age it is immaterial because the composite amounts are so small to each year.

Exhibit L-1 is a tabulation of the manufacture of gas from 1902 and 1903 to 1912. The first column is for the year 1902, and shows, first, as indicated by the words to the left, the amount of the coal gas made during the year, the amount of water gas made, the total amount of gas made, the amount of gas delivered to the mains, the amount of gas sold, the amount of gas used by the company, the total gas used, and sold, the amount of gas unaccounted for, the per cent of gas unaccounted for, and the leakage of gas per mile of main, and the leakage per mile of 3-inch main. The next column is the same information for 1903, the next for 1904, and so on. The leak-

age per mile of actual main and the leakage per mile of main
389 reduced to a 3-inch basis is not shown for 1902, but it is for the remaining years. The per cent of leakage per mile of main really does not mean much of anything when you compare it with other systems because one main system may have a large composite diameter and another a small one, and the greater the diameter the main is, the greater your chance for leakage, and if you are going to get a constant so that your plant may be compared with different plants you must take some size of pipe as a standard, and in order to do that you must reduce your feet of main to the equivalent of a plant all of the same size of pipe. In this calculation it is the practice to reduce the distribution system to the basis of a 3-inch main, and the per cent of leakage is shown for the equivalent of a 3-inch system on this Exhibit. This is, as stated, for the purpose of getting a comparison between the leakage of this plant and other plants.

The gas unaccounted for shown here is made up of the gas that is actually lost through breaks and leakage, and also because of the difference in the temperature of the gas leaving the works and as it reaches the consumer's meter, and there is a loss due to the lowering of the temperature of gas which causes condensation of the actual moisture of the gas. As it travels through the distribution system it strikes changes in temperature which cause the deposit of moisture and for this reason it is necessary to have the drip pots round town to collect the condensation, and as that is taken out the volume of the gas is reduced. All of the gas is measured as it is made at the plant through two meters, which are checked against the increase or decrease of the amount on hand each day, and the readings of these meters are further corrected for changes in barometric pressure and in temperature of the outside air, and sometimes they are even corrected for changes in the vapor contents. My data for this tabulation was taken from the readings of these meters at the plant and the readings of the consumers' meters. I found the amount used
390 by the company. The per cent of leakage or unaccounted-for gas shown here is, I think, normal. The point is that a man watches figures like this to determine when it is going to pay him to make a special search for leaks. It costs a good deal of money to go systematically over a distribution system and find out just where the leaks are. Of course, when you strike a severe winter or where there are serious breakages in the mains you have got to get out and get those things fixed to keep running. After 1909 there is no showing for coal gas as there was none made after that.

Exhibit L-1 is offered and received in evidence.

Exhibit L-2 is a tabulation prepared by me showing the gross and net earnings of the company as taken from its records for the years 1902 to 1912 inclusive, which shows for each year the total amount received from the sale of gas, the average per thousand feet, the total meter charge, and the price per thousand feet, the item of forfeited discounts and the price per thousand feet, and the total earnings for gas from all of these items, and the average per thousand feet. It

shows the total amount to be deducted from this on account of bad debts, and the amount per thousand feet, which gives the total gross earnings, and the average per thousand cubic feet. It also shows the operating expenses yearly of the gas department, which amounts I have determined from an examination and study of the company's books and accounts, records, and other data, and for a number of years I have put in some additional items that should have been covered in operating expenses and which were not carried in their regular reports. It gives the total amount of the operating expenses and the average per thousand cubic feet, and then gives the net earnings by year in total amount and the average per thousand cubic feet, of gas sold exclusive of depreciation. I tabulated this data in this division for the purpose of assisting my judgment in determining the value of the property as a whole. The net earnings shown
391 here are exclusive of any allowance for depreciation.

Exhibit L-2 is offered and received in evidence.

The item of meter charge is the minimum amount of monthly bills allowed which the company requires where a meter is installed, and the amount of gas shown by the meter did not exceed the amount of this charge. The item of forfeited discounts represents the amount paid by the customers who fail to pay their bills within the specified period, and is the difference between the regular rate and the forfeited rate. Exhibit L-3 is a tabulation of the apportionment of operating expenses for the years 1903 to 1912 inclusive. It was made by me from the records of the company, this being necessary in determining what the operating costs really are. It is not sufficient to know that you spent one hundred thousand dollars on the manufacture of gas, but you must know why this was done. You must determine, in other words, where you spent the money, because of fixed expenses of the plant or whether it was spent because of the demand upon your plant resulting in the out-put of product, or whether you spent it because you have a large number of consumers or whether it is because you have a large number of meters. You have got to know all of these things about each division of manufacturing, distribution, collecting department, executive, and general office expenses, or you cannot make a thoroughly intelligent analysis of your own operating expenses, and this exhibit is the analysis of the operating expenses for this time. It is exclusive of depreciation and with the corrections which should be made in the net earnings which I will show later on. It shows in the first section or subdivision, for the first year, 1903, that the out-put expense of the plant was 46.37¢ per thousand cubic feet of gas sold, and the manufacturing expense was 5.48¢ per thousand cubic feet of gas sold. The first figure is the material used in making the gas. The next subdivision refers to the distribution expenses. Of the total distribution expenses for that year it shows that 4.51¢ per thousand cubic
392 feet were spent because of the distribution plant, as such. 2.74¢ per thousand cubic feet sold were spent because of the consumers, as such, and 1.68¢ per thousand cubic feet sold were spent because of the meters, because of the maintenance and repair, and

reading of the meters. The next subdivision is the analysis of the collection department and shows that in 1903, 3.43¢ per thousand cubic feet of gas sold were spent because of the consumers and 1.23¢ per thousand cubic feet was spent because of the meters. The next subdivision is executive department and general expense. This is all charged to the plant in the sum of 17.5¢ per thousand cubic feet sold for the year 1903. It was not chargeable to out-put, consumers, nor to meters. It was in the nature of a fixed charge not determined by volume nor number of consumers directly. This gives a total operating expense exclusive of depreciation, for 1903, of 82.94¢ per thousand cubic feet. The books of the company are kept with a view to showing these results and I secured the data from them.

Exhibit L-4, under the heading manufacturing department expense of coal gas, shows the manufacturing department expense per thousand cubic feet, in parts of a dollar, of coal gas alone for the years 1903 to 1909, inclusive. The first thing shown is the cost separately of the coal carbon, the enricher, bench fuel, then the total of the gas manufacturing material which for 1903 is 84.55¢. Then follows the residuals such as coke, tar, ammonia, and carbon, and their total, which total is deducted from the cost of the gas manufacturing material, and gives the net cost of the coal gas manufacturing material which for 1903 was 42.78¢. Then the additional items of the expense of retort house, labor, bench repairs, and retort house expenses, and their total in connection with the cost of generating coal gas is shown which, added to the net cost of the gas manufacturing material, amounts to 50.68¢ for the year 1903. Then follows
the general items entering into the manufacturing department
393 expenses. They are steam, purifying the coal gas, labor expense and repairs, purifying material, general works building repairs, as applied to coal gas only, general works apparatus repairs as applied to coal gas only, sundry labor works expense supplies, general supervision, district holder station, and then the total of these items, which is called the purification and storage, and then follows the total cost of the coal gas in the holder, which is, for 1903, the sum of 57.24¢ per thousand cubic feet of gas made, which is the cost in the holder at the plant for material and labor only as above shown. This in no way involves the expense of distribution or the expense maintenance of the plant, nor the expense of collection, management, or general expense. The blue print in connection with the Exhibit-4 shows by a line the fluctuation of this expense through the different years. There was a very large drop in the expense in 1905, which was recovered in 1906, and I discovered that it was only an apparent drop in cost as at that time the company had on hand a considerable supply of Pittsburg and Kansas coal. The Kansas coal is much cheaper and I found that they were using the Pittsburg coal and charging up the Kansas coal, and that accounts for the apparent low cost. The fluctuation of the different parts or subdivisions of this expense divided in L-4 is shown by the lines on the blue print.

Exhibit L-4 is offered and received in evidence.

Exhibit L-6 is the data which I have compiled from the books and records of the company for the years 1903 to 1912 inclusive, with

respect to the manufacturing expenses of water gas. For each of the years the classifications are as follows: first, steam for generating water gas, generator, fuel enricher, then the total water gas making material; second, the water gas tar residual account and then the net cost of the water gas manufacturing material. The next subdivision is the gas making labor, repairs to water gas general works apparatus,
and water gas generator house expense. Then is given the
394 total of the first two subdivisions being the total cost of generating water gas. The next subdivision represents the cost of the steam for purifying the water gas, the labor expense and repairs, purifying water gas material, general works repairs, and buildings, general works apparatus repairs, sundry labor works expense and supplies, general supervision, and district holder station. This last subdivision represents the total cost of purification and storage and the last line gives the total of the three subdivisions as the total cost of the water gas in the holder, which for 1903 was 48.89¢ per thousand cubic feet. Exhibit L-7 is a blue print showing graphically by lines the same thing which Exhibit L-6 shows.

Exhibit L-6 is offered and received in evidence.

Exhibit L-8 is a statement or tabulation showing the cost of mixed gas which was prepared by me from the records of the company. The mixed gas is the coal gas and the water gas that is sent into the distribution system. It is the mixture of these two gases which is distributed. Sometimes there are reasons at the time causing them to make coal gas and other times, water gas, and the ratio varies, and what you are compelled to find out is, of course, the cost of the mixture. You first find out the cost of each separately, and from that you determine the cost of the mixed gas, and then there are some items that affect the mixed gas that you do not need to take in in the separate gases. Exhibit L-8 is the tabulation of the cost of the mixed gas with the exception that for the last three years it applies to the water gas only as they were not making coal gas during that period. For each year in Exhibit L-8 the headings are as follows, the figures being all per thousand cubic feet until you get to the bottom: First, the total cost of manufacturing coal gas, which is taken from Exhibit L-4, then the total manufacturing cost of water gas, which is taken
from Exhibit L-6, then the total cost of manufacturing the
395 two. This figure is a composite average of the two preceding figures. The next heading is the total cost of the manufactured gas purchased. This does not apply in this case as they didn't have any. Then is the total cost of all gas manufactured, which is the same as the total coal and water gas. Then follows the out-put cost of gas lost and unaccounted for and the out-put cost of gas used by the company. The next is the total amount to be deducted from the total manufacturing costs, and then follows the net cost in the holder charged to the stock account. The next is the difference in the stock on hand the first and last of the year, and then the last is the exact cost, in the holder, of the gas sold. Accompanying Exhibit L-8 and marked Exhibit L-9, is a blue print which shows graphically by lines the same conclusions as appear on L-8.

Exhibit L-8 is offered and received in evidence.

Exhibit L-10 is a compilation prepared by me showing the distribution department expense per thousand cubic feet of gas sold for the years 1903 to 1912 inclusive. The following items are shown for each of the years: Street main maintenance, service maintenance, street department expense, meter maintenance, meter department expense, setting and removing meters, gratuitous work, the total of these items, gas lost and unaccounted for, total distribution expense. No item of expense of the collection department, executive department, or general expenses are included. Exhibit L-11 is a blue print showing by lines the same data.

Exhibit L-10 offered and received in evidence.

No item of depreciation is included in this tabulation. Exhibit L-12 is a tabulation of the collection department expense per thousand cubic feet of gas sold for the years 1903 to 1912 inclusive. It was prepared by me from the books and records of the company and is divided into the following items for each of the years: reading meters, collection, clerical salaries, collection office expense, rent of collection office, delivering bills, outside collection, and total
396 collection expenses. Exhibit L-13 shows the same information in a graphic way by means of lines.

Exhibit L-12 is offered and received in evidence.

Exhibit L-14 is a compilation showing the executive department, general expense, per thousand cubic feet of gas sold for the years 1903 to 1912 inclusive. It was prepared by me from the books of the company. The expense is shown under the following items: executive salaries and general clerical salaries, general office expense, incidental expense, rent of executive office, legal expense, and the total of these items. Then the items of promoting new business and taxes, then the total general expenses is given. Exhibit L-15 is a blue print showing by lines the run of this expense in a more graphic manner.

Exhibit L-14 is offered and received in evidence.

I have had prepared from the records of the company upon a skeleton which I provided, a tabulation of the consumers for the year 1912. Exhibit M is this tabulation. The consumers were grouped according to their average monthly consumption of gas into 26 different groups. The first column to the left of the exhibit shows the group number. The next column shows the average monthly consumption of gas of the consumers in that group. The first group is those consumers who take less than 500 feet of gas per month. The second group is those who take from 500 to 1,000 feet, and the amount for each group is thus shown in this column. The third column shows the number of consumers in each group, and the last column shows the percentage of the total number of consumers that the particular group represents. For instance, in the first column there were 455 consumers throughout the year 1912, who used less than 500 feet of gas per month on an average, and these 455 con-

sumers represented 5.9%, as shown in the last column, of the total number of consumers at that time. On everything except the very small item of maintenance of the equipment itself, it costs
397 just as much to take care of the consumers who take 500 cubic feet per month as it does to take care of the ones who take 100,000 cubic feet per month. You have to spend just as much time in reading the meter, collecting the bills, making the bills, and rent and the maintenance charges of the larger equipment of the big consumers is the same as in the smaller ones. The only added expense by reason of the large consumer is the actual production cost of the gas used. The more consumers you have for the volume of gas sold the less is the net profit as compared with the smaller number of consumers. There is always a considerable number of the small consumers who are being served at a loss to the company where the rates are as they are here.

Exhibit M offered and received in evidence.

Exhibit N is a tabulation showing the gas sales outside of the city of Lincoln, at the State Farm and adjoining residences, and Havelock and University Place, for the years 1905 to 1912 inclusive. It shows in cubic feet the total amount sold each year in each place, and the total amount sold in all of the places each year, and the total amount sold in all three of the places for the entire period, and likewise the gross receipts for the sales. I prepared Exhibit N so that the sales outside the city of Lincoln can be segregated from those within the city.

Exhibit N offered and received in evidence.

In going over the detailed records of the company for the last ten years outside the few minor errors due to the transcribing and which were easily corrected, I found that certain excess credits had been made during those years for residuals and at the same time I considered that it would be advisable to show how the gross earnings and operating expenses of the company would be affected by the sales outside of Lincoln, and also to show how the operating expenses would be affected by a correct allotment of the depreciation charges.
398 This I have shown on Exhibit P, together with some additional data. I first started with the year 1912 because that is when I got the total reproduction cost of the property, and that is what I had to start with. Having determined these things for that year I found that I could work back from that with the material that I had at hand and ascertain the present value of the property for each of the years back to 1907. In the first place, in this tabulation, I have re-adjusted the operating expense and sales by excluding the gas sold outside of Lincoln, and the expense on account of that, and have shown upon this tabulation what the gross earnings, the operating expense, and net operating earnings were without that business.

On going over the records I discovered that an arbitrary credit had been made to the cost of manufacturing water gas for the tar residual. Someone had taken a unit and said, for each thousand feet of water gas made we will give the water gas manufacturing expense credit

for so much tar in the form of money on the books. At the end of 1912 they went to check up the tar that the books showed was on hand and it wasn't there. The allowance had been greater than the facts justified. Universal experience shows that the tar made in the water gas process varies between 5% and 15% of the total volume of oil used. 10% of the oil used is a fair average. A greater credit than that had been made and there had to come a time of reckoning, and it came at the end of the year 1912. I was advised by the company that the tar was not there. They had been selling the tar practically as fast as it was made while the records showed that they had a good deal of it on hand. The correction of this error affects but the years 1911 and 1912.

Now to illustrate the corrections on account of the gas sold outside. In 1907 the reported gross earnings of the gas department were $215,776.20. The gross sales outside of Lincoln were $888. This sum, deducted from the total gross earnings, gives $214,888.20, which are the gross sales in Lincoln. Now for the same year the operating expenses as reported were $141,924.37. This includes the operating expense on account of the outside business, the amount of which is ascertained as $302.88 by taking the actual sales outside of Lincoln in cubic feet and multiplying that by the actual output cost of the gas for 1907. Deducting this added expense of $302.88 gives the correct operating expense for 1907 in Lincoln as $141,621.49. This correction is worked out in the same way for each of the years subsequent to 1907, down to and including 1912.

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In 1911, after making the correction on both sides for outside sales, the gross earnings for Lincoln are $268,021.97, and the operating expenses were $157,189.73. At this point the error on account of the tar residual is wiped out and for this year we charge off $2,859.86 on account of that, and $2,722.23 was charged off in 1912. These figures amount to 1¢ per thousand cubic feet of gas. Prior to 1912 they had been taking credit for 80% more than that, or 1.8¢ per thousand cubic feet of gas. There was a shortage on account of this tar residual error in actual dollars on the books of the company, and by making these additions in dollars and cents in 1911 and 1912 to the operating expense, I balanced that shortage.

For the year 1912, after making the corrections on both sides on account of outside business, the gross earnings of the gas department for Lincoln proper were $273,175.93, and the operating expenses were $173,689.87, to which we should add the amount charged off on account of the tar, which is $2,722.23. In addition, there should be added to the actual operating expense the item of depreciation. I have added $20,865.03, which is the amount which my detailed valuation shows is what is required to be set aside annually on a sinking fund basis to reproduce the property as it now stands. This depreciation is shown in Exhibit D, the last figure in the last column. The addition of this amount brings the total operating expenses for 1912 for the gas department for Lincoln proper, to $197,277.13, and the corrected net earnings are the difference between this sum and the corrected gross earnings, or $75,898.80.

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This item of depreciation is certainly an operating expense. It must be provided for annually out of the gross proceeds for if you don't do it that way, you will have to produce it all at once which is a very difficult thing to do, and it is just as legitimately and properly an operating expense and enters into the cost of the gas that is sold from year to year as is the payment that is made for collecting, oil, or labor.

Now having the inventory of all of the property as of January 1, 1913, showing the total reproduction cost to be $976,037, and having the age of the various pieces of equipment in this inventory, I am able to determine the value of the property as of January 1, 1912 by deducting the amounts which the inventory shows were added during the year 1912. It would be impossible to go to the books and find how much of this had been done each year, but I can get it from the inventory. For instance, in 1909, there was added real estate. valued at $7,750, which was a part of the total value at the end of 1909, and to ascertain the value of the property at the end of 1908 this is one of the items which must be deducted. Of course, the real estate is not taken into account in figuring depreciation. The depreciation for the year 1911 is arrived at by deducting from the total reproduction cost of the physical equipment as found at the end of 1912 the value of all of the real estate and the value of any additions made in 1912, and on that balance is calculated the depreciation. I ascertained the additions made in 1912 by taking out the items according to their ages. If an item was one year old in this inventory it was put in during the last year. After making the deduction for all of the real estate and for the items added during 1912 you have the total which is depreciable at the end of 1911. Knowing from my
401 1912 figures what the composite rate of depreciation is on the sinking fund basis, I applied that to the depreciable amount for 1911, and secured the depreciation allowance for 1911 on a sinking fund basis. This is $20,183, which brings the correct operating expenses of the gas department, as applied to Lincoln, to $180,232.59, and the corrected net earnings, $87,789.38. This same process is repeated from year to year. For 1910 it gives the net earnings of $86,242.99, and the depreciation for that year is $19,111. In 1909 it gives the corrected net earnings as $91,708.49, and the depreciation is $17,780. For 1908 it makes the corrected net earnings $80,678.85, and the depreciation annuity is $15,588. For 1907 it makes the corrected net earnings $58,121.71, and the depreciation on the sinking fund basis, $14,955. I do not have here the figures showing the depreciation on a straight line basis for these years as I have shown them on Exhibit P, but the amount of the depreciation each year on the straight line basis would be increased at the ratio of $20,865 to $31,629.

Exhibit P offered and received in evidence.

In addition to the items already given in determining the present value of this property I have considered the items of organization and legal expenses that would be involved in reproducing the property, the present working capital of the property, and its present

going value. These items have not appeared in any of the figures so far given. Exhibit A is a tabulation showing the amount of organization and legal expense for a property of this kind. This represents the expense of a preliminary engineering investigation, the cost of preparing articles of incorporation and making and certifying abstracts, drawing and examining contracts, and general retaining fees of lawyers. The salaries of the manager and his assistants and clerical force during the period of the construction, the incidental and traveling expense of these men during that period, and the rent of
his office and incidental expenses like stationery and supplies
402 during the same period are also included. I have had occasion
to work out things like this on other property a number of times and have talked with lawyers and bankers and have gone through the thing with operators of gas properties, and have had the benefit of their experience. From the conception of the scheme of reproducing the property would require three years to complete. I have only charged rent and stationery expense and other expenses for two years because that would be the average time during which those charges would be applicable since a portion of the plant is going to be in operation while the others are being built. The first item, preliminary investigation, covers the commercial phase of the engineering work on the job. It is the expense incident to looking the situation over and determining whether it is advisable to engage in the enterprise, and determining the engineering difficulties and ascertaining all of the conditions which would tend to show whether or not it is going to be a profitable enterprise. It requires a study of the town and its surroundings and its possibilities, so that one would be able to tell his client whether to put his money into it or stay out. It is the same expense that railroads incur in studying out situations to determine whether or not to extend their lines into certain portions of the country. I consider $3,000 as the customary and reasonable charge for this service. The second charge of preparing articles of incorporation, making and certifying abstracts, and including a general retaining fee would follow the completion of the preliminary investigations. You do not find these companies with their articles of incorporation and all of this work done when you come to determine the cost of reproducing the property. Whenever a plant is built somebody has to foot all of these expenses. This includes the incidental expenses such as are involved in getting a franchise, the time of someone to look after that, and seeing that it is properly prepared
in view of the laws of the state where the property is put in
403 service. I consider the amount entered here, $7,500, for this
work as fair and reasonable. It might be easily exceeded but I think it could be done for that. The third item represents the salary of manager and clerical force during construction. There certainly would be a manager's salary to pay while the plant was under construction. You would require a man who is not only conversant with a gas plant already established but one who is familiar with the various construction details so that he can direct the work in general in the absence of the man in charge of the work or in cooperation with him. In addition, there would be work for him in

getting in touch with the business interests of the town. His work would not be required so much at the plant as it would be in the preparation of the community for the coming of this utility. It is in the nature of missionary work and he must do a great deal of advertising and development. I consider the charge made, $18,000, for this a reasonable and fair charge and customary in the building of property of this size. The next item, incidental and traveling expenses, is due to the fact that there are always disputes through delays and misunderstandings in connection with the contracts, and the manager of the company has to travel frequently around the country to the shops of the builders to see why his stuff is not coming through, or why this is being done instead of that. Or he must go to adjoining towns to see what he must adapt to his local situation, and the development of this business involves an expenditure of money and I consider the charge of $2,500 for this work as reasonable by men who are actually building properties. I have built several gas properties and know that expenses of this kind always run higher than we expect them to, and they are always considered and taken into account. By the item of rent and stationery I mean that while this plant is under construction you must have a headquarters some place, and while you are not an operating concern you will have these expenses just the same, and they must go into your construction cost somewhere. The total cost of these items, organization
404 and legal expense, entering into the reproduction of a property of this kind might very fairly and reasonably be $33,000 starting from a town to supply. This amount of $33,000 included here is not affected by my deduction for depreciation. It is a permanent thing and a permanent value as long as you are doing business.

Exhibit A offered and received in evidence.

In addition to the physical property gone over I have included in my tabulation and report the item of working capital which enters into the present value of the property and is a part of the investment of the owners in order to serve the public and continue the business and operate the property. It is necessary to have a certain amount of money tied up in different forms in addition to the physical property itself. The items making up this investment are shown in Exhibit BB. What I have tried to arrive at here is a net working capital. The company in the ordinary conduct of its business has certain amounts owing it and, on the other hand, owes other people certain amounts for the current operation of its business, and what we are trying to arrive at is the difference between the two. That is the excess of credits over debits, which is the amount of money which the company must have as working capital to carry on its business. If those debits exceed the credits there would be a deduction in value. I have reduced my working capital here to a minimum and I have here what I actually found was the working capital at the time I made the examination. I found here an amount which looks like a reasonable working capital for the business being done, and for a concern of this size. The additional credit you can get through purchasing power is reflected in the value of the property as a whole and

not in the present worth of the working capital. If you can buy better than somebody else that appears directly in one form or another in the valuation placed upon the property. If the company can buy $40,000 worth of coal on credit and owes the bank
405 $40,000 I would off-set one against the other and would not give the company credit for having an investment on either item for the benefit of the public. The fact that it has been able to do that appears through the valuation of the details and the consideration of the income and operating expenses.

The items making up the working capital here are material and supplies, $16,334.42; accounts receivable, $35,431.75; advanced insurance and expenses paid in advance, $8,324.07; cash on hand, $2,105.84; cash in banks, $56,920.39; a total of $119,116.47. Then I have added bills payable; $32,000, accounts payable $4,588.18; unpaid wages and salaries, $2,903.71; coupons and interest, $3,944.26; customers' discounts, $2,533.83; main extension deposits, $1,108.83; a total of $47,078.84. These are all obligations inherent in the ordinary current operation of this business and they do not include anything not directly concerned with the manufacturing and distribution of gas.

The item, customers' deposits, is one of the items deducted from the amount of working capital because the gas and electric light consumers in Lincoln have deposited with the company $3,167.29 in order to get certain service, and that sum is owing to them. I have taken 80% of that sum as the gas consumers are about 80% of the total electric and gas consumers. That, in my judgment, should be the apportionment on the amount as that is one of the things that cannot be arrived at any closer. The same apportionment is made on office stock, and the gas making materials. The item of insurance under expenses paid in advance I divided two-thirds to the gas and one-third to the electric which is approximately correct. The hay accounts I have apportioned 80%, and the main extensions I have apportioned 80%. Main extension deposits means that in some cases consumers living farther than the usual distance from the end of a main have advanced money to the company for the purpose of getting that main extended to them with the understanding that it is to be paid back when enough consumers have been taken in on
406 that line to warrant paying the deposit *it* back. The item accounts receivable, $35,431.75, is made up of gas bills for the current month and unpaid at the time of the investigation, $18,059.32; Gas arrears or bills which should have been paid on the discount day but have not been, $3,822.68; credit ledger accounts, $13,333.30, which is 80% of the total. These accounts are for appliances and equipment, coke products other than the gas itself. Also this item includes general ledger accounts for materials purchased of the company, $216.45, which is 80% of the total. The accounts receivable represent principally the amount which the company invests in the manufacture of gas and which it has to carry between the time the gas is made and the time it is paid for, and is an investment in addition to the physical properties of the company. The details of the several items appearing on the first page are shown on the fol-

lowing pages. The items making up the amount for gas materials are also secured from an actual inventory of the materials, and the others were secured from an examination of the records of the company with Mr. Phillips. The items show an actual condition rather than a theoretical one, the only theory to it being the apportionment of 80% and 20% between the two departments on some of the items mentioned.

After making the deductions of the charges against the working capital the net working capital is $72,037.63, which should be added to the present value of the physical property in order to determine the investment of the owners because the property could not be operated without this additional investment, and because there is a distinct value there and if you were taking the property over you should be willing to pay for that value. This is a very reasonable amount. It will vary from month to month and in different parts of the country plants of the same size will require different amounts because of varying labor weather conditions. They sometimes carry enormous supplies of raw material.

407 Exhibit BB offered and received in evidence.

The remaining item entering into the value of the property which we have not yet gone over is going value, which is shown under Exhibit K. In the determination of the going value of the property such as this the matters of franchise and good-will have no bearing. They are totally distinct and are not a part in any way of the going value, as I have used the term here, and as I have determined the going value here. The going value of this property is that value which exists between the total value of the property as a whole and the present value of its physical equipment alone. It is not something that you can lay aside from the physical equipment and say here is your going value and here is your equipment, because they are necessarily combined. It is, you might say, a characteristic of the equipment and business of the property, and the determination of the amount of it is the only problem. There is no question as to its existence. The difficulty is in measuring it. The only rational method that I have been able to find is the one that I have used here which is based upon the assumption that a man comes here to buy this property as a whole and he finds that a certain selling price is placed on it. He then makes his examination of all of the physical equipment as I have made here and reduces it to its present value the same as I have done and he finds that there is a margin between the present value of the physical equipment and the selling price at which the property is held. He then has to determine whether he can afford to pay as much as that difference for the going value. The property has no good-will in the sense that a merchant may have good-will because you either use gas bought from this company or you don't use any. You can use other fuels. There are several here but if you are going to use gas at all you will buy it from this company so there isn't any good-will as such. And there isn't any franchise value. Whether the company has a franchise or not it has

no value which should be included in determining the value
408 of the property as a whole unless the company has actually paid a specific sum for the franchise and I know of no such sum having been paid here.

But, coming back to the man who has discovered the difference between the present value of all of the physical property plus its working capital and its organization and legal expenses and the price at which it is held, we must now set about to determine whether he can afford to pay that much money for the going value of this property, and the only consistent way that I know of to do this is to go through as nearly as we can each of the steps you would necessarily go through in reproducing all of this property and business. To do that we must assume that a town identical with Lincoln in all respects except there is none of the property or business that we are discussing here as property and business of this gas company. In all other respects it is the same. This man conceives the notion of reproducing this property, and he figures up all of the expenses that will be necessary in reproducing the property as a physical entity, and as soon as portions of it are ready he figures on actually making gas and he knows if he goes at it aggressively enough and he is sufficiently capable he can in time work up a business which will be equal in all respects of the advanced business of the going company. So he makes an inventory like the one we have built up here and picks out those items of expense which he would have to meet during the first year of the reproduction of the property and during the first year, say 1913, he would spend for preliminary investigation the $3,000 we have already outlined, and of the amount included for preparing articles and matters of that kind he would spend $4,000 the first year, $1,750 the second year, and the same amount the third year. The salaries of his manager and his assistants during construction would apply only to the first two years in the sum of $9,000 each
409 year. The incidental and traveling expenses would likewise be spent between the first two years as well as the rent and stationery amounting to $1,000 during each of those years. He would also buy certain parcels of real estate being the reproduction cost, as shown in my report here, of $11,000. The second year he would take additional amount of real estate at $9,000, and the third year the still additional amount of $17,000. During the first year he would get far enough along so he could build a purifying house at the reproduction cost of $19,279. During the second year he would build his generator house, and so forth down through the entire list of physical equipment, and in the Exhibit I have placed in each year the amount represented, as in my opinion, they would actually be called for. The whole purpose of the tabulation is to show how much money the man would have to spend during each of the three years on the physical equipment, the result being shown on the third page, as follows: for physical equipment plus the working capital he would have advanced during 1913, the first year, a total of $377,222. In the second year he would have spent $362,536, and in the third year, $341,317. Having determined approximately the periods and the amount of investment necessary to reproduce the physical equipment

we must now endeavor to see how fast the business could be built up in this hypothetical town, so the expenditures have been planned in a way that will give the maximum business in the minimum time consistent with safe construction and good workmanship, but before going into that the plant must be carried a few years into the future, and that has been done here, based upon the growth of this property in this town which I have ascertained from the records here, and such knowledge as I have of other properties in other towns. I estimate that at the end of 1913 this going plant, the plant which is now here and in operation, will have 8,857 meters in use. At the end of the next year it will have 9,321 meters in use, and for the succeeding years until at the end of 1918 the going plant in Lincoln
410 will actually have in use 11,250 meters. Now in the theoretical plant the man would be able to place during the first year 2,000 meters but he would not be able to make gas through the whole year, and my estimate is that he would only have gas to sell in that town during the last two months of the first year, and he would have the equivalent of 333 meters in use throughout the year. In addition, when you first put the consumer on he does not burn as much gas as he does later. The average consumption per meter continually increases in all towns that I know of, and I have estimated that those new consumers that are first put on in 1913 in the hypothetical plant are only using 40% of the going plant's consumption per meter per year. This would give you for your first year, 1913, a total sale of 3,730 thousand cubic feet of gas in your hypothetical plant. I have carried the same calculation through each of the several years for the hypothetical plant and in 1917 I bring the total number of meters in the hypothetical plant up to those in the going plant, and by the end of 1918 in all other respects the two plants get into parallel operation. In other words, though the going plant will have to do business, extend its equipment, and take on additional meters during all of those six years, at the end of the year 1918 this hypothetical plant could not only have been built but its business could have been developed to a point where it equals in all respects the business of the going plant at the end of the same time. In this calculation I have given the existing plant the worst of it as I have allowed the hypothetical to build up a business in six years which the existing plant has taken forty years to develop, but while that is developed very rapidly, it could be done if you had a town like this and money behind you and you were to go after it. Having determined the rate at which the new plant is going to acquire this business it is necessary to ascertain what the existing plant is going to do during the same period in the way of increased business
411 and earnings. I have made a study of that based upon all of the records of past experience in the going company together with such additional information as I have concerning the price of raw material and labor now and prospective, and I show on the next page of the Exhibit a summary of the operating expenses of the going plant exclusive of depreciation and interest charges during each of the next six years, and it shows for 1913 the total operation and maintenance of the going plant exclusive of depreciation and

interest which is per thousand cubic feet of gas sold. I have shown this for each of the years, 1913 to 1918 inclusive. These totals make up the aggregate operating expenses except depreciation and have been arrived at through the three pages of details immediately following in which all of the items of expense as now carried on the books of the company are treated separately through each of the six years in advance. I have done this in view of the past experience of the company and the present conditions and I think that the operating costs per thousand cubic feet of gas which I have shown in figures may reasonably be expected to be as I have estimated them. To compare with this it becomes important to know what the operating expense and income of the hypothetical plant is going to be, so I have made another table running through the same six years being based upon the volume of business the hypothetical plant is to pick up, and the operating expenses based upon the actual records of the existing company, and affected as they would be by conditions under which the hypothetical plant would be operated during the first two years of its life. It is natural that the operating expenses would be higher at first than the operating expenses of the going plant because it has got a lot of money invested and is only using a part of it. It has a new organization and is buying materials in small quantities, and it is making small quantities of gas, and its operating results are inefficient. It lacks organization. I estimate
412 that the total gas made in 1913 per thousand cubic feet of gas sold would cost an operating expense, exclusive of depreciation and interest charges, of $1.66 per thousand feet. It would cost them more to make the gas that first year than they would get for it. The second year, 1914, they would do considerably better, and the corresponding figure estimated for that year would be $1.242. In 1915 it would be $1.0304; in 1916, 90.29¢; in 1917, 82.45¢; in 1918, 82.59¢. In the last year it has reached the economies of the present plant with its increased business. For the going plant the same figures are as follows: For 1913, 81.39¢; 1914, 82.02¢; 1915, 81.86¢; 1916, 82.46¢; 1917, 82.03¢; 1918, 82.13¢. It then becomes necessary to make an abstract of the gross earnings and of the total operation and maintenance and of the depreciation annuity of the going plant to determine what its net earnings will be during each of the next six years. Assuming that there is a population here of 47,000, the gas sales for 1913 will be $298,567, an increase of $16,405 over the 1912 gross earnings, or 5.8%. The total cost of operating and maintenance of the going plant for the same year would be $201,851. The depreciation annuity on the sinking fund basis will be $20,865. Adding the total operating and maintenance to the depreciation annuity makes the operating expenses for 1913, $222,716. Deducting this from the gross earnings gives the net earnings of the going plant for 1913 of $75,851, but what we are trying to arrive at is the going value of this property as of today, and a dollar that we are going to get a year hence is worth less than it is today by that amount which would produce a dollar at the end of the year by compounding. So I have taken a 6% factor for the present worth and have reduced the net earnings for the year 1913 by that

factor, which gives us a present worth of $71,558 for the net earnings to be received a year hence. I have made the same computation for each of the succeeding years up to and including 1918. The hypothetical plant is entitled to have an additional credit from the fact that the man who is going to buy the property must have
413 the money and if he is going to *to* build a new plant instead of buying the existing one, that money will be put into the bank at interest until it has to go into his property, and this credit to the hypothetical plant tends to reduce the difference between the going plant and the hypothetical plant valuation. I have here an interest table based upon the amount of money required for the replacement of physical equipment and the working capital of the going plant with the reproduction expenditures shown on the first few pages of this exhibit. This is made before we have any special notion as to the going value of the property in dollars. This calculation makes no allowance for the additional interest credit which will come from the going value allowance. I put it in later after it has been determined. Starting with column one on the interest table there is there shown the total investment in the hypothetical plant at the end of the year 1913, of $377,222. The amount left in the bank is the difference between this sum and the total amount which he is starting with, or $703,853. The interest on that sum for the first year, at 2½%, is $17,596. In addition, the amount that he withdrew during the year he would draw interest on at 2% for one-half year, and he would be drawing it out in approximately uniform amounts, and the interest on that portion would be $3,772 for the first year, making a total interest for 1913 of $21,368. In the same way the interest credit for 1914 is $12,150, and in 1915, $3,413. Adding to the interest for the first year the gross amounts of the sales from the hypothetical plant which would be $4,491, we have the gross revenue of the hypothetical plant for the first year, which is $25,859. The operation and maintenance expense of the same plant as we have already shown for the year 1913, would be $6,202. The depreciation annuity on the hypothetical plant, and depreciation begins as soon as your plant is started, would be at the same rate we found in the sinking fund of the going plant as applied to the
414 depreciable portion of the property installed during the first year, and would be $4,031, making the total operating expense of $10,233, which gives the net earnings of the hypothetical plant for the first year, $15,626. This sum is also an amount which is to be realized a year from today, so it must be reduced by the factor for present worth to what it is worth today, and this gives a present worth for the net earnings of the hypothetical plant for 1913, of $14,742. This is what the hypothetical plant actually makes during the first year but it is made through the credit of the interest on unemployed capital. The second year there is a deficit but the third year they begin to grow, and at the end of 1918 the hypothetical plant would have net earnings of $95,536 which, reduced by the factor for present worth, would give a present worth of the net earnings of that year, of $67,353. Now having ascertained what each of the plants are going to do during those several years we make a

comparison and in one column we show the present worth of the net future earnings of the going plant for each of the years from 1913 to 1918 inclusive, and in another column we show the present worth of the net future earnings of the hypothetical plant for the same years, and in the third column we show the difference between the two preceding columns, and after we have shown for the first year the present worth of the net future earnings for the year 1913 of the going plant, which are $71,558, and of the hypothetical plant, $14,742, we find that in point of actual value alone the going plant for the operation of that one year would have an advantage over the hypothetical plant of $56,816. Carrying the figures through the respective years to the point when the plants become parallel in operation and adding the difference we find the aggregate difference in value between the two properties in favor of the going property is $238,190. This is before we have given the hypothetical plant any credit for interest that would be paid on the money which the man would have for this going value item. If the man is going to
415 buy the existing property he must have enough money not only to buy the physical equipment but also the going value, and consequently the money represented by the going value in the purchase would also be in the bank, and be drawing interest which would go to increase the difference between the valuation of these two properties, because it would tend to decrease the net cost of building up the business of the hypothetical plant. We know that if we take this full sum, $238,190, and add that to the original amount which the man carries through his interest calculation we are going to arrive at a figure that is higher than this, and therefore we know it is too high so we have to take some figure that is lower. In other words, the going value is less than the figure shown here by a certain amount which can be determined by a short cut calculation in such a way that when we do take the credit of the going value in the bank and take the credit for the interest on that amount we will arrive at the same amount you put in as working capital. That is the check of the accuracy of this calculation. I have done that on the next page. I have added to the interest calculation the apportionment of the differences through each of the several years that is represented by the going value allowance of $225,000. I have carried through exactly the same calculation I have shown for the hypothetical plant and have arrived at the present worth of the net future returns of the hypothetical plant exactly as before with only the changes due to the including of the going value amount. By that process the present worth of the net future earnings of the hypothetical plant is increased. There remains, then, to make only the final comparison between the corrected net future earnings of the hypothetical plant with the expected net future returns of the going plant, and that I have done on the last page. In 1913 the present worth of the net future earnings of the going plant were $71,558. The present worth of the net future earnings of the hypothetical plant for the same year with the allowance for interest on the
416 going value, is $19,958, and the difference between them for that year is $51,573 in favor of the going plant. These dif-

ferences are carried out year by year until at the end of the period when the two plants get into parallel operation there is a difference in value on this calculation of $227,138. Since we started with $225,000 and we finish with $227,138, the correct figure to use as going value is between these two amounts, and as the difference is so slight I did not go through the calculation again to find it. It can be figured so that the figure you wind up with is exactly the same that you started with, but it is so close that I have taken $225,000. That is what I consider a justification for including the $225,000 as going value for this particular plant. The conclusions that I have made and which are shown in Exhibit K and running through some sixteen pages have been prepared by me based upon the property here in this case. I have given the same consideration to the hypothetical plant as I have given to the plant that is here. The items of depreciation and working capital and development of business of the existing plant are all based upon the data that is included in this report with respect to that plant, and this is simply a process of carrying out and extending the plant for six years and comparing that with what the hypothetical plant would be able to do if it was built in another city in all respects similar to this city.

Exhibit K offered and received in evidence.

On the first page of Exhibit P I have shown the items making up the reproduction cost and the present value of the property of the Lincoln Gas & Electric Light Co., used in its gas department in Lincoln as of January 1, 1913. The reproduction cost of the organization and legal expense is $33,000, and the present value the same. The reproduction cost of the working capital is $72,038, and the present value is the same. The reproduction cost of the real estate is
$21,700, and the present value is the same. The reproduction
417 cost of the buildings is $41,312. Present value, $30,967.
The reproduction cost of the works equipment is $253,298, the present value is $196,759. The reproduction cost of the distribution system is $659,727, and the present value is $553,650. The reproduction cost of the going value is $225,000, the present value the same. The total reproduction cost is $1,306,075, and the present value is $1,133,114. This represents, in my judgment, the cost of reproduction and the present value of this property as of January 1, 1913.

The net earnings of the company for the gas department for 1912 were, as shown in Exhibit P, $75,898.80, which is a return of 6.698% on the present value of the property at the current rate for gas, which is $1.2039 per thousand cubic feet. The earnings for the year 1911 upon the same value is 5.81% at the same rate for gas. For the year 1911 the corrected net earnings of the gas department on the then present value of the property was 8.029%, and on the then reproduction cost, 6.942%. For the year 1910 the corrected net earnings of the gas department were 8.437% on the then present value, and 7.288% on the then reproduction cost. For the year 1909 the corrected net earnings on the then present value were 9.464%, and on the then reproduction cost, 8.189%. For the year 1908 the cor-

rected net earnings on the then present value was 9.247%, and on the then reproduction cost, 8.029%. For the year 1907 the corrected net earnings on the then present value were 7.029%, on the then reproduction cost, 6.093%. These figures are on the rates existing in the years in question. I have not computed what the return would have been on the dollar rate but that could be very easily done. In making these calculations for 1912 the total reproduction cost and so forth, as entered on this Exhibit P, has been included. The reproduction costs and present values that I have arrived at for the years 1907 to 1911 inclusive are in view of the reproduction cost and present value of the property as at the end of 1912, and
418 are based upon the additions to the physical equipment and the going value and working capital, organization and legal expense, as shown by the inventory containing the accounts and records showing the growth in volume of business. The figures for these years do not purport to be exact as they are necessarily based upon average cost per foot of street main extensions, but it is my belief that they do represent a fair and correct total in each case. The reproduction cost of the entire property of the gas department, and the then present value are shown for each of the years in Exhibit P, as are also shown the items which make up those values. This was arrived at by the process of eliminating the equipment each year according to its age. Exhibit 7-1 shows, in my opinion and judgment, the reproduction cost and the present value of the property and business of the Lincoln Gas & Electric Light Co. from January 1, 1913. Exhibit 7-1 is offered and received in evidence.

Exhibit A, in my judgment and opinion shows the corrected proper amount to be set aside for organization and legal expense. Exhibit 7-A is offered and received in evidence.

Exhibit BB, in my judgment and opinion, shows the proper amount to be set aside as working capital for this property. Exhibit BB offered and received in evidence.

Exhibit 7-C shows, in my judgment and opinion, the correct and proper amount to be set apart in percentage for engineering and supervision, casualty liability, taxes, and loss of interest during construction, omissions, and contingencies. Exhibit 7-C offered and received in evidence.

Exhibit 7-D, in my judgment and opinion, shows the proper amount of reproduction totals for this property. Exhibit 7-D offered and received in evidence.

Exhibit 7-E showing the reproduction cost, age, assumed life, present per cent condition, present value, depreciation annuity on straight line and sinking fund basis, shows, in my judgment
419 and opinion, the proper amount to be set apart for the reproduction of the real estate and buildings. Exhibit 7-E offered and received in evidence.

Exhibit 7-E-2, consisting of four pages, in my judgment and opinion, shows correctly the reproduction cost, age, assumed life, present per cent condition, present value, depreciation annuities on straight line and sinking fund basis for the works equipment of this company, taking the equipment item by item. It does not include work-

ing capital or going value. Exhibit 7-E-2 offered and received in evidence.

Exhibit 7-E-3, under the heading of distribution system, shows, in my judgment and opinion, correctly the reproduction cost, composite age, assumed life, present per cent condition on the depreciable portion, present value, depreciation annuity on straight line and sinking fund basis, of the distribution system. All of my testimony through-t with respect to the present values of this property is as of the date of January 1, 1913, with the exceptions that I have made. Exhibit 7-E-3 offered and received in evidence.

Exhibit 7-B shows the total net construction cost correctly of the totals of real estate, buildings, works equipment, and distribution system. Exhibit 7-B offered and received in evidence.

Exhibit 7-A, under the heading of real estate, shows as nearly as I have been able to arrive at it, the net construction cost of the real estate, exclusive of improvements, with the exception that on one of the lots there is located a small cottage. Exhibit 7-A offered and received in evidence.

Exhibit 7-B and its subdivisions of 7-B-2, 7-B-3, 7-B-4, 7-B-5, 7-B-6, 7-B-7, 7-B-8, 7-B-9, and 7-B-10, shows the net construction cost of the details entering into each of the buildings where such buildings are properly classed as gas department buildings, and shows the correct amount, in my judgment. All these exhibits offered and received in evidence.

Exhibit 7-I, with the subdivisions of 7-I-2 to 7-I-73, in-
420 clusive, shows the net construction cost of the works equipment of this company in the gas department in detail as of January 1, 1913. Exhibit 7-I-, with the above-mentioned subdivisions, offered and received in evidence.

Exhibit J, consisting of the subdivisions J-4 to J-11, inclusive, shows the net construction cost of the distribution system of the gas department of this company and includes a proper and correct statement of the kind of pavement, the net construction cost of pipe under unpaved streets, the net construction cost of tearing up and replacing paving, the net construction cost and sizes and kinds, and lengths of mains, and of the services and street main drips and street main valves, and district governor, and railroad crossings, and certain miscellaneous items, and the meter stop boxes and cocks. Exhibit J, including the subdivisions J-4 to J-11, inclusive, offered and received in evidence.

Exhibit K, under the heading, reproduction expenditures and identified in my testimony as the going value calculation, correctly shows the various items entering into the exhibit, and the proper and correct calculation made with respect to those items, and the corrected and proper result of the calculation is there shown. Exhibit K, consisting of 16 pages, offered and received in evidence.

Exhibit L-1 is a correct transcript of the records of the company showing the quantities of gas made, sold, and unaccounted for, for the years 1902 to 1912, inclusive. Exhibit L-1 offered and received in evidence.

Exhibit L-2 is a correct compilation of the records of the company

showing the gross and net earnings of the gas department of the Lincoln Gas & Electric Light Co. for the years 1902 to 1912 inclusive. It does not show the allowance for depreciation as their records did not make any allowance. Exhibit L-2 offered and received in evidence.

Exhibit L-3 is a correct compilation and calculation from
421 the records of the company for the years 1903 to 1912, inclusive, of the apportionment of operating expenses to the manufacturing, distribution, collection, and executive departments and is further divided as to plant, of out-put of consumers, and of meters. All of it is taken from the records of the company except that below the word "resume", which is merely a re-statement of the figures contained in the records of the company to show another phase of the same matter. It agrees in all respects with the records of the company as of January 1, 1913. Exhibit L-3 offered and received in evidence.

Exhibit L-4 shows in detail the manufacturing department expense per thousand cubic feet of coal gas made, considering only such expenses as are properly chargeable to it for the years 1903 to 1909, inclusive, as taken by me from the records of the company. Exhibit L-5 is a blue print containing curves made under my direction from the figures shown in Exhibit L-4. It is an abstract and a correct compilation from the records of the company. Exhibits L-4 and L-5 offered and received in evidence.

Exhibit L-6 is a record of the detail costs incurred in the manufacturing department in the making of water gas for the years 1903 to 1912 inclusive. It shows the cost in per thousand cubic feet of water gas made. It was taken by me from the records of the company and is a correct compilation of those records. Exhibits L-6 and L-7 offered and received in evidence.

Exhibit L-8 is a tabulation made by me from the records of the company, showing the manufacturing department expense of the mixed gase- made, per thousand cubic feet, for the years 1903 to 1912 inclusive. It was taken from the records of the company. The accompanying blue print, Exhibit L-9, is a graphical representation of the figures on Exhibit L-8. Exhibit L-10 is a tabulation made by me from the records of the company showing the distribution department expense per thousand cubic feet of gas sold for the years 1903 to 1912 inclusive.

422 Exhibit L-11 is a graphical representation of the information shown on Exhibit L-10.

Exhibit L-12 is a tabulation made by me from the records of the company of the collection department expense per thousand cubic feet of gas sold, for the years 1903 to 1912 inclusive.

Exhibit L-13 is a graphical representation of the data contained in L-12.

Exhibit L-14 is a tabulation made by me from the records of the company showing the executive department and general expense per thousand cubic feet of gas sold, for the years 1903 to 1912, inclusive.

Exhibit L-15 is a graphical representation of the data contained in Exhibit L-14.

Exhibits L-8 to L-15 inclusive offered and received in evidence.

Exhibit M is an analysis of the gas consumption of the company for the year ending December 31, 1912, showing the average monthly consumption through-t that year for each of the 26 classes of consumers. It was made from the company's records by the secretary of the company and I believe it to be correct. Exhibit M offered and received in evidence.

Exhibit N is a statement of the quantities of gas sold outside of the city of Lincoln and of the receipts from the sale thereof for the years 1905 to 1912 inclusive. It was compiled from the records of the company by the secretary at my request and I believed it to be correct.

Exhibit O is a blue print showing graphically the growth of sales of gas from the end of the year 1872 to 1912, as shown by the records of the company, with the exception of the years 1876, 1879, 1900, and 1901. It was prepared under my direction. For the years mentioned I was unable to find any records. This Exhibit also shows the growth in the number of feet of street mains, and the growth
423 of services and meters in use by the company from the year 1903 to the end of 1912, and also shows my opinion for the last three items of what must have been the growth of those items from the end of the year 1872. Exhibit O offered and received in evidence.

Exhibit P is a statement headed corrected net earnings, prepared by me from the records of the company with the exception of certain modifications which I found should be made. These are shown in the Exhibit under the heading indicating where they are made. It also shows the deductions I have made as to the present value and the reproduction cost of the property for the years 1907 to 1912 inclusive, the latter figures being based upon my valuation of this property and business as of January 1, 1913. This also shows the corrected net earnings of the gas department in per cent of the then present value, the corrected net earnings and per cent of the then reproduction cost for each of those years, and also my deductions from the valuation placed upon the property as of date of January 1, 1913, for each of the preceding five years. Exhibit P offered and received in evidence.

Exhibit Q is a tabulation made by me showing the gas sales in thousands of cubic feet, for each of the years from 1873 to 1912, inclusive, with the exception of the years 1876, 1879, 1900, and 1901, for which no records were available. It was taken by me from the records of the company and it shows the relation both between sales of each year to the sales of 1912, and also the yearly gains in sales in per cent of the 1912 basis. Exhibit Q offered and received in evidence.

Exhibit Q-2 is the outline of my calculations showing the composite age of street mains based upon information taken from the records of the company, showing the total mains in use from the years 1903 to 1912 inclusive, and between the years of 1873 to 1903 as determined from my study of the growth in gas sales as shown on

the blue print constituting Exhibit Q-2, and the blue print referred to in Exhibit O. Exhibit Q-2 offered and received in evidence.

424 Exhibit Q-3 is the outline of my calculation showing the composite age of house services in use, as based upon the actual records of the company, showing the number in use from 1903 to 1912, inclusive, and showing my deductions from the study of the gas sales and their relation to the number of services as indicated by Exhibit O. Exhibit Q-3 offered and received in evidence.

Exhibit Q-4 is the outline of my calculation showing the composite age of meters in use as made by me from the records of the company, showing the meters in use for the years 1903 to 1912, inclusive, and from my study of the gas sales as related to the number of meters and indicated in Exhibit O. Exhibit Q-4 offered and received in evidence.

Exhibits 7-B-2, 7-B-3, 7-B-4, 7-B-5, 7-B-6, 7-B-7, 7-B-9, 7-B-10, 7-I-1, 7-I-2, 7-I-3, 7-I-6, 7-I-7, also Exhibits 23, E-28, exhibits 31, 33, 34, 54, 55, 58, J-2, J-3, all being blue prints and drawings attached to Exhibit J and identified by the witness in his testimony, are offered and received in evidence.

Cross-examination by Mr. Morning:

The gas plant which was installed by me at Peoria was a coal gas plant and I started in on the work from its inception and did not leave it until they were ready to make gas. We installed seven benches of the full depth in that plant, and the capacity of the plant was 650,000 cubic feet a day. Gas benches are the furnaces in which the retorts for the distillation of the gas from the coal are located. While I was at Madison Henry L. Doherty was general manager of the Madison Gas & Electric Light Co. He was also connected with the McMillan syndicate, and I was connected with them while I was at Peoria. From the very beginning up to the present time I have been appraising gas plants. The appraisals were made because sometimes a bank would want to know whether it should underwrite an issue of securities, or an individual desired to know whether or not he should buy a property, sometimes it was a rate case

425 before the state commission, sometimes it was a consolidation with other properties. In making an appraisal for the bank it would be thorough in the sense that all of the ground necessary would be covered, but a bank would not want to know how many brick there are in a given wall, and that detail would not be gone into.

In making valuations for a bank we got close enough to the mark if we determined the cubic contents of the buildings and then applying a reasonably close figure per cubic foot. The account of the entire system including the buildings, works equipment, and distribution system, is determined even in the most casual examination that I would make. I would determine the cubical contents and the characteristics of each of the buildings and the area of each parcel of real estate and the relative valuation of each and the size and

capacity and age of each of the works equipment, and I would determine, not only from the records of the company but from additional checks which are always available, the exact number of feet of each size and kind of street mains and whether or not under pavement, and if so, what kind of pavement. I would also determine the soil characteristics in the locality, the number, size, and average lengths of services, and whether or not under pavement, and, if so, under what kind of pavement. I would also determine the composite age of street mains and of services, the number, size, kind, composite age of meters in use and in stock, and in effect would give the same information that was given in this case with the exception that I would not go into such great detail.

The basis of the valuation is the same whether for rate purposes or for sale or condemnation or taxation. There is but one value to the property. The only difference in a rate case is that we have to have the details to prove our conclusions. In making a valuation for a bank or purchaser they want only the conclusions. They would be the same in each instance. I have made appraisals for prospective purchasers in Grand Rapids, Hancock, Mich., Hoopton, Ill.,
426 Jackson, Miss., Laurien, Mich., Maniste, Mich., Manitowoc, Wisc., Marquette, Mich., Newcastle, Ind., Red Jacket, Mich., and Shelbyville, Ind., and such sales as were made were made upon my valuation. The sale at Jackson, Miss., was consummated upon my valuation. That was a place of about 30,000 people. I don't remember a thing about it now except that I was there and did the work and it was about that size of town. I could discribe the property to you and give you a rough sketch of the plant. The purchaser was the Kelsey, Brewer Co. of Grand Rapids. Without knowing what the buyer was offering or what the seller wanted the value that I placed on this property was just half-way between those two figures and they got together on it. There is no item appearing here in this valuation that was not included in that valuation, including going value, superintendence, and engineering. I recognize only one value for a property regardless of the purpose of making the valuation.

I also made a valuation for Bacon, Olds & Co. of the properties in Anderson, Ind., Elwood, Newcastle, and three or four others. My valuation was to govern how the underwriting was to be taken over on all of these properties, by a Philadelphia bank and the money was all but paid when the banker died and the deal fell through. I made a valuation of each of the plants separately, but they were all in one report. I cannot give you the valuations but some of the properties were natural gas, some coal gas, and some water gas. I valued a property at Emporia, Kans. where the manufacturing plant was under construction and the existing distribution system was involved, and the sale was consummated. I constructed there a plant with the capacity of 165,000 feet a day, and it consisted of water gas apparatus, purifiers, holders, condensers, a scrubber, and an exhauster. That plant was under construction about four months. I designed it and the machinery was all installed under my direction. It was sold for the valuation that I placed on it. I represented both

the buyer and the seller and they left to me the valuation.
427 It would be violating a confidence if I were to tell you what the valuation was and I object to furnishing it for that reason. It was sold by one private corporation to another.

Sometime within the last two years, for the Continental & Commercial Trust & Savings Bank, I made a valuation on the property at Ottumwa. They were about to underwrite an issue of securities on the company and I made a valuation of it to advise them what it was worth. The deal was made in that case but I don't say it was on my report as I don't know what they paid. I could ascertain what valuation I placed on that plant. I do not recall it now, but I object to furnishing it to you because it would be unprofessional. The capacity of that plant was in the neighborhood of 400,000 feet per day. They had two water gas sets and either four or five benches of six'es. They also had one building containing a gas engine pressure unit beside the main building. But they did not operate an electric light plant. I do not follow these things up to find out whether the deals are consummated or not, and I presume some are consummated that I don't know about.

At another time I went to Clinton, Ia. for one of the stockholders in a company there who wanted to know whether it would be a good thing for him to secure control of the company there. He did not have the control at that time. I gave him my report showing what I thought of the property and he is now in control. What effect my report had I don't know. It is a place of about 30,000 with one gas plant. Their combined capacity, coal gas and water gas, was about 750,000 feet a day. That was some time within the last three years. I do not know what the valuation was that I made and I wouldn't tell if I did know because it is unprofessional. I am not supposed to do that. I made a valuation of the property at Freeport, Ill., where they were considering the re-organization of their company and they reorganized after I had made my report. They have since sold the property to a Philadelphia syndicate operating a large number
428 of gas plants and I was advised by one of the former owners that they sold the property at the valuation I placed on it. They had prior to that time put in a large amount of additional money in building up their plant and business without issuing any additional securities, and they wanted to re-organize, and therefore they wished this valuation.

My first experience as a witness in a rate case was in the Des Moines case which was tried in 1910 or 1911, where I was called as a witness for the gas company, and made a report something similar to the one I have made here. There they were trying to avoid the enforcement of a 90¢ rate fixed by the city council. The next case in which I appeared as a witness in court was this case. I have also appeared before the Wisconsin Railway Commission in the Sheboygan case. I was called there as a witness by the gas company. That was on complaint to the effect that the company's rates were excessive. That was a town of about twenty-five or thirty thousand people. I appeared also for the city of Buffalo in connection with the hearing before the New York Public Service Commission within the past two years. My re-

port was received there and was sworn in as evidence. I did not testify. I made the examination and report jointly with Mr. W. A. Baehr. Mr. Baehr and I did this for the city of Buffalo to determine how much the gas company could reduce its operating expenses if it adopted thoroughly modern equipment and methods throughout. There was a gas rate case on at the time but we were not concerned with that. We made a report that very considerable economies could and should be made by the gas company in the city of Buffalo, and I presume it was used in the rate case.

I am employed at the present time to make a valuation of the Spokane gas property which is owned by the same general organization that operates the local company here. There is a rate proceeding pending before the public service commission of the State of Washington, by an application to reduce rates, and I am expecting to go there from here to make the valuation. These are the
429 only two valuations which I have been employed to make for these people. At the present time I have under construction a re-building and extension of the existing plant at Excelsior Springs, Mo. Last year I outlined some plans for them to follow in the growth of their business and did some work for them and this year they have come back with an increase of business which warrants them to go ahead with the extensions. That is a water gas plant. It is a resort town and they have to provide for a peak load which is away beyond the requirements of the town itself.

I also have under construction a plant to be used jointly by Nogales, Ariz., and the town across the line in Mexico. That plant will have a capacity of 125,000 or 150,000 feet a day. They have a plant there now and this is to be an extension of it.

The valuation which I made of the real estate of the Lincoln Gas & Electric Light Co. was obtained from local real estate men. Some of them placed higher figures and some of them lower than what I have put here, and I do not pretend that that is an accurate valuation. Part of the lots in Peck's Grove addition are not now being used by the Gas Company in its gas business. I do not remember which ones. I can tell from the plat which I will produce tomorrow. The company has some additional buildings down near the plant but I have not included them in my inventory as they are not any part of the gas making plant. I think they have two or three houses down there.

I have acted as foreman on buildings but never as a contractor. However, I have been in direct and immediate charge of men doing the work, telling them whether to build the wall this way or another way, and how and when to build it. In arriving at the cost of the several buildings in my inventory I used the unit costs for the material and labor. The units varied depending upon the nature of the work. On the brick in the purifying house which was common ordinary brick I figured $17 per thousand to put the brick in the walls, which was a price of $7.50 per thousand delivered at the plant and 38¢ per thousand in the wall for the sand; 79¢ per thou-
430 sand for the cement, and 40¢ per thousand for the lime, the total for the materials being $9.07 per thousand. The time

of the brick layer was $4.16 per thousand; of the helper, $1.87 per thousand; of the carpenter, 77¢ per thousand; the miscellaneous cost of handling materials, $1.16 per thousand; total labor, $7.96 per thousand; total cost per thousand brick in the wall, $17.03 which I have put in at $17. Those prices obtain in my valuation for all brick put in at $17 per thousand. The brick in the pilasters I have put in as $21.25 per thousand because it is customary with contractors to charge 25% more for the brick actually in the pilaster than they do in the ordinary run of the wall as the cost to them is that much more to lay the brick in the pilasters. The difference is in the labor item.

In the same building I have put in the actual brick in the cornices at the same rate, $21.25, for the actual work there, and they are figured at the same rate as the pilasters because of the extra labor. In the pilasters of the purifying house there are 4,452 brick, and in the cornices, 5,860 brick. Those are all of the modifications in the brick-work of the purifying house, and the other buildings I treated the same way. In addition there is some little brick-work in the foundation in which I think I have used $20 per thousand because of the small amount of brick. It would be a negligible quantity. I did not try to separate the different kinds of lumber. I took an average price for all of the lumber which was $42 per thousand in place. I figured it delivered at the works at $26, $27, and $28, and I know that is what it would actually cost there. I have taken the average figure of $42 to put it in place as I found that it is not worth while to go to the details while getting the unit of each particular piece of lumber in the building. It is a small amount in the aggregate after you get it and $42 as an average cost I believe works out equally as well and I feel perfectly safe in saying that all of the lumber in that gas plant will average $42 a thousand in
431 place. The average labor included in that $42 is the difference between $26, $27, and $28. Some of the steel work in the purifying house I put in at 5¢ per pound in place. The steel delivered on the ground would cost about 3½ or 4¢. That steel is framing for the floors. There is also some cast iron in the same floor on which I used 4¢ per pound in place. The iron alone would cost about 3¢. The same unit was used on the steel and iron in the other buildings.

In estimating the value of the gas holders I determined the quantities as nearly as possible and the excavations and made an estimate from those items. On the re-enforcing steel I estimated 4¢ per pound in place. 3½¢ of that is for the steel alone. The balance is for labor. That steel is used in the concrete foundation. There again in the foundation of the holder I have some brick in at $17 per thousand and concrete at $5 a yard which includes the labor and the materiai, and covers the same kind of brick as used in the building. I have taken all the brick at the low price.

The cost of the steel in the holder depends very largely upon the size of the holder. The fabrication of this steel is nearly all done in the shop and when you buy steel for a gas holder you do not buy so many pounds of steel, but so many pounds of gas holder. Every

sheet of it is all accurately cut and finished so when it comes here it goes together like the spokes of a wheel. The steel in the holder in East Lincoln I have in place at 6¢ per pound. There were a total of 136,600 pounds in that holder. The actual erection of this steel is figured at 12¢ per pound. For the other items in this holder I have figured the excavation at 75¢ a yard, the re-enforcing steel at 4¢ per pound, the concrete at $5 a yard, the brick at $17 per thousand, the dressed stone at $47.25 a cubic yard, the cement plaster on the brick and concrete at 2¢ a square foot, back filling and removal of surplus at 25¢ a yard, water at $1.50 per thousand cubic feet. The cost of the masonry tank which includes all the items in the entire cost of the holder except the water in the tank and the steel
432 and iron in the holder proper and the guide fram- and the inlet and outlet connections, is $2,281. This covers the excavation and forms required in concrete work and re-enforcing steel for the concrete itself and for the brick and dressed stone and plaster on the brick and concrete, and the back filling and removal of surplus material. The holder complete cost $18,685. The water costs $148. The connections and miscellaneous are 12,000 pounds figured at 6¢ per pound. These are cast iron and on work like this where the major portion of the cost is labor it will run to 6¢. It includes the belt and spigot pipe.

I tried to find what this gas holder actually cost the company when it was constructed but I was unable to do so as it was covered by a good many vouchers. The masonry tank is considerable more than half of the total cost which is frequently the case. This total cost of some $18,000 does not include the booster. Its particular function there is to take the gas from this holder and push it out at a little higher pressure to the outlying districts. It is used in connection with the University Place and Havelock extension service. I consider my estimate of the cost of the masonry tank to be the fair and reasonable cost of building it new. There is at the East Lincoln holder a number 5 Sturdevant blower belted and its net construction cost including the foundation is $180; another number 5 Sturdevant blower, geared, with net construction cost of $210. Their purpose is to increase the pressure at all outlying points and it is necessary to have two of them in order that one may be held in reserve for emergency and also that both may be operated to take care of the peak load at times. These blowers are treated in this valuation as independent items and include the installation of each and connecting them up with the distribution system ready to use.

I estimated the gas connections at the East Lincoln holder of the company to be approximately 24 feet in length as the tank is shown to be 22.9 feet deep at its maximum depth and 7 feet at the minimum depth, and it is the general practice that the diameter is 12
433 inches, but I did not see the holder built and thus cannot give it to- as it is from knowledge. I don't even know that there are any connections to that holder but I observed that the gas goes in and comes out and that it goes up and down and I suppose it must be with connections. There is a standard practice in the designing of holders of given size and unless some person makes a

special request for an off-size they get a given size which is either a 10-inch or a 12-inch one. I suppose that I took the 12-inch because that is what would be ordinarily taken. It is the customary thing to include these connections in the steel contract. I did not ask for the contract because I did not care what the actual cost was. I can come close enough to the actual cost of a holder without knowing the contract cost.

If there was a contract showing the cost under the valuation which I have given in the report I would think that there were additional items not shown in the contract. I figure that my actual experience is better than some method of bookkeeping in arriving at the cost of the holder. If you can show records which will satisfy me that they are complete and cover everything in question then you have got some very good evidence as to the cost of the holder and you have something which bears materially upon the reproduction cost as the construction was completed within the last few years, and if the construction was finished recently enough and if all of the details were there I would adopt and very gladly accept that evidence as an indication of the reconstruction cost, but I have yet to see the first gas company that so keeps its construction records to show accurately the construction cost of a given piece of equipment. The records are not designed for that purpose and they are not so kept in any plant that I have ever seen. I found that the system of keeping the records here was the same as used in a great many other places with which I am quite familiar and I know that neither I nor anyone else can find from that record the actual cost of any piece of equipment, therefore I did not ask for it, with the exception of such little
434 items as the pump or some little piece of equipment that is made up separately. I know that you cannot go into the records of this gas company and determine what the last water gas holder cost. Before proceeding with my valuation I made sure that the bookkeeping was of the kind ordinarily met. I did make an investigation of the actual cost of several of the large items just to make sure that my position was sound, and I found it was. That was that the actual cost of the items could not be determined from the records. I ran through several hundred vouchers covering a period of four or five years altogether in an effort to find what the actual cost was of several important items.

The purpose of the bookkeeping of the gas company is not to determine the actual cost of these items in the inventory. It is of no service to the gas company to know that. It is all right to know the total construction expense. With respect to the district holder I found that the steel work was done under contract and it was also apparent that some of the other work was done under contract. I examined the vouchers and added up the total of all that I thought were concerned with this work but they did not agree with my valuation because work that is supposed to go against a water gas machine, for instance, frequently concerns a lot of items that go to other places, and the man who makes the apportionment of the time cannot always keep it exactly straight and sometimes there are important items that

actually went into the gas holder that are charged up in the records against the water gas set.

It is a very ordinary thing to find that materials meant for one piece of work are used in another because it happened to be convenient at the time the man was putting the work in. If the masonry tank in this district holder was constructed by contract and the steel and super-structure by another contract the sum of these two contracts would not give the total cost of the gas holder unless you had some evidence that those two contracts covered all of the cost
435 involved. I did not ask for the contract on the 500,000 foot holder at the plant which was built five years ago.

In making my estimate of the cost of that holder I took my knowledge of what other gas holders had cost other companies, plus what I could find out here as to local conditions and local prices. I do not believe the records of the company will show what the holder actually cost. I think it was built by the Stacey company of Cincinnati. The 500,000 foot holder has a steel tank and must stand a greater pressure than the 100,000 foot holder. It has a concrete foundation with reenforcing steel. The steel tank containing the water has a concrete pan above ground for a foundation and then the holder is floated in this water. I do not know what the actual cost of the foundation for the large holder was but I found that it had been built by contract. I do not know who was the contractor and made no effort to find out.

If you will tell me what is covered in your contract I can tell you whether or not it covers the items I have shown in my inventory and valuation. The concrete pan for the large holder costs $5,709. The tank connections I found were 10,000 pounds at a price of 5½¢ per pound in place. These connections consist of inlet and outlet pipes. The miscellaneous connections are included in the valuation of the tanks and I have not shown them separately in the East Lincoln holder. I included the miscellaneous items with my connections. I just happened to work it out that way. These miscellaneous items outside the connections proper are foundation bolts and should be included in the contract price of the superstructure. The reenforcing flanges where the contract for the foundation was let to one contractor and the steel super-structure to another would not be included in either contract as they are miscellaneous items. The gas company ordinarily has to do those things themselves with the exception of the foundation bolts which are nearly always furnished by the contractor for the steel work. The flanges which I speak of are used where you have a relatively long piece of pipe standing
436 vertically and you wish to steady it, and you put the reenforcing collar around the pipe sometimes, and other times you put in guy lines and these are the flanges. The steel above the foundation for the large holder I estimate at 400,552 pounds at 5½¢ per pound in place.

I did not estimate the labor and steel separately but the labor would be about the same as I gave before, but I have not gone that far because of the shop work. The steel work and iron work in place amounts to $37,980; the foundation, $5,709; and the water, $296. That is the cost of putting the water in the holder and it is part of the

reproduction cost of the holder. In order to put it there you have to have a considerable bit of extra labor and have to rig up a pump and you must have a man there to watch it very often. It takes 197,267 cubic feet to fill this holder with water. I figured the water at $1.50 per thousand cubic feet which includes the average price for water and the cost of putting it in the tank. You have to have at least one man there all the time and you very commonly have to get pumps and even if you don't need pumps it will cost you $1.50. The $1.50 per thousand cubic feet figures something less than 18¢ a thousand gallons. It is necessary for the man to stay there while it is being filled to see that it doesn't explode. The contractor may also have a man there to turn the water on and off but that would not be satisfactory to the gas company. It would be a very poorly managed gas company that would allow someone to do that without supervision. The net construction cost of this large holder is $43,985, which includes everything. On the excavating on this holder I figured $1 per yard and for back filling and removing surplus material, 50¢ a yard. On the East Lincoln holder I figured 75¢ and 25¢ for these items. I used a different figure on the two holders because there is very much more excavating on the smaller holder. The smaller holder is built down into the ground while the larger is on the ground. The 200,000 foot holder at the plant was
437 built 25 years ago, has two lifts and a brick tank with a concrete bottom. The tank is below the ground. The tank I have estimated would cost $10,409, which includes excavating, brick, concrete, dressed stone, plaster on brick and concrete, back filling, and removing the surplus material, but does not include connections. For the excavating I figured 75¢ a yard, and for the back filling, 25¢ a yard. I figured $17 a thousand for the brick in place, and $5 a yard for the concrete. The total excavating was $4,237; the brick, $3,261; the concrete $870; dressed stone, $421; plaster on brick, $114; plaster on concrete, $94; back filling and removing the surplus material, $1,412. On the super-structure, knowing the pressure that is thrown by the holder I calculated its exact weight, by its diameter, as 242,650 pounds for the steel and iron which I have estimated at 6¢ a pound in place.

I have not attempted to segg*r*egate the shop from the balance of the labor. The most expensive part of the labor is done at the shop after the metal is purchased. That weight includes the guides and frame work. All of the weights of the steel and iron in the holder I have calculated myself from the diameter, weights, and pressure thrown. All of the quantities of excavation and the steel in the foundation and the concrete and the plaster and water has been furnished by Mr. Brodnax and his assistants. The lifts in this last holder weigh 137,150 pounds. I secured the other weights involved from the knowledge of what those weights run on gas holders built in many parts of the country by various builders. They are not necessarily the actual weight except that they are standard constructions of gas holders each manufacturer having a standard holder which he builds and he always tries to get to that same standard in all respects because his cost is lower that way, and I think that they succeeded in doing

so in this case. I have seen this holder and I knew who built it, but I have forgotten now. I did not try to find the contract price for this holder nor could I had I tried so far as I know. There is another holder of 50,000 capacity at the plant built 31 years
438 ago and I presume it was built by contract. It is a single lift gas holder with a brick tank. I do not know what it cost when built. It is a holder that would be built by an up-to-date company at the present time only it is small. The footings and the tank itself are made out of concrete, the walls of the tank being brick, and the super-structure is steel. The foundation which includes the tank and everything except the water, steel, and iron, I figure to cost $6,850, figuring the excavation cost at 75¢ a yard, the removal of surplus material and back filling at 25¢, the brick work at $17.00 a thousand, and the concrete at $5 a yard. There is a total of 58,234 pounds of steel and iron which I figure at 6¢ a pound in place. The same condition exists there as to the lab[illegible]r as did on the others. The lift weighs 33,264 pounds and the balance of the steel and iron weighs 24,960 pounds. The connections are included in the total steel and iron weights.

The measurements for the buildings were furnished to me by the company and were made by Mr. Brodnax and his assistants. I made three visits to the plant to look the buildings over prior to my valuation. I did not make any measurements. I went down there with the purpose of satisfying myself that the inventory provided me was substantially correct. I checked it up both on the buildings and distribution system as far as I could to satisfy myself. I did not go down there to see if they had given me the correct number of feet of lumber, the number of brick, amount of iron and concrete, and I have assumed in my figures that those details were correctly given. As to the depth of the foundations under the brick walls, I made some inquiry but I didn't dig up any of the foundation and I also inquired as to what troubles they might have had in the foundation work. The measurements of the foundations were made on a plan which I outlined to Mr. Brodnax. We had worked together before and he knows what information I wanted. We went over in
439 a general way before he began to take any of his measurements and when the matter came back it was in the form I expected and I have every reason to believe that it is correct. I fixed the age of the purifying house at 22 years which was based upon information which Mr. Brodnax and his assistants secured through local inquiry and looking over the available records as to dates of buildings and works equipment throughout.

There is a full basement in that building—more than an ordinary basement. It is 11 feet from the floor of the basement to the underside of the next floor above. The floor is of concrete and wood. The operating floor is wood. The floor of the purifying house is 8-inch concrete, and covers the entire basement. That basement was used for the re-vivifying of oxide. The oxide when exposed to the gas combines with some of the sulphur compounds in the gas and when exposed to the atmosphere in the process of re-vivifying combines with the oxygen and releases the sulphur, forming oxide which we

started with. Then the mixture can be placed back into the purifying boxes and used over again. The operating floor is where the men walk around the boxes while filling them. The boxes are on cast iron columns going up through the basement. The columns are steel beams and on top of these beams rest the bozes or purifiers. There is no story in this building above the basement and first floor except part way up to the boxes in this operating floor where the men walk around. These boxes are used to purify both kinds of gas. The inner walls of the building are 13-inch and the outer walls are 17-inch.

I do not know what this building actually cost the company when constructed and made no effort to find out. In figuring the cost of brick I obtained the local prices I used here. The local prices varied some. I inquired for the present prices and found the usual range that you would get in any town on building material. The dealers are very seldom together. I figured the brick at $7.50 delivered at the works, and I found that I could buy brick here at prices
440 higher and lower than that depending upon the brick. The brick used in the construction of this building is not as cheap as some brick but it is not fancy brick. The price was secured from the average cost in many parts of the country as applied to the local prices. I secured local prices on the lime and sand and all of those things. Sometimes I took the actual figures given me and sometimes the figures between them.

The next house in my inventory is the generator house which is used for the water gas generation. There are two water gas sets in that house and are in actual operation. Ordinarily a water gas set consists of the generator, the carburetor, the super-heater, scrubber, washer, wash boxes, condensor, blowing plant, with the miscellaneous gages, pyrometer. That last measures the temperature. Some contractors also include steam meter and air meter. Exhibit 7-B-3 is a drawing showing the generator house plant. The gas generators in this house are located on the ground floor but are operated principally from the second floor. This building is used altogether in connection with the manufacture of gas.

The next building in my inventory is the retort house which is used to protect the coal gas benches and the men who operate them when they are in use. That is where the coal gas is made. The retorts are built on the ground floor and are of brick. They are what we call the benches. This company has not made coal gas for three years and I do not think this building has been used during that time except for a storeroom. The same unit prices were used in estimating the cost of this building. The retort house or coal gas house is an essential part of the system at the present time because the price of oil has made jumps during the past year that were never dreamed of before, and has only been guarded against by cautious management by taking a long shot in assuming that such a thing might happen and now it has actually happened. The price of oil is increasing by leaps and bounds and nobody knows where it is
441 going and as a protection the coal gas equipment is very valuable. It is an emergency plant for I expect to see them mak-

ing coal gas again before very long in this plant, as when the oil gets up to a certain point it will be cheaper to make coal gas. When the oil goes down again it will be cheaper to make water gas. The fact that the company has a combination plant enables it to buy oil at much lower prices than they could buy it if they had no coal gas equipment. This applies not only to the building but the coal gas apparatus itself.

The six benches independent of the piping have a net construction value of $17,993. In addition to the building and the benches there is the operating floor. In speaking of coal gas apparatus I include these benches and probably the charging floor in the retort house. That is the floor which the men use when they throw the coal into the retorts. If the retorts are thrown out as being of no value then we would have to build and erect this floor. It would have to be added to. The present value of the six benches of sixes is $16,280; of the retort house, $6,511. There is nothing else in the entire equipment of this plant that could not and would not be used for water gas.

Lots 1 to 15, in block 2, Peck's Grove addition, are used for the district holder. The entire group is the district holder site. The entire group is given over to the district holder station and you have to provide for extensions in the future when you erect such a station. I am unable to say just how many are needed at the present time. The lots 1 to 15 in block 7 are directly across the street from the first group. These lots were purchased because of threatened damage suits. They were really a part of the cost of putting up the holder out there. I visited this property the first time I was out here. On the second group there are no buildings. The next piece of real estate, the south 92 feet of the east half of lot 11 in block 77, is located across the street west from the works. The company is holding this property for the purpose of erecting barns and additional
442 buildings this coming summer. It is not used by the gas company at the present time. The next piece of property is the west half of lot 11 in block 77 and it adjoins the last mentioned lot and it is not used by the company at the present time. It is in the same condition as the first piece. In the valuation of neither of these two pieces are any buildings included. The east half of lot 12 in block 77 is in the same condition as the last two preceding ones.

Lots 1 to 12 in block 79 I have valued at $11,000. On this property is located the company's electric light plant to the extent of about 20%. Some measurements were made and we found that the ground actually used by the electric department represented about 20% of the whole. I am unable to give the measurements. They gave me a plan of the works and I was able to tell from that. The next piece of property, the south 20 feet and the west 16 feet of lot 2, block 32, Havelock, was acquired from the old Havelock gas company, and is not now in use. That was acquired when the existing company bought out the Havelock company. They had at that time an acetylene plant out there. It is not used at the present time and if it were it would be exclusively in connection with the Havelock service. The same answer applies to lots 18 and 19 in block 17 in Havelock. I

understand that it is vacant property. The apportionment of the real estate between the gas and electric department is as follows: lots 1 to 15, block 2, and lots 1 to 15, block 7, 100% to the gas department; the property in blocks 77 and 79 in Lincoln, 80% to the gas department; the property in blocks 32 and 17, Havelock, 100% to the gas department. The 80% assignment is based upon the assumption that the gas buildings occupy 80% of the ground space and has no reference to the relative income of the two departments. The same method of apportionment is followed on operating expenses but there are not many operating expenses that are common to the two departments. I went through all of the items
and made a study of each item. They include taxes,
443 some of the general office expenses, and salaries, office
rent, insurance, and legal expenses. They have all been subdivided on what I believe to be the most fair apportionment. Some of them I apportioned 80%, and some of them 66 2/3%, whatever I believed to be fair. The property in Peck's Grove was purchased at about the time the East Lincoln holder was erected, and was in connection with that project.

The amount of water used to fill each holder is shown on the sixth and following pages of Exhibit I. In the East Lincoln holder I figure $148 for water; in the 500,000 foot holder, $296; in the 200,000 foot holder, $150. I understand that these holders are filled by a service pipe from the city water mains. It is measured through a meter I think, but whether it is or not is immaterial. The cost of putting the water there is part of the cost of reproducing this plant. The purpose of my investigation was to determine the reproduction value of this property. Operating expenses are diverse from reproduction expenses. In the first place you have got to get water into that tank. If you have got everything equipped and have the plant ready to operate, before you can begin to make gas and use this holder you must fill this tank. After you have once commenced and it has been filled once the additional water required for that holder is an operating expense. I do not figure any depreciation on that water. It loses some by evaporation but the rains make that up. You don't have to put the water in but once. It is like the brick you put in your well. That is not true of an item like coal. They have installed two gas meters down there and I have included them both in my valuation. As long as they are not making coal gas they do not use one of them. However there is no such thing as a coal gas meter. They have two meters there not because they are making coal gas or water gas but because they need two meters, one for use in emergency. Either gas can be measured through either meter as now connected. The 10-foot McDonald station meter used in connection
with both kinds of gas is installed at the end of the purifying
444 room called the meter room. I do not think both kinds of
gases can be measured at the same time through the same meter but I understand that both of these meters are so connected that either kind of gas can be measured through either one of them. I did not ascertain whether they were both measuring water gas on January 1st or not. They were both necessary. In order to get an

economical operation of your plant you must measure the coal gas separately and you might want to manufacture coal gas. As long as they are making water gas exclusively I would want both of them and I might use them both at the same time to keep them in operation. The small meter would not be quite large enough at all times. When they were making both kinds of gases one was used to measure one kind and one to measure the other kind, and I presume the small one was used for coal gas. There is no third meter there for measuring the mixed gas, and I presume that one of these meters really measured the mixed gas and the other the straight gas, and the volume of the other straight gas is obtained by subtraction. The net construction cost of the 10-foot meter including foundation is $3,901. The net construction cost of the 6-foot meter with the foundation is $1,358. The foundation in the 10-foot station meter is $66. The balance is for the meter proper. The foundation for the 6-foot meter is $58. The net construction cost of the 6 benches of six'es complete with foundations is $17,993. The cost of the foundation was $1,193, which does not include the arches. I did not value the arches separately as that is not the way prices are made on benches. I have not figured out the arches and settings and iron work on these benches separately but I could do it though it would take the rest of the day. $2,800 is the cost of each bench, which includes the benches complete without foundation. These benches are constructed by contract, ordinarily. I have not stopped to figure out what the iron work for one of these benches delivered in Lincoln would cost.

445 I presume the builders bought the brick and tile in special shapes at St. Louis. While I was operating properties I took special work in the University of Wisconsin, the Louis Institute of Technicology, Armour's Institute of Technicology at Chicago, and Northwestern University at Evanston. I was three years at Madison, then went to Peoria for a year and then to Fond du Lac, Wisconsin for a few months and then went to the Western Gas and Construction Co. in the fall of 1901 or the spring of 1902, and stayed with them for a year and a half or two years. None of the apparatus at this plant was installed by the Western Gas and Construction Company while I was with them that I remember of. In calculating the cost of reproducing these buildings I assumed that the purifying house, retort house, coal shed, oxide shed, stable and blacksmith shop would be erected the first year and not separately, and this assumption enters into the calculation of the going value. Also if you were going to build this a little bit at a time the cost would be much higher than I have it here. If the company was going to build all of these buildings at once it could get the material in large quantities and by letting the contract for the entire work they could get a better price than by building each building separately, and I took that into account in my valuation. For instance, on the brick I have figured $7.50 a thousand straight through and it would be that if you were going to build it all at once. The two 7-foot, 6-inch water gas sets in Exhibit I were both installed by the Western Gas and Construction Co. I made no effort to ascertain what the contract price was. I did work through the vouchers as I have already explained but these

vouchers don't show all the cost. The Western Gas and Construction Co. frequently makes detailed statements with each contract but I did not need that here because I saw the equipment. I could see what they had and I did not care what they had bought. I have often made repeated attempts to find what the actual cost of
446 items was from the records but have always found it impossible. I presume that there are seasons in the year when they do use both of these sets, however not at the same instant. The process of making water gas is intermittent. You first have got to blow up your fire. We call that the blasting period in which air is carried through the fire, resulting in what is called producer gas. That is carried forward into the carburetor and down over the superheater, and out into the air through the stack valve. They have got a secondary air that burns all the combustible portions of the gas that have been left in the generator. When this air reaches the stack valve in normal operation there is no combustible property left. Having brought the various parts up to the required temperature the stack valve is shut off and steam admitted below the grate. That steam is decomposed and then combines with the carbon, forming carbon-dioxide, and hydrogen gas. The carbon-dioxide forms at the bottom of the fire and on going up through the fuel bed takes up additional carbon. Each molecule of steam will take up an additional volume of carbon-monoxide so that at the top of the fire you have practically equal volumes of carbon-monoxide and hydrogen. These both burn with a blue flame and have relatively low thermal values, and to make it of commercial value oil must be introduced. This is done in the form of a spray and the oil is broken up into hydrocarbon gases and these are mechanically mixed with the blue gases from the generator. This whole operation takes but a few minutes, four to seven minutes depending on the local conditions, and the period of blasting takes from one to three and a half minutes, and in that way while one set is blasting the other can be making gas. But this would only be done in cases of emergency. It is not the best way of operating the set. Ordinarily one machine is down for a day or two while the other is in operation, and because of the alternating scheme it is possible to use two generators with only one
447 scrubber and condensor. Also one is used in the sense of a reserve for the other. It happens very frequently in water gas sets that one set will need repairs. The two 7-foot, 6-inch water gas sets are practically identical. The foundation in each I figured to cost $277, which would make the foundation ready for the receiving of the gas sets. They are always installed by contract exclusively of the foundations and the contract price normally includes the erection on the foundation. The owner in addition to building the foundation also builds all the small pipe lines within a certain distance of the shells and then the contractor installs the machinery and connects it up. The water gas sets including the foundations I have valued at $8,200 each, in place. The 6-foot, 6-inch water gas set found on the second page of Exhibit 7-I-6 is 12 years old and is located in the retort house. It is connected with the plant and ready to use but I do not believe they are using it. It is not as economical

a machine as the new ones. At the time it was bought the design of water gas sets was relatively crude and they are making better machines now, and you can't afford to run those old machines except for emergencies. It is cheaper to get a new machine. I figured the reproduction cost of this machine at $9,364, and its present value at $6,648. In getting this present value I do consider its obsolescence. The present per cent condition is 71 which I secured by reference to the tables. The machine is 12 years old and has a life of 30 years. The 71% represents the average of all three factors, obsolescence, inadequacy, and physical decay. When passing upon the value of the machine it is impossible to say which of the three is going to be the controlling factor. The same process is used on a new machine. When these new machines arrive at the same age as this one the same per cent condition would apply. I know of one concern now that wants to buy this particular machine. I haven't asked the price but there is no trouble in selling it. I have figured the foun-
448 dation here at $222. The balance of the reproduction price of $8,072 is for the machine in place upon the foundation. I do not know what it did actually cost the company. It is not in actual use but is held as a reserve unit and has not been used very recently. Either one of the larger sets is of sufficient capacity to make the necessary output for this plant but they both might easily be out of condition at the same time. Also the output is increasing rapidly. It is extremely inadvisable to try to run a plant with one set and a plant cannot be run with two sets unless the sent-out remains stationary. The next set is the 6-foot, 6-inch springer water gas set. It is 22 years old. The type is not being manufactured at the present time and this piece is pretty seriously affected by obsolescence. The reproduction value of this set is $5,790. Its present value is $2,200. The market value can be secured as any manufacturer will make one if you want it. I arrived at the value by determining the size and character of the machine, the quantities, and the foundation and applying the present cost of materials in the equipment. The foundation figured $191, and the balance is for the set placed upon the foundation. The present per cent condition of this springer set is 38, and it is worth 38% of its new cost. It is worth that much to this company as a reserve unit. The crippling of either one of the 7-foot, 6-inch station sets might easily make it necessary to operate both the 6-foot, 6-inch set and this springer set, while one of the 6-foot, 6-inch sets might make all the send-out necessary, but no water gas machine can operate continuously. If I were rebuilding this plant of my own design I would have none of these sets. I could determine how many sets I would install but I would not want to do it off-hand. I am not sure whether or not this springer set is connected up and in place. It has been a good while since it has been used. The Sturdevant blower, identified in my Exhibit 7-I-9, is located in the manufacturing plant. I have figured the foundation of this blower at $12, and the total cost at
449 $272. On the Sturdevent blower, identified as Exhibit 7-I-10, I have figured the foundation at $19, and the total cost at $279. Either one of these blowers might be used in connec-

tion with either of the gas sets. They are both useful. The blower identified as Exhibit 7-I-11, valued at $273, wood foundation, I believe is in the condensing room and it is used in connection with the coal gas, and I believe it is out of commission at the present time. The foundation on this one I figured at $53. The next item, the number 8 Sturdevant turbo blower, is located in a room adjoining the water gas room and is used in connection with the two large water gas sets. The total cost I have figured at $435, of which $67 is for the foundation. The next item is the number 8 Sturdevant blower entered at a valuation of $453. It is located in the meter shop in what is called the booster house. It is used to increase the supply of gas at times when the pressure of the holder alone will not deliver enough to the mains. It is useful and in actual use. $83 of this valuation is for its foundation. I secured the information as to their age from Mr. Brodnax. Exhibit 7-I-15, being the number 6 Sturdevant exhauster, is in the purifying house and is used in revivifying oxide while it is in place, and to take the gas from the relief holder and send it on through the purifiers into the storage room. I have entered it at a valuation of $346. It is five years old. The next item is the number 10 McKenzie exhauster, identified as Exhibit 7-I-16. I have entered it at a valuation of $440. I do not remember just what it is used for but as far as I know it is connected up and I consider it a useful thing. The exhauster is a machine to draw the gas from one place and push it on to some other place,—a kind of pump. The 4 x 5 Greenfield vertical steam engine is used in connection with one of the exhausters or blowers at the plant. My valuation of that is based upon the tables of costs of engines. This engine is 15 years old and its life is 20 years. The present per cent condition I
450 figured at 35. The amount of depreciation on that engine would be the difference between the reproduction value and the present value. The number 5 x 5 Sturdevant vertical steam engine, identified as Exhibit 7-I-18, operates one of the blowers and exhausters in the works. I think all of the exhausters are operated by steam. For the next item, the 7 x 6 Sturdevant steam engine, of the amount of valuation I have placed upon it, $47 is for the foundation and the balance for the engine in place on the foundation. It is also probably used to operate one of the blowers or some similar work, and it is actually used or useful in this plant. The item covered by Exhibit 7-I-20, a 40-horse power General Electric motor, is 7 years old and was purchased from the General Electric Co. I presume. I did not attempt to find out what had been paid for it except as I have heretofore stated. It is used in place of one of these engines or one of the small pieces of work. I cannot tell you exactly. I do not find any substantial equipment used by this company in the inventory of its plant that I do not consider useful or used, and it was distinctly understood that property that was neither useful nor used was not to be considered. I found none of this character unless there was some scrap iron round the plant which was some old junk. I do not remember of excluding any items of machinery and everything that I found in the plant with the exception I mentioned I considered useful or used. The 35-horse power Fort Wayne motor cov-

ered by Exhibit 7-I-21 is 10 years old. I do not remember what its exact location is nor whether it is in actual operation at the present time but I do know that it is useful to the company for it can be placed in service and is useful without being connected up. The fact that the company has any of this machinery in its plant and in readiness to use is evidence that it is a dependable unit in a plant which must run 24 hours every day in the year, and is evidence that
451 it is used or useful. $40 of the total cost is for the foundation and the balance is for the motor in place. On 7-I-25 the foundation cost is $41. On 7-I-26 it is $51. On 7-I-27, the foundation cost is $71. The scrubber, covered by this exhibit, is of a very efficient type that is used today, but whether or not I would put it in there now is a question. It is usually used on coal gas for the extraction of tar vapors and ammonia from the gases, but it can be used on every kind of gas. I would not design it for a water gas plant alone. But in that case I would use an immersion washer. This scrubber is located in the condensing room on the second floor. I don't think they use it for water gas now.

The items in the foundation for the purifying boxes, 7-I-28, are cast iron, $108, steel, $980, footings, $200. Above the foundation those boxes consist of cast iron columns and steel I-beams. They are just a big cast iron box 24 x 24 x 4 inside, four in number. Around the upper edge of the sides is what we call a seal, being 8 inches of additional portion of cast iron brought out from the side so you can have an annulus in which water is carried, and you place an inverted steel cup usually with a flat top and the sides go down into the seal. It is arranged so that it is easy to remove it and it can be lifted off one box and set over on another box when the men want to get into the box to throw out old material and put in new. The material consists of iron ground up. Sometimes they are filings. When it gets so it cannot be used any more it is revivified. These boxes are installed in the building called the purifying house. If I were building this plant today I would want some protection for them because you can't purify gas economically or efficiently unless your temperatures are maintained at a certain point and in the boxes themselves the flow of gas is not always constant, and even if the temperature is constant outside there are variations in the boxes, and it is necessary to reduce the variation to a minimum which can be done by putting a house over them. They are built out of doors in
452 the south where the weather will permit. They have the boxes built outside in Racine, Wisc., I think, and also in Springfield, Ill., but that does not indicate anything as I would not build purifiers in Lincoln outside. In my judgment there must be a protection here. For determining whether I would in re-building this plant, install as expensive a type of boxes I would require some time for calculations. This type of boxes are as modern and efficient as any. There are some plants that are installing the same kind now and larger, and in other plants boxes that were not in use 20 years ago are now being used considerably. These boxes appear as being 11 years old. I do not know what kind the company had before that. If they are older than that they are not so valuable now. There

might be a cheaper type of boxes that would serve this plant in this location as well as those installed here but I made no such calculations. The company here would furnish the foundation for these boxes and then the boxes would be built by some contracting company. I have no information as to what these boxes actually cost the company. I arrived at the net construction cost of these boxes by applying my knowledge of the usual cost and selling price, for similar boxes in other places and through a knowledge of local conditions and costs. I have been connected with a company that actually manufactured and sold these things but I cannot give you the unit price as I don't do business that way. It would have to be figured out. I have also data of the actual cost of boxes installed in other cities which I got from my experience both in preparing detailed estimates as well as closing contracts for these boxes. The foundation for the item covered by Exhibit 7-I-29, cost $66, and the balance of the valuation is for the meter in place. That meter is 11 years old. The Hinman drum is of a later construction than the shell of the meter. I did not put a valuation on the drum separately as they are not sold that way. They are sold complete as I have given the figures here. The drum is that portion which revolves within
453 the shell of the meter. It is of a metal construction something like a windmill with the fan partially enclosed so that the gas in going from one connection passes under the connection and as the flow is increased it pushes it up until the gas escapes to the next, and so on. I do not know when that drum was put on this meter or what it cost the company when it was done. The fact that it is a Hinman drum indicates a capacity greater than the ordinary drum. The item covered by Exhibit 7-I-30 is 30 years old and has a life of 40 years. There is no foundation for this meter. It is carried by the floor. I do not know whether it is in actual use at the present time or not. It was probably used for the coal gas, and is useful in that it is probable that the company will make coal gas again very soon, and then they will need a second meter, but whether they embark in the manufacture of coal gas or not it is probable that their send-out will increase to a point where the present large meter cannot handle the business alone. If the output gets too large they can then run part of the gas through one meter and part through the other and make 100% use of them. Normally the capacity for the large 10-foot meter with the Hinman drum is 1,200,000 to 1,400,000 cubic feet a day but the capacity of a gas meter must be sufficient to take the maximum load per minute. If I were to install a new meter for this plant I would have to determine first the actual peak load demands for a considerable period of time and I believe I would install this meter that is there now. The capacity of a meter must be sufficient to take care of the peak load, and that capacity must be determined by careful calculations. The large meter now in the plant is obviously able to take care of the present peak load. The station meter is located between the relief holder and the storage holder and if you have sufficient capacity in the storage holder to take care of the momentary peaks you can have a smaller meter, but the station meter must be large enough to permit sufficient gas to go into the storage holder

to supply the ordinary consumption. You can be running
454 your meter at full speed and while the meter is running the gas producers need not be working. There is a margin between the capacity of this plant and its present requirements. I can determine that by some calculations but I have not prepared those figures and I cannot do it off-hand. The governor covered by Exhibit 7-I-35 is located at the plant, is known as a station governor, and its function is to maintain a uniform pressure on the gas leaving the plant. Such an appliance is necessary in all gas plants except those called high-pressure plants, and there they have the equivalent by having individual governors on the services. The age of this governor I have assi-ned as 21 years, which was determined from inquiries made by Mr. Brodnax and his assistants. Its life is 50 years. Governors as a rule are sold separate. $840 is the net construction cost of this governor with its foundation. I believe this governor is resting on the floor. It would cost about $40 to install it which would make it cost $800, F. O. B., Lincoln. The governor covered by Exhibit 7-I-36, has the same function as the preceding item and is on another main from the holder. The 20-inch on the first governor and the 12-inch on the second governor signifies the size of pipe leading from the storage holder on which the governors are placed. The Reynolds station governor is 4 years old and the net construction cost which I gave it includes the cost of the governor plus the freight and labor of installing it. The labor item was $15 and the freight and handling was $40 from Anderson, Ind., which leaves the net cost at Anderson, Ind., $360 for that governor. The item covered by Exhibit 7-I-37, the Knowles compound pump, I do not remember what its particular function is as I am unable to recollect the piping arrangement. It is used, however, or is useful, as it is connected up and ready to be used. That pump is ten years old. My information was secured from the same source as the ages of other items. I estimate its life to be 20 years. These pumps are handled through dealers. My valuation of $360 includes the freight and labor in
455 setting it up. The item covered by Exhibit 7-I-38 I presume is a deep well pump but I do not remember. Its age is 20 years and its life is 20 years but it still has a little service value which is 25% of the reproduction cost. It is still in use though it may have lived the full average life. I have given the minimum value to it in accordance with the rulings of state commissions. The average life which I have given to each piece of equipment here is based upon tables showing what equipment of that kind has done and sometimes the equipment lives longer and sometimes not as long, but that is the only way that we can get at it. This average life is based on the experience of men throughout the country who have kept records of the life of a given amount of equipment. It is obviously impossible to take a single pump or a special piece of equipment and determine how long that piece will live.

The next item, Exhibit 7-I-38, a 3¼ x 4 x 6, Gardner duplex pump is a water pump and I understand it to be in use, but I do not have the piping in mind and I can not tell you its particular function, but it is probably used for pumping water from one part

to another in the plant. I cannot give you the separate items of the labor and foundation such as there is. I have placed the valuation here at $90 to cover everything and I find that $90 is the quoted price, F. O. B., New York, without foundation, handling, or erection. This was on February 13, 1904, and the price of pumps has gone up since that time. The pump covered by Exhibit 7-I-39 I valued at $95. It is four years old. It has no foundation except the planks. I think it is a water pump but it might be a tar pump or even an oil pump. The pump covered by Exhibit 7-I-40 is also in use but I do not remember exactly where. I have given it an age of three and one-half years. It should have been two years. The pump covered by Exhibit 7-I-41 is four years old. The next pump, covered by Exhibit 7-I-42, is one year old. The next pump, covered by Exhibit 7-I-43, is 20 years old. I have given it the minimum service value, 25% of its reproduction cost. I assumed
456 that this pump had a life of 20 years, and if the company had started out when it first installed that pump and laid aside a depreciation on the sinking fund basis, at the present time it would have a sum equal to the reproduction value of the pump. But by taking the average life of each piece of equipment we are doing what is fair to all concerned. The pump covered by Exhibit 7-I-44 is four years old. The pump has a life of 20 years. The purpose for which all of these pumps are used was ascertained by Mr. Brodnax and his assistants. It was understood that he was to include nothing except what was used or useful.

The Otis elevator covered by Exhibit 7-I-45 is in use in the generator house for the purpose of lifting coke to the operating floor. The elevator alone cost $940, the freight, handling, and miscellaneous, $120. I secured the price of this elevator from the builders of elevators. It is a complete electrically operated Otis elevator. The motor with it is given separately. The platform is 6 feet, by 6 feet. The item covered by Exhibit 7-I-46 is a Fairbanks scales platform, 4 x 4, which they use for miscellaneous weighing around the plant. They weigh coke, sometimes tar, and works materials and supplies. The price is derived from the quotations by builders of those scales. They are five years old. Their life is 15 years. The item covered by Exhibit 7-I-47 is used to test the candle power of gas. It is seven years old. I don't know whether they had one prior to this one or not. The price of this article is fixed. It is sold principally in Philadelphia. It would cost $410 at point of purchase, and the balance of the cost is for freight, handling, and erection. I assigned it a life of ten years which I have ascertained from experience. Its present per cent condition is 35.

The item covered by Exhibit 7-I-48 is used to test the heat units in the gas. It is three years old. The market price if you wrote for quotations would be $250, but there is a discount to these people. This item, with one meter, would cost $170. The meter is a
457 part of the machine. This has a life of ten years. The items covered by Exhibit 7-I-49, shop tools and miscellaneous items, were all furnished to me by Mr. Brodnax. I have no knowledge of whether or not they are possessed by the company. The cost which

I assigned to each of them is based upon my knowledge and records of the costs of similar items. I might be able to get a part of the total cost on a part of the items from the records of the company but it would be very unusual if the records showed the actual cost, because they are not kept with that in view, and it is not proper that they should be. For instance, on the drill press it would have part of the cost in the voucher covering the purchase price but the additional items such as freight, handling, and possibly the erection of a small foundation you could not find in the records of the company. I did not make any apportionment of these items in this exhibit between the electric and gas departments but less than $200 of the items shown in this exhibit are used in the blacksmith shop which is the only place in which they would have been common to both departments. The number 99 Buffalo forge drill press is the first article in the list which is outside the blacksmith shop. That is in the gas meter shop. The grindstone is the next item not in the blacksmith shop, but that might be used jointly by both departments. The oil filter is the next item not found in the blacksmith shop. The two 20-gallon waste cans is the next item. The galvanized iron lye tank, tire roller, and the meter test tank, are not in the blacksmith shop. The 2 x 24 x 6 oil tank, the three 1-inch Denni steam drips, the four number 1 lined water heater, the pipe rack, are all in the meter shop which is used purely for gas purposes. So is the pipe dripping trough.

The next item covered by Exhibit 7-I-50 are four boilers, 63 x 16, without settings. They are used as tar tanks entirely in connection with the gas department. I should judge that they are old boilers' shells. They do not use the tar for fuel in these boilers. I arrived at my valuation of these boilers by estimating the reproduc-
458 tion cost of shells of that kind and size. They were originally constructed for other use but they are as good as anything else. When they abandoned them as boilers the flues gave out but the shells were perfectly good and by removing the flues and putting in new heads they had the equivalent of new tanks. I do not have the details by which I arrived at my valuation of these tanks but I know that tanks of that size cost very close to $190 each. I assigned seven years as the age of these tanks, and their probable life as 40 years. The next item is the tar separators. They are used for separating water from the tar. It is a device which holds the tar in the first place and contains a series of wooden baffles and generally steam coils are placed in them so that the temperature when the separator is used may be maintained constant all over the tar as it comes from the coal gas or water gas plant. When it first comes it is mixed with water in the form of an emulsion. A good deal of time is required in separating the water from the tar. It is done by causing the machine to travel slowly at a maintained temperature round these baffles and after awhile the tar is thrown off at one place and the water at another. These tar separators are seven years old and their useful life is 40 years.

The next item covered by Exhibit 7-I-52 is a tar well for the storage of tar. It may be in the form of a tank. It is 3 x 3 ft., 3

inch, and it is 10 feet deep. It is walled up with brick and has a concrete bottom. The construction cost is $104. It has been constructed for 21 years, and its life is 40 years. The next item covered by Exhibit 7-I-53, is also a tar well 6 x 20 x 12, estimated to cost $472. It is 15 years old and its estimated life is 40 years. The next item, Exhibit 7-I-55, covers two steel tar tanks. They are Ten years old and I estimated their life to be 30 years. The two oil tanks covered by Exhibit 7-I-56 are ten years old and I estimate their life to be 30 years. I arrived at their net construction cost by considering the actual quantities of material and the local cost.
459 These are installed under contract only in connection with other equipment. Where bought separate they are shipped to the purchaser and put up by him, usually. The item covered by Exhibit 7-I-57 is a brick oil tank.

I arrived at the valuation of the items covered by Exhibits 7-I-60 to 7-I-64, inclusive, from my experience with articles of that kind. I made inquiry of the company for the price of pipe of that kind. I fixed the life of these several items from experience and their age was determined through inquiries of Mr. Brodnax and his assistants, and some of them from my own judgment. Some of them were determined by the ages of the equipment with which they are connected.

In Exhibit P in the first column I have given my estimate of the net reproduction cost of this company at the end of the year 1907, and the next column, for 1908, and so on down to and including the year 1912. That net reproduction cost for each year is based upon the inventory made at the end of 1912. For instance, the records show that during the year 1912 there were added a certain number of feet of street main, a certain number of services, and a certain number of meters. They also show that no addition was made to the real estate nor to the buildings during that year. The only physical equipment added during 1912 was in the distribution system and from the total reproduction cost of the street mains in use at the end of 1912 taking in connection the total number of feet of such mains in use at the end of 1912 you arrive at the average reproduction cost per lineal foot of street mains of average size. From this, figure the cost of the street mains added in 1912 and deduct that from the total reproduction cost and we have the reproduction cost for the end of 1911. On meters the records show the number of gain during 1912. Multiply that by the average reproduction cost per meter and you have the amount added during that year.

I did not know that there was an inventory of the company's property in 1907, and used at the former hearing in this case. I determined that it was more reliable and accurate to work back from the actual inventory of 1912. At least that was the most reliable
460 information which I had at hand. I have gone over the records of the company and I am certain that from those records an itemized list of the actual property and the actual cost to the company, of the items added during the years 1908, 1909, 1910, 1911, and 1912, cannot be secured. The books of the company do not

accurately show the total number of feet of street mains in use due to the fact that the personnel of the company's officers is changing more or less and frequently new men come on and take over the work of making these records. Extensions are made that are overlooked in the actual adding of them to the records and street main maps, and I have yet to find the first gas company with a record like that that is absolutely correct and that has an up-to-date record of its physical equipment. The only way to determine what a company has in the way of street mains is to forget about their general books and go back to their records. You first have to take the maps and service records and meter records and by a comparison of the services and meters with the mains reported on the map, determine whether or not the map shows correctly all of the mains, and check this information with the assistance of such local men as have been concerned directly with the extensions of the mains, services, and meters. And after having added to the map such items as you have found to have been omitted or taking from the map such items as you have found to have been incorrectly there, and have brought it up-to-date as nearly as the information available will enable you to do, you will then have to determine the scale on which the map was drawn and after that you must determine the shrinkage in the blue print on which the street main map was exhibited, and after you have determined the shrinkage in the blue print which depends on the quality of the paper and the exposure you have to determine the relation between the distances shown on the map and the piece of pipe that you know is a certain number of feet long. When you get that relation that will give you a correction factor and to make up for the shrinkage you have to add a certain unit of shrinkage of each
461 inch of main shown on the blue print. It is not added to the main but is added to the statement which is given to me through scaling the blue print. For all intents and purposes my inventory for the year 1907 working back from the inventory of 1912 would be a correct inventory.

Cross-examination continued by Mr. Foster:

The details for the deductions for each year in connection with the Exhibit P of works equipment and distribution system are shown under Exhibit Q. Each item shows the composite age and all you have to do is to make the deductions. On the mains I have used the average size. The history of all companies shows that the size of the pipe that they start out with always proves to be smaller than is required and they find it necessary in later years to lay larger mains. The details of the buildings are shown under Exhibit E.

On Exhibit P, for the year 1909, there appears to be $906 of buildings added. If you will add together the totals of the buildings of three years of age shown in Exhibit E you will get the $906. I do not think it is unusual to find ten miles of mains that the company has no record of. The inventory of the street mains which was made under my direction by Mr. Brodnax and his assistants was checked by them against the street main authorization cards, the service rec-

ords, the meter records, the information from the men actually employed in the extension of the distribution system, and was found to be correct. The 1¼-inch mains in this city are wrought pipe. It used to be iron but now it is steel. There is no difference in them so far as use goes except that pure wrought iron pipe will last a great deal longer than steel and also costs a good deal more and is practically out of the market. The letters WI on Exhibit J-4 mean wrought iron in the commercial sense of this pipe. It is sold as wrought iron pipe but it is not wrought iron. If you try to bind the manufacturer he will leave the iron out and just say wrought pipe.

Wrought iron is the standard expression. I understand all of
462 the 2-inch pipe is really wrought iron and I presume some of it is actually iron though I have made no allowance for it. I figured the 1¼-inch pipe in the mains on the unpaved streets at 18.57¢ per foot which includes everything and is the net construction cost of laying the pipe. The cost of the labor in Lincoln I figured at 23¢ which is 75% off the standard list. I figured the trench 36 inches of dirt over the pipe, and the trench will be that plus the diameter of the pipe. I figured 30¢ per yard for excavating and 15¢ per yard for re-filling and tamping. Cost of digging on a 1¼ inch main would be something over 6¢ per lineal foot. I got local prices on this and found that it was customary to pay $1.85 to $2 a day for ten hours for street labor. I did not ascertain whether or not there was any local standard of prices and I am not aware that the current standard here is 4¢ per lineal foot for a trench 3 feet deep. The gas company has always paid by the day.

For digging a trench through asphalt on concrete paving for the 1¼-inch pipe I figured a width of 22 inches; for brick on concrete, two-course brick, 31 inches; on the 2-inch mains under wooden blocks, a width of 31 inches; asphalt, a width of 22 inches; brick on concrete and two-course brick, 31 inches; for wooden blocks of 3-inch mains, 31 inches; for asphalt on concrete over 4-inch mains, 22 inches; brick on concrete, and two-course brick, 31 inches; on wooden blocks over 6-inch mains, a width of 31 inches; asphalt on concrete, 22 inches; brick on concrete and two-course brick, 31 inches; asphalt on concrete over 8-inch mains, I figured a width of 24 inches; brick on concrete and two-course brick, 33 inches; on the 10-inch main, asphalt on concrete, 26 inches; brick on concrete and two-course brick, 35 inches; on the 12-inch mains asphalt on concrete, 26 inches; brick on concrete and two-course — 35 inches; on the 16-inch mains, brick on concrete and two-course brick, 39 inches. On the 2-inch mains I figured a trench 36 inches to cover it. On all of the other cast iron mains I figured a trench 3 feet, 6 inches to cover it. On 2-inch mains the width is 22 inch; on 3, 4, and 6-inch
463 mains I figured a width of 22 inches; on the 8-inch mains, I figured a width of 24 inches; 10-inch mains, 26 inches; 12-inch mains, 26 inches; 16-inch mains, 30 inches; 20-inch mains, 32 inches. Asphalt on concrete paving over mains I figured $2.85 per square yard, which covers tamping and replacing the pavement. Brick on concrete I figured $2.45 per square yard; two-course brick, $1.68 per square yard; wood blocks, $2.25 per square yard. If there

is any paving included over mains in this list which has worn out and is not to be renewed so that no additional cost is involved in going over it, then it should be excluded. I have figured this work and the cost of the materials for these mains on the basis of reproducing the property as rapidly as consistent with good workmanship, and good economy just as though you had your money here and wanted to jump into this job and get your money working as soon as possible. The cost would be lower than it would be if it was done piece-meal. I have figured the net construction cost of laying 2-inch wrought iron mains in unpaved streets in Lincoln at 23.19¢ per foot. I made quite an examination of the company's books to ascertain what it did actually cost the company to lay 2-inch mains in these streets in Lincoln and I found nothing of value. The company's report and record for 1904 gives the average cost of laying 2-inch wrought iron pipe in unpaved streets in Lincoln at 19½¢; and in 1904 the records showed that the labor alone for 2-inch wrought iron pipe in Lincoln was 27¢ per lineal foot. In 1911 it was 21½¢. That does not include any paving that I know of. That includes only the labor and material entering into the laying of the pipe, and as a matter of fact the cost of tearing up and replacing the pavement is handled separately. My figures on the cost of paving were secured from the city engineer's office. I did not ask them for the price in any specific year but only for the fair reproduction price and the price I have is
somewhat lower than the actual price because it is based upon
464 what it was sometime ago. Prices now are higher.

I did not ask for or obtain the figures for 1911 and 1912 because I have found in all jobs I have been on that the present prices are higher than five years ago, and if I took the price then prevailing I certainly would be conservative. I obtained a number of actual costs in tearing up and replacing the pavement and they varied some from that which I arrived at, $1.92 per square yard for asphalt on concrete, and this appeared, in view of the variations, to be a fair average unit price. I did not consider the fact that the cost of asphalt on concrete paving was 19¢ less in 1912 than 1907, unless I had reason to believe it was a permanent downward trend. It might easily be somebody's politics. On the length of pavement over the service pipes I have estimated less than the company averaged where it goes through paving because on the reproduction of the property I would not follow the method they have been following here of tearing up the pavement. Instead, I would cut holes in the pavement and drive my pipe through saving some of the paving cut. The average of the paving cut for each service on the basis I have figured it would be holes averaging five feet by two feet, and the concrete, 17½ square feet, and if the main was on the other side of the street there would be one hole on the other side and it would only make two holes averaging 1½. On the 4-inch mains in 1909 the records show $1.04 per lineal foot for cast iron pipe laid in unpaved streets while in 1912 it was 41.8¢ and in 1911 it was 54.4¢. This should be conclusive evidence that the records of the company cannot be accepted on that kind of a thing. There was no paving included in that high price as far as I can determine. Again in 1905 the records show the

total for labor and material in unpaved streets and the cost per lineal foot for 4-inch cast iron pipe was 27.8¢ per lineal foot. I have used 56.7¢ the last three years because the records are not complete, that is, complete in details. I have never yet found a company showing all of the items entering into the actual cost of laying a foot of any size of pipe. They will always approximate it.

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In Exhibit Q-2 I have taken the number of feet of mains regardless of size and computed the average composite age and I would be glad to use a more accurate method if it can be shown. I know of none more accurate. The ideal method of working out the composite age of a street main system involves going back to the very first year of construction and taking the actual record of each size and kind of main in feet laid during each of those years up to the present time but it is physically impossible to do that as there are no such records. It is just as fair since there are no records to accept the average size and talk in feet. The records do show that the 10, 12, and 20-inch mains were all laid prior to 1903, but since they were all cast iron I have no hesitancy in saying that if you were to make a calculation on that basis that the greater length of life of cast iron plus the original cost for laying, if carried through to date, would give a larger present value of street main system than I have given, but I would not be able to justify doing this because there are no records to substantiate it.

It is impossible to go back to 1873 on the dollar basis, but on the foot basis you can go back that far as accurately as possible. The cast iron mains laid at that time would be in much better per cent condition today than the wrought pipe. On a 3-inch cast iron pipe I figured a weight of 14.54 lb.; 4-inch pipe, 19.38 lb.; 6-inch pipe, 30.6 lb.; 8-inch, 42.84 lb.; 10-inch, 56.92 lb.; 12-inch pipe, 73.95 lb.; 16-inch pipe, 110.47 lb.; 20-inch pipe, 153 lb., which are the standard gas pipe weights corrected for foundry differences. They became formally standard in 1903, but were in use and accepted many years before. The formal standard prior to that was heavier. On the 3 and 4-inch pipe I figured $32 per ton, F. O. B., Lincoln, and on the 6-inch and larger, $31 per ton, F. O. B., Lincoln.

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HENRY I. LEA, recalled for further cross-examination, testified on behalf of the plaintiff as follows, pages 1149 to 1292, Vol. 2, original record:

Cross-examination by Mr. Foster:

The weights given were the standard of the American Gas Institute plus 2%. This 2% is added because most of the companies manufacturing gas pipe have a standard of 2% foundry over-weight. It varies to 5%. It sometimes runs below the standard and unless the depth of pipe specified is given as a minimum it is very rare. The pipe won't bear the strain if it is under and the logical thing to do is to have it over-weight, and the practice shows the average is 2% above the weight specified. I did not weigh any of the pipe used by the company but I have no reason to believe that there is not a good deal of the pipe heavier than I have specified because

it was the custom years ago to use a heavier pipe. There was no standard 20 years ago and there is no universal standard now. They have been trying to standardize gas pipe for the last twelve or fifteen years. The standard given was a modification of the old standard of the old American Gas Light Association. I did look at some of the bills and they told me the price per ton for some of the old pipe that the company laid but it was not very significant as I saw so few bills.

Cross-examination continued by Mr. Adams:

The trenching and back filling placed on the unit price of 30¢ per cubic yard for excavating and 15¢ for re-filling for the different pipe are as follows: for a 3-inch pipe, $.1170; 4-inch pipe, $.1170; 6-inch pipe, $.1220; 8-inch pipe, $.1390; 10-inch pipe, $.1560; 12-inch pipe, $.1620; 16-inch pipe, $.2010; 20-inch pipe, $.2300. The entire cost per lineal foot of handlin*d* and laying the pipe complete exclusive of the cost of the pipe itself, is as follows: 4-inch pipe, $.1258; 6-inch pipe, $.1591; 8-inch pipe, $.2132; 10-inch pipe, $.2833; 12-inch pipe, $.3531; 16-inch pipe, $.4956; 20-inch
467 pipe, $.6738. The cost of the pipe itself per lineal foot, F. O. B., Lincoln, is: for the 4-inch pipe, $.3101; 6-inch pipe, $.4743; 8-inch pipe, $.6640; 10-inch pipe, $.8822; 12-inch pipe, $1.1462; 16-inch pipe, $1.722; 20-inch pipe, $2.3715. The specials on all sizes amount to 4½% of the pipe cost. This is wrought pipe. The trade designation is Black Pipe, Merchant Wrought. For the 3-inch pipe the cost per lineal foot is as follows: the actual cost of the pipe, $.2326; handling and laying, $.1062; trenching and back filling, $.1170; specials, $.01015. The cost of the pipe alone, per lineal foot, is: for 1¼-inch pipe, $.0575; 1½-inch pipe, $.0688; 2-inch pipe, $.0295; the cost of handling and laying, per lineal foot, is as follows: for 1¼-inch, $.0288; 1½-inch, $.0327; 2-inch, $.0384; the cost of trenching and back filling in dirt streets, per lineal foot, is: for 1¼-inch pipe, $.0968; 1½-inch, $.0968; 2-inch, .0968. The cost of the specials, per lineal foot, is: for 1¼-inch, $.0026; 1½-inch, $.0031; 2-inch, .0042.

For the joints on the cast iron pipe I have figured but few flanges and principally balance spigots, and for joining material I have figured on using lead, cement, hemp, jute, and oakum, with the majority of the joints being lead. In my costs I have figured the same definite quantity and amount of money for each size for joint material and I arrived at that by assuming prices low enough on the lead to allow for cement joinings they having been made in the *in the* last few years, by taking a price I knew was less than what lead would cost. I figured 5¢ a pound for the lead. I know that the price was higher. The weights that I have used here on this pipe I have used in other cases before public service commissions and they have met with their approval. I do not know of any gas light association that adopted those weights prior to 1905. I believe that most of the cast iron pipe in this plant was laid prior to that time. In estimating the weights on all of the cast iron pipe

I used the weights which my experience in connection with many plants has shown to be generally used. I did not make any inquiry
of the company as to what the pipe actually weighed nor
468 did I make any investigation of the company's records to find out if they showed what it actually weighed, because the records of a gas company are not kept to show things of that kind and I have never found a gas company yet that did keep its records that way. I have made sufficient inquiry to satisfy myself that the weights I have used will average as they have averaged in many cases. I cannot say off-hand whether the bulk of this cast iron pipe used was in the ground prior to 1901 or not. I have used in my estimates I have assumed the following weights of different sized pipes: 6 inch cast iron 30.6 pounds per foot; 10 inch 56.92; 12 inch 73.95; 16 inch 110.47 (p. 1170-1173).

On railroad crossings I have figured a very reasonable cost based on the practice which is in addition to the ordinary cost of laying the pipe. These costs are as follows: for single electric crossings, $15 each; for the double electric crossings, $20 each; for the triple electric crossings, $25 each; for the single steam track crossings, $20 each; I do not know of there being any double steam track crossings over these gas mains. In making these figures I did not figure on any permanent special construction in the ground and there are none there that I know of. These figures are the actual cost in reconstructing the property under existing conditions. They include temporary structures while the work is going on in some instances.

I made no investigation as to the particular cost here but I had determined the number of crossings of each kind, and from my own experience in laying such mains I knew what the reproduction cost under those conditions would average. These figures involve the extra caution necessary in going under the tracks, the extra care required in guarding the trench, temporary trestles required, and all of the incidental expense involved in going under the street clear. It is necessary to secure special permits at the cost of considerable time and a whole lot of argument with the railway and railroad companies. I have never seen a gas company's records that were capable of showing these cost items. There are a total of 349 steam and electric crossings in Lincoln. I do not know the size or kinds of pipe under them, but so far as the separate cost
of the separate crossings themselves are concerned that does
469 not make any difference. The cost of the crossing is in addition to the other cost of the cast iron pipe, etc. This pipe usually comes in 12-foot sections, and the steel and wrought iron pipe, in 18 and 22-foot sections. Where there is a screw joint the cost of a crossing might be smaller but my figure is an average of all kinds, which is made from my own personal experience in a number of cities on this particular item. I think that is as close as anyone can get.

You have got to buy so much lumber. You have got to provide considerable bracing. Some railroad companies won't let you do your own bracing but insist on doing it for you and charging you

with the expense. The 200,000 foot holder is of a type very commonly used and I have figured the weights as follows: lifts, 137,160 pounds; steel in the guide frames, 75,500 pounds; tank connections incidentals, 30,000 pounds, making a total altogether of steel and iron of 242,660 pounds. I arrived at the weights of the guide frames by referring to my record of actual weights of guide frames for holders of that size and type, taken from construction companies' records. The weight I have given to the guide frames is the fair average on holders of that type and size. I know that from my experience but also from the experience of holder builders. I also had some measurements made. They are: inside diameter of the tank, 85 feet, 6 inches; maximum depth of the tank, 21 feet, 3 inches; minimum depth of tank, 6 feet; maximum pressure thrown by the lifts, 4.5 inch water column. The guide frame is fitted to the tank. No particular measurements were made of the guide frame itself. This holder has a brick tank with a concrete bottom. There are 30,000 lbs. of steel and iron in the tank connections, and miscellaneous items, which includes the large
470 in- and out-let pipes which carry the gas, at 10,000 pounds. I did have the size and length of these pipes but I do not have them here. But this is the average weight for holders of that size and type and size of pipe. These pipes begin and end with the drip pots and the weight which I have assigned to them is the average weight for holders of that size. The drip pots are usually three or four feet outside.

I know that in estimating the reproduction cost of that holder that if I take 10,000 pounds for connections and multiply it by a certain number of cents per pound I will arrive at the reproduction cost. I do not know what the weight actually is and I have no means of finding out but I have been told what the size of the pipe is that extends from the drip pots into the outer wall, but I have forgotten what it is. Deducting this 10,000 pounds from the 30,000 pounds leaves 20,000 pounds for the weight of the iron and steel embodied in or used in connection with the brick holder tank. This does not purport to be a representation of the iron that is actually there, but that is what would be regarded as a fair average figure for that size of tank. A portion of it is in the tank, a portion of it is in the crown, a portion of it is in the wind ties, and a portion in the diagonal braces. Part of these might be above the top of the brick tank and part below. I am unable to say how much as I did not prepare my estimate that way. I am unable to say how much weight there is above the top of the brick tank. 137,160 pounds is in the two lifts which includes the weight of the bracing but not the cost.

On the 500,000 cubic foot holder my total weight of steel and iron is 690,550 pounds. The weight of the floating or movable portions is 279,917 pounds, which leaves 410,635 pounds. There is an error of two pounds there. The weight of the tank is 280,000 pounds, which leaves 130,635 pounds to be accounted for elsewhere. I have allowed 10,000 pounds for inlet and outlet connections which

is the same as on the other and they average very nearly
471 the same. I have been told what the actual inlet and outlet connections were in this holder but I have forgotten it. I did not figure up the weight on what they told me as that would not have told me what else was inside the holder. In order to figure that weight you have to know what is inside and I have taken the average weight on holders of that size. I found that they were within normal range. This leaves 120,635 pounds yet to be accounted for. This is as follows: 72,810 pounds are in the 10 columns of the holder; 35,185 pounds are in the 30 girders. 12,640 pounds are in the diagonal braces and wind ties.

I arrived at these weights by an examination of the weights of builders of holders of that type and size. I do not know that they are the exact weights of this particular holder. I had measured for me those parts of the holder that are readily determined in that way, which were the diameter of the tank, the height of the tank, and pressure thrown by the holder when filled. I did not measure the detailed members of the guide frame. I took the average price of 6¢ a pound for the iron and steel in the 200,000 cubic foot holder because I knew it to be a price fairly representing the construction cost. On the 500,000 cubic foot holder I took the price of 5½¢ per pound for the steel and iron, which I know to be the fair reproduction cost per pound for the steel and iron in that holder. This is based on my knowledge of the construction cost and erection cost and selling price of gas holders and the prices paid by various gas companies in various parts of the *company* with whom I have been in contact, and whose records have been open to me.

I can't give you the name of any company that has paid these prices off-hand, but I can go to my office in Chicago, and refer to my records and tell you. I do not have with me any of the contracts or prices for any special gas machines erected in any plant. I have personally closed a great many contracts of that kind but I do not have those contracts here. The same is true of gas holders. I compiled my reproduction costs in my office where these records
472 were available. I saw a drawing of the 200,000 cubic foot holder, prepared by Mr. Brodnax or one of his assistants, within the last sixty or ninety days, upon information obtained by inquiry of the men in the plant or who were there at the time it was constructed and who remembered the formation. It showed the thickness of the tank walls as near as could be determined, which was by inquiry and measurements and copying the portion exposed, but I do not know that any excavation was made to determine that. There is not much chance to go wrong on that as in the actual construction of the tank the practice is pretty well defined as to what it must be. The amount of cement plaster on the concrete amounting to 660 square feet, I presume was determined by inquiry at the plant as to how the tank was finished. The drawing may have been based upon actual drawings as the work was built. I think I had a drawing of the 500,000 cubic foot holder.

The amount of concrete in the foundation of that holder was given to me by Mr. Brodnax. He secured it by calculation and from what

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information he could obtain. I think he probably had access to the drawings which showed the actual amount of the concrete used there. If he didn't it is possible to arrive at very nearly the correct amount of the concrete in the foundation without a drawing as it is only a pan. When I was at the plant I noticed that it was a very poor spot to build a plant because of the excessive cost. I do not know whether a better one was available or not but the place is low and there is trouble from water in any big foundation work, particularly the building of holders, and considerable filling has had to be done and the place now is still lower than some levels not far away.

I think the present site of the gas works is somewhat higher than the property just beyond the railroad. In three directions the land seems to be about the same level and on the railroad side it is three or four feet lower. That is only my recollection. I would not be surprised if the land about these gas structures is three or four
473 feet higher than the land immediately adjoining on three sides. The fact that the land at the plant has been filled in would not have any bearing on my items of excavation, back filling, and disposal of surplus material as they are figured on the basis of reproducing the property under existing conditions today. The depths of the foundations for the buildings and the various gas machinery was arrived at by Mr. Brodnax through inquiry and in some cases by measurements. I am not familiar with the details of his measurements but I was down there and satisfied myself that he had shown the dimensions substantially correct and they looked reasonable and in accordance with the usual practice.

For instance, for the foundation for a water gas set they could be able to measure accurately without any considerable digging because, knowing the size of the set and knowing what is required to sustain it, it is easy to determine what would be a reasonable foundation, and I think these foundation beds there thoroughly represent the actual condition. I don't say that they are the foundations that would be required in all cases. They are lighter in some and heavier in others. My total weight of the steel in the 50,000 foot holder is 58,200 pounds. I worked up in detail, 58,234 pounds, but in the cost I used 58,200 pounds. There is 33,264 pounds in the lift or moving part. This leaves 24,970 pounds to be accounted for. Of this sum I allowed 5,000 pounds for cast iron inlet and outlet connection pipe. I think they are 8-inch. I did not know the length but I arrived at the weight by taking the average weight for connections in that size holder.

I have no way of determining what actually exists there without getting inside the holder which is impossible. That leaves 19,970 pounds to be accounted for. 225 pounds of this is in the guide rails; 14,645 pounds is in the guide frames or girders; 625 pounds for the foundation bolts; 450 pounds for the wheel sleeves; and 2,000 pounds in miscellaneous items. These amounts are derived
474 from measurements of the holder in connection with my knowledge of the current practice in the construction of holders of that type and size. I was able to figure the weight of the guide frame at 14,645 pounds through knowing the diameter of the

tank, the width and height of the lift, which is here that a man needs to know who is familiar with the business. This is the average for holders of this type and size. The actual weight there might be more; it wouldn't be worth while to measure each of the little ½-inch strips comprising each individual brace, but the dimensions of the guide frame are covered by the dimensions of the holder and the tank. I have in a number of cases made detailed estimates covering each of the individual pieces of metal going into a gas holder, and each of the members comprising the holder as a finished product, and I arrived at the weight of 14,645 pounds by taking an average.

I understand that the connections in the 200,000 foot holder are 12-inch. I have not changed my figures at all as a result of that dimension. Where I am unable to determine within a reasonable time the actual condition of the detailed parts I have used a fair average cost and when I put down 10,000 pounds it is in view of the prices that I am placing that cost at a very fair average as a reproduction cost of the item I have made the price on, and I hold to that irrespective of the actual size of the parts and concrete information as to the actual size of these connections is not going to affect the cost I have used in the slightest degree, because I am only trying to arrive at the average cost of these items that I am not sure of, and I know what the fair average is. I might tell how many given feet there are and I would be a trifle nearer but not enough to affect the cost. I would still have to estimate the balance of the parts unless I went into the holder and into a detailed and elaborate investigation that nobody would consider warranted. The benches here are of a type built exclusively by single concerns. These are Parker Russell benches. I thing the furnaces are ½ or ¾ depth. There
475 are benches of other makes about the same in cost and selling price but not the same in construction.

The Parker-Russell benches are more expensive relatively than others because their retorts have a better reputation than most others. As compared with other Parker-Russell benches erected elsewhere of the same general type I do not know of anything which would make these more substantially built than others. As to the street mains it is absolutely necessary that all of the mains now under paving be put there because if you do not do that you are not allowing in the reproduction cost of this property the reproduction of this particular property as it is here today. I have not examined the streets to ascertain whether it is physically possible to put the mains elsewhere. I suppose there are some alleys that could be utilized but I am not concerned with that.

I could easily build a new gas plant that would make as much gas as they are making here with a smaller expenditure but that isn't what I am required to do in a case like this. These people didn't have the foresight twenty years ago to know what they are doing today in gas plant construction. I have figured on reproducing the property as it is and not a hypothetical plant. In my valuing of this plant I have gone on the method of determining the cost of reproducing every element in its exact location and condition so far as can be done. I have not used a uniform price for every item of

concrete in the plant. The same price is used for similar conditions. In the purifying house on the 8-inch concrete floors I have figured the concrete at 14¢ per square foot in place. I am told that these floors are 8-inch floors but have no personal knowledge, getting this information from men who saw them put in or who have been chopping holes in them. I put the 8-inch concrete floors in the retort house at the same figure. The concrete floor was 4-inch in the generator house and I have put it in at 7¢ per square foot. The concrete in the foundations in the meter shop and booster house I have
put in at $8 a cubic yard in place. It was a 1-2-4 mixture
476 with Portland cement at $1.65 a barrel.

I did not try to determine the actual mixture on all of the buildings but I took what I knew would be a fair cost per cubic yard for these concrete foundations. The concrete in the 500,000 foot holder I figured at $7 a cubic yard. There the work is easier to handle and the labor cost per unit of product is lower. It is not any better grade of cement. In the 200,000 foot holder I figured $5 a cubic yard for the concrete. There is a considerable quantity there and it is easy to place so the cost is very low in place. The concrete there is not any better than 1-3-5. On the brick in the walls of the purifying house I figured $17 in place. This is per thousand. The brick in the pilasters and cornices I figured at $21.25 in place.

I figured the same on the generator house. By a thousand brick in place I mean the commercial understanding of one thousand brick in the wall. I do not know what the size of these brick in this building is. I did not obtain the information myself but I told Mr. Brodnax the basis on which to arrive at those figures, and when I say 187,843 brick in the walls of the purifying house I mean that they are the equivalent of that many brick at $17 per thousand. I cannot tell you how many brick are actually there.

Before this figure was arrived at the number of cubic feet of brick work in that wall was determined. Mr. Brodnax has that information and has also the size of the brick. I did know how many brick per cubic foot of brick work Mr. Brodnax estimated on before but I have forgotten. It met with my approval when I did know. But Mr. Brodnax can give you all of this information.

My cost of $17 per thousand for the brick in the walls of the purifying house is made up of the following items: good brick delivered at the plant, $7.50 per thousand; to lay what is left, after allowing for the breakage, for the thousand required half a cubic yard of sand. It costs 75¢ delivered or 38¢ per thousand brick in the wall for the
sand. Portland cement cost $1.80, and it will require .44
477 bbl. per thousand brick in the wall, or 79¢. It requires 2 bbls. of lime which will cost 40¢ per bbl., or 80¢ per thousand brick. The total material cost is $9.07. Your brick layers will cost 60¢, or $4.16. Your laborers will cost 17½¢, or $1.87. Your carpenters will cost 20¢ to 22¢, or 77¢. The handling of these various materials cost $1.16. This makes a total labor charge of $7.96, making the total labor and material per thousand brick in the wall, $17.03.

I do not remember now how many brick we figured we could have gotten laid into the wall for this $17.03. The matter was determined before the inventory was made. It was acceptable to me and I state that it was correct and I believe that it was followed throughout. Mr. Brodnax can tell you whether or not it was. In figuring this unit I did not take any particular building but I took what I believe to be, and I think this is, an absolutely fair average for the whole job as far as the costs are concerned. Mr. Brodnax told me that some of the mortar used in this brick work was cement and some was lime. I made it neither lime nor cement but an average.

On the 7 foot, 6 inch water gas sets I figured the concrete at $9 a yard, 26½ in each. This covers the foundation for the generators, carburetors, super-heater, and wash boxes only. The foundations under these 7 foot, 6 inch sets was determined by inquiry and measurement. I do not believe any parts were measured except the exposed parts of the foundation. I think a sketch was made showing the foundations. I do not think that there was a drawing of the foundations as they actually went in but they are almost standard and when you know the size you know in a very general close range what quantity of concrete is required. Under normal conditions this is true.

The 6 foot Parkinson meter with a differential of 1 inch has a capacity of 297,600 cubic feet each 24 hours. The 10 foot meter with a Hinman drum has a capacity of 864,000 cubic feet per day. In order to determine what capacity of station meter is necessary you must determine the maximum demand required at any hour. I have forgotten what the maximum demand in this plant is.
478 I have seen the returns, however, showing the peak loads. Without going back to the curves which I do not now have I could not tell you whether this meter is good for any number of years to come as far as its capacity is concerned or whether it is too large or too small. It is impossible to estimate what meter is necessary on the average daily output.

For the cost of disposing of the surplus material from the excavation for the purifying house and the 500,000 foot holder I figured 50¢ a yard and $1 a yard for excavating. I considered that it would be hauled to the nearest dumping place. I did not measure where that would be, but I took the average cost for the removal under conditions of that kind. If the entire amount of the dirt was used within 150 feet of the excavation that would not change my estimate. I believe that the cost of handling this material in the reconstruction of this plant would average 50¢ a cubic yard for such work as that whether 100 feet or 50 feet. In the 100,000 cubic foot holder I charged 25¢ for back filling and removing the surplus material. I did not feel warranted in assuming that the material would be spread out between the different structures. I estimated various lengths for the haul. I did not try to itemize them, but lumped it off at 50¢ a yard. 50¢ a cubic yard is the equivalent for the cost of labor and time of handling that stuff about a mile and a half on a straight haul. It might easily cost more to get it distributed around

than to get it moved on hauls of one and a half miles. I have seen records on hauls inside of blocks which have been filled three and four feet with hauls of less than four blocks and actual cost running as high as 75¢ a yard where they just hauled it and dumped it. The total yardage of back filling for the district holder was 5487.5 yards and I figured 25¢ for the disposal of the surplus material out there, amounting to $1,372. I concluded it would cost about half as much to move it out there as it did down at the plant.

I heard Mr. Freauaff testify yesterday that under certain conditions it was advisable to save cost by building district holders in residential sections and there are a number of holders in Chicago
479 where the same idea is followed out. There is one 5,000,000 cubic foot holder located at 47th and 12th streets, Chicago, one and a half miles from the nearest generator house. Denver also has a 5,000,000 cubic foot district holder.

In the location of district holders the distance from the manufacturing plant is not the determining factor, but location right at the plant is the antiquated notion of construction. If the growth of this town continues and the demand for gas increases it will not be many years before it will be advisable to increase the number of district holders. I do not believe it is advisable at this time. The reason for the construction and location of a district holder in East Lincoln was to send the distribution of gas at low cost per thousand and it works out as expected. I think they save money by putting that holder out there because you have to run some kind of a line to supply the district in which the demand is beyond the capacity.

When you find a district that is not properly supplied from the holders at the station and it becomes necessary to get more gas into that district in some way you must either lay larger trunk lines to distribute the gas at the former low holder pressure from the plant to this district, in which event you will have a very slow rate of travel through the main with a relatively high investment per foot of main and a condition which is not anything like it should be. Under the large holders at the station the consumers must many times every day use the gas under pressures too low to attempt any economical operation of their stoves and the consequence is that their loss from radiation is relatively very high. They get out of their dollar's worth of gas much less heat than they would get under proper conditions of pressure. It is impossible to get the proper conditions when the old holder pressure is used alone. So we are getting to the condition of higher pressure distribution which enables them to distribute a given quantity per hour through a smaller pipe. By means of recording gauges and charts, it was found that the district
480 in East Lincoln was growing beyond the capacity of the main and something had to be done to relieve that situation. That neighborhood at that time was supplied under low pressure and it was necessary in that case to distribute the gas to East Lincoln under low pressure. That made it necessary to get the required volume of gas to East Lincoln which would take the maximum minute peak load to meet the demand and that had to be under low pressure. There was only one way for doing that and that was to put a district

holder there. The necessity of the holder being determined the only question remaining was the kind and size of pipe to use, and it was decided then that having the holder it would be better to use the small pipes with high pressures and a service regulator on each service than the larger pipe with low pressures. The holder was put there to economize the distribution of gas and part of the economy was in the smaller size of the pipe used, and the holder not only enables the company to give a better service but also makes possible a more economical use of the gas by the consumers.

The consumption of gas per block in a given district is not a factor which determines the location of the holder, and I do not know what the consumption is in other districts. The proper condition from the consumer's standpoint is absolutely uniform pressure. The company is also boosting its pressure at the works and they are able to do that by having service governors on the individual services, but that is not possible under any scheme that involves the distribution from the holder at the plant with no other assistance. At the time the holder was constructed the town was not on a high pressure basis. The fluctuation was very bad throughout the outlying districts. It was not only the distance from the plant but it was also a matter of elevation. It is practically impossible in any town that is not built on an absolute level to design a distribution system of any kind that will give a uniform pressure throughout the entire area. The town is now on a high pressure basis. Everybody has a service
481 governor with the exception of about a hundred or so. There is a pipe running from this district holder to some two or three little towns outside of Lincoln. I do not know the size. I do not think that the supplying of this district outside of Lincoln had anything to do with the location and construction of that holder because it would have been extremely bad business to build a holder of that size for that business. The pressure chart showed that something had to be done immediately to supply Lincoln and a larger pipe would not have distributed the gas. It would not have been as well to distribute it with a large pipe as it could be with a smaller pipe with higher pressure, and it would have involved a materially greater cost. The conditions shown by the charts could have been bettered by putting on service governors and running the gas from the station holder at a higher pressure, but that would have meant the putting of the entire city on high pressure at once. You can't operate service regulators on low pressure. You have got to get on high pressure before you put on regulators. If you had regulators used in East Lincoln and none down near the plant under high pressure the people near the plant would be in danger and you would possibly have killed a number of people.

HENRY I. LEA, being recalled for further direct examination, testified on behalf of the plaintiff as follows, pages 1664 to 1669, Vol. 2, original record:

Direct examination by Mr. Strode:

In subdivision E of my exhibit which is the compilation of the corrected net earnings of the company for 1907 to 1912 I did not

take into account any charge against the gas company on account of occupation taxes. The decision involving the legality of those taxes had not yet been made when I made my calculation. I have since computed the amount that this occupation tax would reduce the net earnings without figuring for interest or penalty. If interest or penalties were charged the reduction would still be greater. Under the first ordinance which was 2½% of the gross sales the tax
482 amounted to: for 1907, $5,394.40; for 1908, $5,858.64. From January 1, 1909 to December 13, 1909 it would amount to $5,767.98. The 3% occupation tax from January 13, 1910 to January 1, 1911 was $7,304.17; from January 1, 1911 to January 1, 1912, $8,228.79; and from January 1, 1912 to January 1, 1913, $8,364.86; January 1, 1913 to July 1, 1913, $4,141.80; and the total of these occupation taxes is $45,160.69. This is the amount simply on the gas sales and each of these amounts should be deducted from the net earnings for the different years as shown in my exhibit and reducing the net earnings by these occupation taxes the amounts shown in Exhibit P should be as follows: for 1907, $52,727.31; for 1908, $74,820.16; for 1909, $85,940.51; for 1910, $79,438.82; for 1911, $80,560.59; for 1912, $67,433.94. Computed on these net earnings the rate of return on the reproduction cost of gas at $1.20 per thousand cubic feet are as follows: for 1907, 5.528%; for 1908, 7.447%; 1909, 7.674%; 1910, 6.674%; 1911, 6.370%; and for 1912, 5.163%. On the present value for each of these years the rate of return after deducting the occupation taxes from the net earnings is as follows: for 1907, 6.376%; for 1908, 8.575%; 1909, 8.869%; 1910, 7.726%; 1911, 7.368%; and for 1912, 5.952%. If the gas was sold at a dollar a thousand the 3% occupation tax would make it a little more than 97¢ as gas selling at a dollar will bring a net receipt of a little above or a little below that amount.

HENRY I. LEA, being recalled for further direct examination, testified on behalf of the plaintiff as follows, pages 1676 to 1682, Vol. 2, original record:

I have made a tabulation showing the net earnings of the gas company based on the dollar rate for the years 1907 to 1912 inclusive, taking into account the same items of expense as are shown in Exhibit P of Exhibit 7. The corrected net earnings as shown in this exhibit would be reduced by the following amounts for the different years, these amounts being one-sixth of the total gross earnings as reported, which accounts for the difference between the $1.20
483 and the $1 rate: for 1907, $35,962.70; for 1908, $39,057.92; for 1909, $40,854.12; for 1910, $41,990.39; for 1911, $45,715.49; and for 1912, $47,027.02. The net earnings after making these deductions and before deducting for occupation taxes would be: for 1907, $22,159.01; for 1908, $41,620.93; for 1909, $50,854.37; for 1910, $44,752.60; for 1911, $42,073.89; for 1912, $28,871.78. The occupation taxes reducing the gross earnings under the dollar gas with the sales as previously shown figured on 2½% from January 1, 1907 to December 13, 1909, and from January 13, 1910 to

January 1, 1913 at 3%, would have been as follows: for 1907, $4,495.34; for 1908, $4,882.24; for 1909, $4,905.47; for 1910, $6,084.41; for 1911, $6,857.32; and for 1912, $7,054.05. And the net earnings reduced by these amounts for those years would then have been as follows: for 1907, $17,663.67; for 1908, $36,738.69; for 1909, $45,948.90; for 1910, $38,668.19; for 1911, $35,216.57; and for 1912, $21,817.73. These figures would have shown the following returns on the reproduction cost of the property for the respective years: for 1907, 1.852%; for 1908, 3.657%; for 1909, 4.103%; for 1910, 3.249%; for 1911, 2.785%; and for 1912, 1.674%. The rate of return on the then present value for the respective years would have been as follows: for 1907, $2.136%; for 1908, 4.211%; for 1909, 4.742%; for 1910, 3.761$; for 1911, 3.220%; and for 1912, 1.925%.

The gross earnings for the company for 1913 are going down and it shows that I made a poor estimate on the increased earnings of the company for this year. This is explained in part by the records of the electric department which show a considerable growth and in view of the unusually severe competition between the electric companies. The electrical appliances are replacing gas appliances in a considerable number of cases. By appliances I mean those other than light. We used to show an increase in gas sales largely due to the use of gas irons and the number of small devices. These are being met here by a competition with the electrical appliances. The actual records of the company so far this year show the gas considerably below the same period of last year. Since the passage
484 of the ordinance the electric business has practically supplanted the gas business in the lighting field.

Prior to 1906 gas was used for lighting purposes. Since that time the percentage of lighting done by electric current has constantly increased, and gas has been driven back to the field of fuel. That field is increasing but if the lights don't reach those fields it does not do you much good. Every electric company sells electric irons and toasters in plants of that kind at this time. Six years ago they were not known. They are now in very common use. This very directly affects the sale of gas by eliminating gas. Until a few years ago there was no satisfactory electric flat-irons but today they have good electrically heated flat-irons and many people would rather have them than the gas iron. There are also a large number of small cooking devices which are operated by electricity and the electric business has also gone to the regular range in the kitchen and they have electric cooking apparatus. I know of one town that had no gas whatever in the spring of this year and they had over three hundred cooking ranges operated by electricity.

As the situation now stands I have no doubt but what the electric business will continue to make inroads on the gas business in a number of fields and I do not know of any way the gas company can meet this competition on its present basis. The cheaper electric power the other companies furnish would crowd the gas company still further away and it is an extremely small amount of power de-

veloped with gas here today and that amount will decrease as time goes on because the electric companies will likely continue to reduce their rates for power purposes.

The use of electric current for heating is cheaper to some extent but not for general heating. It is for minor heating. I do not know of any place where houses are heated with electricity. I know of a few places where electric ranges are installed in kitchens but they have not yet reached a point where they constitute any serious menace to the gas business.

485 HENRY I. LEA, being recalled for further direct examination, testified as follows on behalf of the plaintiff, pages 1771 to 1814, Vol. 2, original record:

Direct examination by Mr. Strode:

I prepared Exhibits 103, 104, and 105. Exhibit 103 shows the amount that would have been paid by the gas company because of the occupation tax from January 1, 1907 to July 1, 1913, if the two ordinances had been effective. Exhibit 104 shows the corrected net earnings of the gas department as affected by the occupation tax which is referred to on the assumption that the price of gas for the years shown would have remained at $1.20. Exhibit 105 is a statement of the corrected net earnings of the gas department as affected by the occupation tax as affected by the assumption that the price of gas was $1 per thousand cubic feet throughout the years shown. Exhibit 106 is an abstract from the records of the gas department showing the total income from gas sales, meter charge on minimum bills, forfeited discounts, total earnings from gas, bad debts, gross earnings from gas, operating expenses exclusive of depreciation, and the net earnings of gas for each of the first six months of this year. It also shows the total for each of these items for this period, showing the deductions for sales outside of Lincoln and the amounts representing sales, etc., within Lincoln proper. It is an extension of the corrected net earnings shown on subdivision P from the end of 1912 to the middle of 1913.

Cross-examination by Mr. Morning:

Exhibit 107 is the gross earnings as reported and from them are deducted the sales outside of Lincoln, getting the corrected gross earnings of the gas department within the period as far as shown. And a report of the sale of gas outside of Lincoln deducted from that to get the output of gas within Lincoln, to that is added the depreciation of one-half of the corrected amount on last year's equipment though the present equipment is more than that, which shows
486 the corrected operating expenses to have been $103,400.25, and the corrected net earnings, are $25,208.82, which is considerably less than the first six months of last year at the present rate. At that rate the corrected net earnings of the gas department will be 3.86% of the reproduction cost for the full year and on the present value it will be 4.448%. The earnings promise to be for this year

$25,000 less than they were a year ago. Exhibit 108 is a statement of how the corrected net earnings for the first six months of this year would be figured had the occupation tax been in effect with the price of gas at $1.20. It shows that the net earnings for that period would have been $21,350.55, a return on the reproduction cost of 3.268 per cent per annum, and on the present value a return of 3.768 per cent per annum. This exhibit also shows how the net earnings would have been affected during that period had the occupation tax been in effect and also the price of gas been $1 per thousand with the same sales. Under that the corrected net earnings before a deduction of the occupation tax would have been $3,773.98. The occupation tax on the $1 rate is, at 3%, $3,215.23, leaving the corrected net earnings $558.75. This would be a return of .085 per cent per annum on the reproduction cost of the property and a return of .098 per cent per annum on the present value of the property, taking the reproduction cost and present value as of the date of my valuation. Exhibits 103, 104, 105, 106, 107, 108, offered and received in evidence.

Cross-examination continued by Mr. Adams:

The 16% on my reproduction cost amounts to $131,632. Of this 16%, 4% is for taxes and loss of interest during construction. I can subdivide the 4% and show how much is for taxes and how much for loss of interest. I did not do it in this case but I have done it in a number of cases and find that the average is 4%. I cannot give the separate amounts now without working it all over. In making my computations I figured approximately three years to repro-
487 duce the property, and during that time I figured on doing some business in the amounts shown in Exhibit K. In working out this calculation I took each of the items of construction and determined the amount of time required but I did not keep any record of those details. The largest gas holder would take approximately nine months to a year to reconstruct. I do not think any part of the plant would take any longer than the large gas holder. However, it would not be good business to reproduce it all as fast as it is possible to do so.

I settled on three years as the proper time because that is the time you can best take care of it in commercial use. If you build all of this plant in one year you will have a large amount of capital idle without any commensurate return. I would not want that part invested until I could use it. The interest on the 500,000 foot holder will average one-half as to the period of three years. The liability or casualty insurance covers all of the items for which the company might be held responsible in the way of accidents, delays, personal injuries, fires, railroad wrecks, spoiling equipment—whatever is involved during the construction that might cost the company money. I took 2% on the total net construction cost of the property because that has been shown to be a fair average required for that purpose. I have not further subdivided it because contractors have had that experience and engineers have found that to be a fair figure. Sometimes the contractors in the contract for construction carry the acci-

dent insurance. There is no uniform custom. It is not common enough to be considered a standard practice. It has not been the practice during the last 40 years to use a lighter weight of cast iron pipe for gas mains than that on which I have estimated in this reproduction cost.

The sales that I have shown for the Lincoln gas plant since the beginning of its operation with the exception of three or four years were taken by me from the records and are the actual sales as there reported. The average length of 73 feet for services
488 from the main to meter is the result of an actual investigation made to determine that length from the records of the company. I did not investigate whether the company was the owner of the entire service pipe or not and I have included the entire 73 feet as a part of the whole which constitutes the value of the property. For a 5-light meter I figured a cost of $8.06 in place. The cost of the meter itself is the list price less 40% in carload lots, F. O. B., Chicago. That amounts to $5.40. The connections amount to $1.41. The freight on the meter will average 8.1¢; testing, 10¢; setting, 63¢; incidentals, 6.3¢; making a total of $7.68. Correcting the freight to Lincoln makes it $8.06. The method of figuring the cost of installing the other sizes is exactly the same.

The going value is that difference between the value of the existing property with all of its established relations and the value of its physical equipment alone, having no relation other than just existence. The value of the connections between the pipe and main and various buildings in the city of Lincoln is reflected in this going value, and it also takes into consideration and is affected by the fact that the company has an organization. The fact that there is an organization is one of the things that tends to constitute its value. The going value of this property is the result of many years development. It is here today and we must try to measure it. You can't go back and measure it as it has been developed from year to year and the best way that I know of is to take what it would cost to equal the going value now here, and for that reason it is necessary to take the hypothetical plant and run it into the future. It would take six years from January 1, 1913 for the hypothetical plant to catch up with the going plant and be in parallel operation. Three years of that is co-incident with the period of construction.

In estimating this going value I have accepted all of the conditions found here today, and I assume that the community is familiar with the use of gas. If I were to start in a community not familiar with it I would develop a going value enormously greater than
489 I find here. I assumed that the houses are piped for gas beyond the meter. In this $18,000 for salaries of manager and assistants in my estimate, I believe that it will fairly cover a portion of the manager's time and clerical force that is chargeable to construction during the whole period of three years. The time of the manager and his force would not be entirely devoted to construction. As the plant grows the time devoted to construction matters decreases and to operation increases. This item of value enters into

the going value the same as the main in the street enters into it. It does not enter into the going value twice.

Working capital is the difference between the credit items and debit items of all kinds that are involved in the current operation of the business. The working capital might easily have been more or less than it was the first of any year. I have found what the working capital was at the time I made the inventory and valuation and I satisfied myself that it was a reasonably fair average and that is why I have shown it here. The depreciation on the reproduction cost at the present time is $172,961, which is 18.1% of the reproduction cost minus the real estate. The present condition of the entire physical property is 18.1% less than new. The depreciation annuity on the sinking fund basis necessary to reproduce this property is $20,865.03. In this is not included any sums expended by the company for repairs and renewals because they are not a part of the depreciation.

The amounts expended for repairs and renewals for 1903 to 1912 are shown in my report in a number of different places under coal gas, water gas, and mixed gas. I am certain the company has at no time carried a depreciation reserve and also that it was carrying current amounts to the repair account and I know that that account showed no abnormal amount by carrying that way and from that I was satisfied that a depreciation allowance as I have shown here should be allowed in addition to that shown by the company's records. The fair allowances for repairs, renewals, and depre-
490 ciation on this plant is about 10¢ per thousand feet of gas sold.

If the company had wooden mains at one time there are none now. I have no record of them. Whatever they had at first I have made no estimate on them. I am making a valuation of the existing property. I have depreciated engineering, taxes, and interest which enter into and make up the 16% at the same rate and to the same extent that I have the other elements of value in the physical property and I think that should be done in estimating the present value of the gas property. I have not depreciated the organization and legal expenses. The value of the organization is here and it remains here and we presume it is going to stay; equipment will go, consequently you don't have depreciation on organization as you do on equipment.

Redirect examination by Mr. Strode:

I have run across the depreciation reserve account of $1,000 per month in the accounts of the company. It is not exactly a depreciation reserve. They call it a reconstruction reserve. It serves only one function and that is this: in the operation of the property the holders of the securities have a right to assume that the capital will be maintained intact. A company that pays dividends out of its earnings that are not sufficient is in effect paying out of the capital. This it has no right to do. Consequently a conservative manager will try to keep in mind the amount of money he should have earned to maintain his capital intact before he gets up to the point where

he would be warranted in paying dividends, and this $1,000 a month will tell the company whether or not they are really able to pay dividends.

I remember having seen in the books of the company the depreciation account that is carried in suspense. The items were not entered specifically because they didn't know the amount. It is in suspense. It was carried in suspense and did not enter into any of these calculations. Neither does this $1,000 reconstruction reserve account enter into my report nor is it in the result of the net earnings of the company. The only function it has is to tell the manager
491 whether or not he is able and has a large enough reserve to be warranted in paying dividends. I also ran across an account carried in suspense which referred to the occupation tax, and that did not enter into the tabulation of the net earnings of the company at all. If items were carried by the company into the account of repairs and renewals and should have been carried into the construction account it would tend to increase the current operating expenses and decrease the capital account. It would not affect the amount set apart annually for depreciation, however, as depreciation is beyond current repairs and renewals. No matter what the mingling of the accounts has been in the past it would not affect this depreciation.

If a man had charged to operation an item which should have gone to construction it should be corrected in the accounts of the company but it does not affect my estimate of depreciation required in the future. It might affect the result shown in my report of what the operating expenses of the company were during that period, but the gain would be in operating expenses and the loss in construction. Any item that adds to the amount of your property is an addition to the construction account. Any item that replaces another though of the same kind adds to your construction account only the excess in value over the value of the one replaced, determined by capacity or cost. If the new item costs less it would actually involve a reduction of capital though it was the installation of new equipment.

Recross-examination by Mr. Morning:

I have found nothing in the accounts of the company showing the amounts spent for repairs and maintenance that would indicate an abnormal expenditure for those items but there is quite a variation from time to time. They have not been spending sufficient money in those items to take care of the element of depreciation, and the element of depreciation should be deducted from the reproduction value to find the present value. If you were to replace a water
492 gas set that should not be charged to operation except as it goes back through depreciation. If you replace a plunger of your pump that is a current repair or renewal. If you replace your roof, that is a renewal but to replace a whole building is not maintenance. That is a replacement and should be handled through depreciation.

The item that is charged for as maintenance and repairs is the

every-day thing. That happens frequently and that should go directly into operating expenses but the cost of replacing a building should not go there. It should be handled by depreciation. I would build up in the books a depreciation reserve on the annuity basis, and out of that I would pay for such items. I would lay by each year so much money for each piece of equipment. I might invest that cash, but it would be actually available for replacing the equipment. In the absence of such a reserve the property has to suffer gradually. Had there been such a reserve there wouldn't have been such a difference between the reproduction cost and the present value.

If I found that a $5,000 or $10,000 machine had been replaced with a new machine during the current year and the value or cost of the old machine had been carried as an operating expense I would immediately deduct from my allowance for depreciation for that year the amount so taken out. If $20,000 was the amount required for depreciation and they had by this machine absorbed $5,000 I would only have the right to call for $15,000 more. They have no right to replace anything which is carried by depreciation and put in into operation expenses. Mr. Phillips said he had done such a thing as that and we are now going over the records to find out how much of that has been done. In my corrected statement of the net earnings I have worked back with depreciation deducted on the present requirements, and I said last year you should have taken $20,183 for depreciation and if Mr. Phillips absorbed $2,000 then I would say it should only be $18,000. Under my sinking fund method of handling depreciation, if a piece of equipment has assumed life of twenty years, and ten years old, that would depreciate it much less than fifty per cent in finding its present value. The rate annually deducted is lighter during earlier years than during the later years because under this system interest compounded would equalize the matter at the end of the assumed life (p. 1812).

493 HENRY I. LEA, being recalled for further examination, testified on behalf of the plaintiff as follows, pages 4192 to 4267, Vol. 4, original record:

Direct examination by Mr. Strode:

Exhibit 425 is a book prepared by me entitled Comparison of Valuation Data, Operating Statistics, etc. Section A is a comparison of the net reconstruction costs and the reproduction costs, the present value and the depreciation annuities, of the four groups of physical equipment, real estate, buildings, works equipment, and distribution system, as shown by my valuation in Exhibit 7, and Mr. Adams' valuation of January 1, 1913. The exhibit is a correct statement of the amounts as arranged by Mr. Adams' report and my net construction cost. The wording is not the same. He does not use the term "reconstruction" but he means the same thing.

In my original report, Exhibit 7, I included land at the plant which I understood was used entirely by the gas department. I learned later that it was used in part by the electric department, and

I have therefore made a proportionate deduction on that account. Also in the distribution, after my report had been filed an error was discovered in the amount of 2-inch pipe. There was more shown in the inventory than in the ground. I have made the correction throughout my entire report so that the figures in Exhibit 425 as compared with Mr. Adams' are those figures after these corrections have been made. I find the net construction cost of the real estate, buildings, works equipment, and distribution system to be $803,028.25, and Mr. Adams finds it to be $514,970. The reproduction cost of the physical equipment alone I find to be $928,423, and Mr. Adams finds it to be $551,018. The present value I find to be $760,875; Mr. Adams, $415,208. Depreciation on the four items I find to be $18,053.61; Mr. Adams, $10,905.94. Mr. Adams does not include some of the items that I include.

Exhibit 425-B shows the net construction cost, the reproduction cost, present per cent condition, present value, of each of the
494 parcels of real estate involved in this valuation and shows the relative values placed on each parcel by a report of Mr. Adams and in my report. This Exhibit was prepared by me or my assistants under my direction and I am satisfied of their correctness. They were made up from the Exhibits offered and in the record here, with the exception of the corrections made in my first report above mentioned. The net construction cost of the real estate I found to be $19,320; Mr. Adams found it to be $2,625. The reproduction cost I found to be $19,320; Mr. Adams, $2,809. The present per cent condition we both found to be 100%. The present value we found as we did in the reproduction cost. The items marked "O" for Mr. Adams indicates that he excluded those from his valuation. At least he allowed no valuation for them.

Exhibit 425, subdivision C, is a summary of the buildings involved, showing first the net construction cost given by myself, Mr. Adams, and Mr. Assenmacher. It next shows the reproduction cost given by Mr. Adams and myself. Mr. Assenmacher did not give it. The same plan is followed showing the age, life, present per cent condition, present value, and depreciation annuity of the buildings. The difference in our reproduction costs is first due to the difference in our net construction costs and in addition due to the fact that Mr. Adams adds but 7% and I add 16%. The only building which I include and which Mr. Adams does not include is the district holder and booster house. Subdivision D of Exhibit 425 shows the net construction cost, reproduction cost, age, life, present per cent condition, present value, and depreciation annuity for each of the items of works equipment, as valued by Mr. Adams and myself. I have placed a net construction cost of $218,358; Mr. Adams, on those items which he included and which are not the same throughout as mine, has placed it at $160,069. The major part that he has omitted is the East Lincoln holder. Also he has omitted a drill
press which I valued at $45, there is a number 5 Sturdevant
495 engine which I valued at $270. That Mr. Adams included with the blower. The total reproduction cost of the works

equipment I figured at $253,298, and Mr. Adams figured it at $171,-274. I get Mr. Adams' present per cent condition by dividing his present value by the total reproduction cost.

Subdivision E of Exhibit 425 shows the net construction cost, reproduction cost, age, life, present per cent condition, present value, and depreciation annuities for each of the items entering into the distribution system as shown by Mr. Adams and myself, after having corrected the error discovered in the street mains as per the testimony of Mr. Brodnax. The total net construction cost of the items I find to be $529,736. Mr. Adams finds $324,659. His present per cent condition I have arrived at by dividing the present value by the reproduction cost. The second sheet of this subdivision shows the corresponding information for street mains exclusive of paving. On the following sheet is a comparision of the paving data. This covers the cost of tearing up and replacing the street pavement only. It, I have shown, is a total of 190,037 feet under paving, while Mr. Adams has given 68,978 feet. It also shows the net construction cost and present value of paving alone as given by each of us.

Subdivision F of Exhibit 425 shows the valuations placed on the different parcels of real estate owned by the company as placed by myself and Mr. Adams. The column headed Valuation Assessed by the County is omitted. That assessment includes both the land and buildings. My figures were $21,700, which is not the revised figure. That has already been given. Mr. Adams values the same at $2,625.

Subdivision G of Exhibit 425 goes further into the details on the buildings. The first sheet is a summary of the net construction cost for the buildings shown separately and then follows a number of sheets showing the differences, if any, between the denominations and quantities as used by Mr. Adams, Mr. Assenmacher, and
496 myself in our several valuations of these buildings. The quantities, denominations, and amounts of money are shown wherever they could be separately located. The cipher under any one indicates nothing. A single star indicates that the quantity corresponding with that location on the sheet and the costs corresponding with that location as given in my valuation has been accepted by Mr. Adams. Where you find two stars that means that the item has not been included by me in my unit prices. Where you find three stars that indicates that that item is exclusive of doors and windows and means that there is nothing shown for that item by that person.

Subdivision H of Exhibit 425 is a number of sheets having to do with street main services, and meter data. The first sheet shows the width and depth of the trenches, the cubic yards of excavation per lineal foot, the cost of excavating, and refilling per lineal foot, for each of the sizes of mains here found as shown by Mr. Adams and myself. The next sheet is a continuation of the same matter showing the comparison of weights of pipe per lineal foot cost, cost per 2,000 pounds ton, F. O. B., Lincoln, cost of pipe per lineal

foot, F. O. B., Lincoln, percentage added for specials, cost of pipe per foot and specials, F. O. B., Lincoln, and storeroom cost per lineal foot for each size and kind, shown here in use as shown by Mr. Adams and myself. The next sheet is a comparison of the cost of handling and hauling and laying per foot, and all lead, hemp, and of the total lead and hemp or their equivalent, per lineal foot, and all miscellaneous items, per lineal foot, and the total cost of the pipe laid in unpaved streets, per lineal foot, for each and all of the sizes and kinds of pipe shown here, as shown by Mr. Adams and myself. The next sheet is a comparison of the street mains in the system. It shows the corrections in accordance with Mr. Brodnax's testimony on all sizes and kinds of pipe used for street mains and figures as used by Mr. Adams agree with the figures used by me as to quantities. The next sheet shows the total
497 number of house services and stub services, the total number under paving and the total number of each kind, the net construction cost laid in unpaved streets, and the percentage of total services under paving.

I do not understand how we come to differ on house services. Mr. Adams shows more than I. It shows the net construction cost of services laid in unpaved streets, given by both Mr. Adams and myself. It shows the per cent of total number of services under paving shown by me and shown by Mr. Adams. The next page shows the relative totals entering into the cost of services used by myself and Mr. Adams. It shows, for instance, the average length used by each, the cost per lineal foot in unpaved streets used by each of us, and the total cost per service shown by each — us. The following sheet is a similar arrangement of the details of the stub services. The next is a comparison of the unit prices per square yard for paving of different kinds, tearing up and replacing pavement, tearing up and replacing paving per service, the area of pavement to be cut and relaid per service. It shows the prices used by each of us. The next sheet shows the comparison of the statements as to service gain and meter gain per yard, net, in each case beginning with 1903. The next sheet shows relative details entering into the cost of meters of each and all sizes and kinds, given by each of us, and shows the freight which Mr. Adams neglected to produce.

Subdivision I of Exhibit 425 shows first the corrected gross earnings of the gas department in Lincoln alone with gas at $1.20 per thousand feet for particularly the years 1907 to 1912. In the two years before that shown there not all of the figures required were available. These are below the dotted line. All of these figures were taken from the Exhibits in this case except those which I mention as I go along. You will find reference to the Exhibit numbers in a good many columns. The next two columns show the gas actually sold in Lincoln alone in thousands of cubic feet for each year. The next shows the gas sales alone in Lincoln
498 as they would have been had gas been reduced to $1 a thousand January 1, 1905.

That column under my name shows an estimate because Mr.

Adams, in his Exhibit 347, indicated an estimate that the sales of gas would not have increased because of the reduction in price is the testimony of someone else. He does not believe that to be so and these are the figures he gave and using that there would have been an increase but he has not shown what it would be. In that respect he has been unfair to himself because he has not shown the advantages that would have arisen in carrying that to its logical conclusion. The reduction to $1 on January 1, 1905 would have in a relatively short time brought about an increase in the sale. It would not have opened up important new fields but would have increased the consumption by consumers and in the course of the three following years the consumption of gas per consumer would have so increased that the average revenue per consumer of the company would have been restored to the point it left when the reduction was made.

The average consumer will spend each year a fixed amount. If the price is reduced he will use a greater proportion, so that instead of the assumption that the volume would not increase it should be estimated that it would increase and also the operating expenses, and thereby you have increased the return which would be much greater than the increase in operating expenses. Mr. Adams said it wouldn't increase over $1.20. I have figured a much greater increase in sales at a dollar than he has. I consider Mr. Adams' presentation wholly inaccurate and in this statement I show what the correct amount is and it is to your benefit. If the gas had been sold for a dollar in 1905 the sales in 1912, in my belief, would have been 272,000,000 instead of 227,000,000 to the existing consumers. That would have yielded at a dollar practically the same amount of revenue as the actual sales did at $1.20, and there would be an increased operating expense and that increase over the actual expenses in 1912 would, in my opinion, have been $12,015.

499 The next sheet shows the total operating expenses on account of the gas sales in Lincoln alone with gas at $1.20. I have shown that in the first three columns then in the next two columns I have shown what that sale would have been throughout that period if gas had been sold at $1 a thousand. In other words, while the sales of gas would have increased, the operating expenses would also have increased. This is without considering the new consumers because Lincoln is not an industrial town and I know of no field for the use of industrial gas that could be reached by gas at $1 per thousand cubic feet that can't be reached at the present rate, and the increase would come from the present consumers almost entirely.

Now the net earnings for the gas department in Lincoln alone if the gas were $1 per thousand for those six years were a total of $404,913 against the total for those six years as estimated by Mr. Adams of $485,811, and as against the actual net earnings for those six years of $480,940 on the $1.20 rate. The corrected gross earnings of the gas department in Lincoln alone of gas at $1.20 per thousand are shown in the last sheet of this part of the exhibit in the first two columns and it will there be seen that Mr. Adams'

and my figures are the same. The total operating expenses for the gas department alone for Lincoln with gas at $1.20 per thousand is shown in the next three columns. The first column shows the amount from the gas records as corrected by me, the second shows the estimate of Mr. Adams, and the third the amounts which Mr. Adams reports as found from the company's records as arranged in his exhibit. The next heading is the net earnings of the gas department in Lincoln alone with gas at $1.20 per thousand, the first column showing the net earnings according to the company's records as corrected by me, the second showing the net earnings as shown by Mr. Adams using in part the records of the company and in part his estimate, and the third showing the net earnings as shown by Mr. Adams, which are in excess of the net earnings as shown by me in the sum of $252,572.93. My figures are based on the
500 records of the company as corrected by me for residuals for 1911 and 1912, and for depreciation for each of the six years shown.

The figures of Mr. Adams are in part an estimate. I accepted part of the expenses and on other portions used his estimate. The last column shows the total of these years. The difference between our figures is in the operating expenses due to the depreciation and correction on residuals. Mr. Adams found the same gross earnings that I found. I took the operating expenses as shown in the records and added for each of the years the depreciation and then made the correction for the residuals. The amount added to the operating expenses because of the estimated increase in sale under the reduced rate of $1 is what I believe to be the actual cost for the additional volume of gas which would be sold to existing customers. I figured the minimum amount that anybody could be expected to deliver that additional amount for. It is so low that I don't believe it could be reached except through a somewhat similar average price per thousand sold that would result from this increase in sales. My basis for my estimate of the increase of the sales due to the lower price comes from knowing the growth in sales following the reduction in price in various cities. It is a matter of general information that three years will restore the revenue caused by a reduction in price of 20¢ per thousand.

Exhibit 426 *are* the final figures of the reproduction cost and present value of the different items after making corrections for real estate and for the error in street mains. The purpose of this subdivision I of Exhibit 425 is to show what would have been the effect on the gas sales, on the gross earnings, on the operating expenses and on the net earnings of the Lincoln gas department if the gas had been sold for $1 per thousand feet since January 1, 1905, and the result is that the total net earnings would have been approximately $80,000 less than they actually were with gas at $1.20. That would have been the loss after having allowed for the full increase in sales and the increase in revenues above what was shown by Mr.
501 Adams, and the increased operating expenses as shown by Mr. Adams.

Subdivision J of Exhibit 425 is a comparison of the figures shown

by the gas company's records and by its annual reports between which there are some differences at times though in the aggregate they are insignificant. It is a comparison between these reports as corrected and the estimates supplied by Mr. Adams and the figures found by Mr. Adams in the gas company's reports for the total operating expense in money and per thousand feet sold for the years 1907 to 1912 inclusive, with the totals for the past six years, and in some cases for the items for the years 1905 and 1906. The next sheet in the same exhibit compares simply gas making materials and labor plus taxes. The next concerns the salaries, office, distribution, and general expense. These are not assembled in the gas company's reports. Mr. Adams selected the items and put them into groups of his own arrangement and I have followed that arrangement. I have gone over the books again and taken his arrangement and have found what he says is in the books and have paralle-d them. The last sheet is simply information concerning repairs and renewals.

Subdivision K of Exhibit 425 on the first sheet is a summary of the total expenses claimed by Mr. Adams to be excessive for the years 1907 to 1912. It shows that Mr. Adams claims the expenses shown by the gas company's records for gas making labor and material and taxes for those six years have been $7,742.04 more than they should have been and it also shows that he claims that the amount of money spent by the company for salaries, office, distribution, and general expenses during those six years was $168,592 more than it should have been. It also shows that the amounts spent by the company for repairs, renewals, and depreciation during those six years was $44,306.31 less than it should have been according to the records of the company, and leaving the net amount excessive, according to his contention, $132,028.13. The following three
502 sheets under this same exhibit show the details of the three subdivisions shown on the first sheet.

Subdivision L of Exhibit 425 is a still further analysis of the items comprising the total gas making labor, material, and taxes. The first sheet is a summary of the following sheets one of which is for each year from 1905 to 1912, inclusive. On these later sheets are shown for each year all the items of the company's account of money that was reported as having been spent, and the corrections, if any, made by me, and the amounts as found by Mr. Adams from the gas company's records. I have shown under a heading entitled amount spent for gas making labor, material, and taxes, each and every item in the company's records. If Mr. Adams eliminated any it will be shown as being eliminated by him and included by me. The page for 1912, for instance, shows all of the details of expense which go under gas making material and labor as shown by the company's records. Then there is shown all of the gas company's records as corrected by me if I have made any. Then is shown the gas company's records as Mr. Adams says they are, in the last column.

Subdivision M of Exhibit 425 is a treatment of the subject of salaries, office, distribution, and general expenses in the same way for each of the years 1903 to 1912. Subdivision N of Exhibit 425 is a treatment of the subject of repairs and renewals for the years 1903

to 1912, inclusive, in the same way. The exhibit will show where depreciation is included and where it is not.

Subdivision O of Exhibit 425 is a comparison for the years shown at the top of the columns between the so-called labor and materials and so-called over-head costs as shown by the gas company's records, and as shown by those records as corrected by me, and as shown in Mr. A. D. Adams's Exhibit 300, showing in the first two subdivisions the total net wages, salaries, and material in the manufacture, distribution, and sale of gas, and labor and material in repairs,
503 renewals, and depreciation. The third subdivision shows the totals of these items. The next subdivisions are the subdivisions of the so-called over-head expenses of, first, supervision, executive salaries, office rent, and incidental expenses, and next, legal expenses and, next, taxes, and showing what is the total of these items. And in the last subdivision is the total operating expenses being the total of all of the items in fractions of a dollar per thousand cubic feet of gas sold.

Mr. Adams, in one of his exhibits here, has endeavored to show the trend of the so-called labor and material costs as against the trend of the so-called over-head costs per thousand feet of gas sold, and he has shown by that that the over-head expenses per thousand feet of gas sold has been constantly increasing and he has done that throughout by attaching a classification that was satisfactory to him and which was not conclusive or fair to determine the real relation between labor and material costs as a whole and over-head costs as a whole.

It is obvious that all of the items entering into each of these general heads must be taken into account. Mr. Adams treated labor and material as confined to the plant and there is labor and material in the distribution system, in the office, and in the construction system, and there is actual true over-head expense and directing expense over and above what he purports to show. The actual facts are shown in this exhibit summing them up, and the relation of the so-called labor and material costs to the so-called over-head costs per thousand cubic feet of gas sold is shown. It must be remembeerd that this exhibit compares the results I got by talking about all material and labor and about the true over-head costs as against what Mr. Adams got by talking about labor and material at the works alone and all other expense as over-head. I have brought in the elements that should have been properly brought in and have shown them in detail. I haven't taken a part of the story.

The total net wages, salaries, and material in the manufac-
504 ture, distribution, and sale of gas, for example, in 1907 was .6315; in 1912, was .5321, showing a decrease in that total of salaries, wages, and material, per thousand feet of gas sold. And the gas company's records as corrected by me for that same item show a reduction from .6315 in 1907 to .5437 in 1912, and under the arrangement of the items shown in Mr. Adams' Exhibit 300, he shows, for 1907, .4473, and for 1912, .3239, for what he is pleased to call labor and material. In my comparison, I am not comparing the same items Mr. Adams compared. I have all of his items and

have placed them where they belong. My comparison was distinguished entirely from Mr. Adams'. Take my explanation in connection with my tabulation and you will get it correct. The same comparison is made for each of the items for each of the years throughout the exhibit. There is an increase in the total operating expense as shown by me from .1002 in 1907 to .18 in 1912 per thousand feet of gas sold. This is made up of .0219 of the increase in legal expenses; .0256 in taxes; and .0323 in supervision, executive salaries, office rent, and incidental expense. The occupation taxes are not included here.

Subdivision P of Exhibit 425 and the pages following show in a general way all the details required for the preceding table, subdivision O showing specifically the items and amounts which I have classed as labor and material and the other items which I have classed in the over-head.

Subdivision Q of Exhibit 425 relates to the Massachusetts cities. I have been more or less familiar and have studied from time to time with the public records of the Gas and Electric Light Commission of Massachusetts for the past eighteen years, and in all that time I have never been able to satisfy myself that they were records that could safely be consulted for learning specific things with relation to other properties not only because they even have failed to agree with themselves in their own reports, but on account of the very nature of their compilation. In the first place I dare say there is no record of any one company's operation in any one year in all of those records that can be competently analized and whose specific amounts can be positively shown except by the man or men who made the records of the gas company in the first instance.

505 Those men have transferred what they have drawn from the expenses of the local company and put it into the standard form of report and have submitted it to the commission. All the other companies in the state have done the same thing. Though they work under a uniform classification of accounts it is very obvious not only from the records but from the admissions of Mr. Adams that these questions are not understood generally in the same way.

Different men not only in the same town but in different towns place different interpretation and it is impossible to tell from the record exactly what is meant. That happens not only with the Massachusetts but with all holding companies. For instance, take this company and the Doherty group which has a much more elaborate and scientific system of bookkeeping than the Massachusetts commission has ever been able to obtain. From their special trained auditors and accountants and parallel system of accounts they get the best they can and all of these boys try to get into each of these accounts just what should go there but that don't mean that they all interpret the classification the same way, so that the items are grouped in here that belong here and there. Those are unavoidable things and are to be expected in any comparison of operating results. You have different men, different conditions and since the men who made these reports for the company were not available for an explanation of the items they certainly are not the best authority.

The best authority would be the employees of the Massachusetts commission whose duties it is to compare these reports, discuss them, and make analyses of them. The figures which I have shown here all refer to those Massachusetts towns first introduced by Mr. Adams. I went to the office of the Massachusetts gas commissioners and obtained the original sworn returns as presented to the commission by each of those companies for the several years from 1907 to 1911, inclusive, and because of this I have used in some of my latter comparisons the years 1907 to 1911. The detail arrangement of
506 the form used by the commission in the year 1906 and some time prior thereto is not the same as used for the years 1907 to 1911, inclusive, and the form used in the year 1912 is somewhat different from the form used in those intervening years.

I have used those five years from 1907 to 1911 inclusive because throughout that period the same classification and the same account numbers are meant to represent the same thing. I wanted to know what was all of the expenses shown, at least the part of the return to which Mr. Adams was referring, and I got that information and the thing shown by Mr. Adams in his cost does not present all of the cost in any of the six towns submitted in his first exhibit concerning Massachusetts in all of the years. In those exhibits he shows all expense except material and labor making gas, repairs, renewals, and taxes per sworn returns to the Massachusetts commissioners. Now, from the heading he has used I understood he meant all expenses except certain things and I concluded that the best source of information concerning a matter of that kind was the commission itself.

In my opinion there is no individual or body as competent in an analysis of the records of the Massachusetts matters as the man who makes and works continuously on the records of the Massachusetts commission. I had occasion, therefore, not only to refer to that one page of the large report which Mr. Adams has used but to that and all other figures shown by the commission in its own analysis of those particular things. In the single page of sworn returns which Mr. Adams has used there will be found such items as salaries of officers, general salaries, general office expenses, law expenses, claims and incidental expenses, none of which he undertakes to explain in detail and none of which can be explained from the records to which he has referred or from any other records in the office of the Massachusetts commissioners with any degree of exactness. I have
507 before me the sworn returns and it is very obvious from the analysis submitted by the commission of its own figures that there are expenses for a great many of these companies in a great many years denominated "other expenses" which are certainly no more specifically defined for the use of Mr. Adams or anybody else than the items which he has used under the caption of general office expenses, law expense, and incidental expense, and they may have been just as properly abstracted and placed here as outsiders think they should go as Mr. Adams has abstracted them. The expense called other expense, being item 29 on page 8, are not included in the total expenses but they are shown to the commission that they are a legitimate part of the operating expenses of the gas depart-

ment for the specific years and they are a part of the expenses and so recognized by the commission and are deliberately omitted by Mr. Adams from his statement of the expense.

Even in an organization conducted with such attention to detail and accuracy as the Doherty organization it is positively impossible to make the operating expenses of the several subdivisions of their own accounting system in their own companies keep anywhere within the limits of the accuracy which Mr. Adams undertakes to show has been done in Massachusetts. There are so many elements entering into the final operating results of a gas company as to make it impossible to compare any single town and it cannot be done except by one individual who is familiar with all of the details entering into those elements in each of those properties, and there is no reason to believe that any individual has any such comprehensive knowledge of the Massachusetts towns and of Lincoln so as to draw any such conclusions as that. In the first place the amount of gas sold by the company has an important bearing on its operating expenses and if you want to compare one town with another on that particular item the sales should be determined on the same relative basis. Here in Lincoln the sales of gas are to the general consumer of gas in Lincoln alone and the company is selling no gas
508 to other companies and there is no street lighting and in a comparison with Lincoln these factors in other towns should be eliminated. But the towns referred to by Mr. Adams are not except in a few instances fairly comparable with Lincoln because of the effect of a street lighting contract, of gas purchased from or sold to other companies. In some instances the effect of these factors is relatively small but in others it is considerable, but they must be segregated in order to get on the basis that the Lincoln company is on not only in the matter of gas sales but on all other matters if you are going to make a comparison that is of any value.

Subdivision R of Exhibit 425 is a statement of the percentage of wrought iron mains to the total mains in each of the towns referred to by Mr. Adams. One of the most inportant factors in the operating expense is the depreciation and depreciation, of course, is intimately related to the extent and nature of the physical equipment employed. Mr. Adams has shown the life of cast iron mains twice as great as for wrought iron mains and if there is to be any comparison of the depreciation charges proper in the six towns which he cites, unless you make an adjustment which does not appear to have been made, that relation cannot be ignored if an honest interpretation of the depreciation required is to be arrived at. In some places he excludes depreciation but he does not in his final costs. This exhibit shows, for instance, that in Lincoln the percentage of wrought mains to the total is 69.22% of the whole, and wrought mains have a larger life than cast mains. Mr. Adams says they have half the life. In Cambridge, one of the towns referred to by Mr. Adams, the percentage of wrought mains is 2.01% of the whole. In Brockton it is 4.51%; in Lawrence there is 7.70% of wrought mains; in Lynn, 11.58% of wrought mains; in Taunton, 31.60% of

wrought mains, and in Haverhill, 20.67% of wrought mains.
509 Now, such a variation in the physical characteristics of the distribution systems is an obvious thing and must certainly be taken into consideration if you are to arrive at a fair percentage for depreciation in Lincoln from the records in Massachusetts.

*Explanation of Subdivision S of Exhibit* 425.

There has been some criticism of the gas capacity of this plant. The records of the Massachusetts commission purport to show the maximum daily capacity of each of the 20 plants referred to here. I presume that the capacity is determined by finding the gross amount of gas which each of the plants can keep on making day by day. I presume they have some reserve but I don't know, so I have assumed that the maximum capacity shown in the Massachusetts returns is the absolute maximum without any reserve. That is, that every machine is running as hard as it can 24 hours a day, which is an impossible condition to maintain. If that is the basis then this plant's capacity would be 2,200 M per day. The daily average send-out for 1912 was 642,000 cubic feet per day, and the ratio of daily capacity to the average daily send-out for 1912 was 3.42 to 1. In that same year the ratio of the Lawrence plant was 3.98 to 1; in the same year the ratio of the Salem plant was 3.69 to 1; the Fitchburg plant, 4.51 to 1; if, however, the maximum capacity of the Massachusetts plants was determined as I supposed they were determined by allowing a reasonable reserve, and by daily capacity meaning that capacity which you can stand, then on that basis the daily capacity of the Lincoln plant would be its average daily send-out for 1912, which was 2.41 to 1, and on that basis as compared with the following towns, Brockton was 2.53 to 1; Cambridge, 3.35 to 1; Fall River, 2.65 to 1; Fitchburg, 4.51 to 1; Haverhill, 3.11 to 1; Lawrence, 3.98 to 1; Lynn, 2.94 to 1; New Bedford, 2.99 to 1; Salem, 3.69 to 1; Springfield, 2.63 to 1; Worcester, 2.42 to 1; all of the towns having a higher ratio than Lincoln. I show this be-
510 cause there was some criticism of the capacity of this plant and if that criticism is to be sustained by the statistics of Massachusetts I want to show those statistics. Your criticism was that we had an excessive investment in capacity and you compare the absolute daily maximum capacity of the Lincoln plant with its maximum for a single day. The "1" represents the maximum day's send-out and the 2.63 represents the amount that the plant could do*ne* on that day. That is 2.63 times as much as was sent out without a reserve. That is the relation between the absolute maximum capacity without reserve and the maximum daily send-out.

Another factor having an important relation to the costs is the gas sold per mile of main per year. In Lincoln they sold 2,187.456 M per mile of main in 1912; in Boston, 5,993.727 M per mile of main: in Cambridge, 4,696.844 M; Charleston, 4,490.444 M feet; in Fall River, 4,210.001 M feet; in Haverhill, 3,197.814 M feet; in Lowell, 3,370.618 M feet; in Lynn, 4,208.496 M feet, and so on.

There are some of the towns in there closer to Lincoln than that and are to be seen by checking the table, and on that element it is impossible to select a single town comparable with Lincoln out of the 20 towns. If I can distribute 100,000 M feet with only ten miles of mains it is obvious that my investment is going to be much less than if I have to have 20 miles and it is also obvious that my depreciation annuity in the first instance would be smaller; also the expense of meters would be less, also the percentage of gas lost through leakage and unaccounted for will be less. The extra miles of mains also increases or doubles the number of joints through which the major portion of the gas escapes. You would have double the investment in two miles that you have in one. Another very important bearing on the cost is the amount of gas sold per consumer.

In Lincoln in 1912 they sold 27,993 cubic feet of gas per consumer. There are many towns in Massachusetts that don't sell that much gas per consumer per year. Out of the 20 cities reported there are but two that sold as much gas per consumer per year as the Lincoln company in 1912, which indicates that the existing price
511 of gas is a strictly competitive price in this locality. With the condition of the fuel supply in these times the consumers find it economical to use gas at the existing price.

Another factor having a bearing and somewhat closer related to the sales per consumer is the amount sold per capital per year of population. This gives an indication as to the relative degree of saturation as it is sometimes called. In Lincoln in 1912 the gas sold was 5.095 thousand cubic feet per capital. Most of the towns in Massachusetts are in the neighborhood of that, several being above and several below, but that is a factor that has an important bearing on these matters and must be determined if any comparison is to be drawn. Now, a factor which shows very strikingly that same difference may be seen in comparing the Massachusetts cities with Lincoln, and is found in the last column showing the number of consumers per mile of main. If by running only a mile of main I can hook on 200 consumers it is obvious that my investment will be less and some of my operating expense will be less than if I have to run 2½ or 3 miles to get the same number.

In Lincoln in 1912 there were 78.1 consumers per mile of main. In all of the 20 cities referred to and reporting to the Massachusetts commission in this reference there were but two that had so small a number of consumers per mile of main and those are Newton and Taunton. Cambridge had 186.5; East Boston, 212.3; Fall River, 173.7, and so on. This very obviously required a smaller investment per consumer. All of the items in that table go to show important differences that bear definitely on the cost of the service and point out in detail a number of those differences which must be paralleled before you can consistently take the costs in Massachusetts and say that they apply in Lincoln because you happen to find them in Massachusetts. The greatest difference would be in the investment. If you are speaking of the number of consumers per mile of main you must remember in the Lincoln case that over half of

the total investment is in the distribution system and the
512 major portion of that is in the mains that have much less than half the consumers per mile that most of the Massachusetts companies do. Of course, you can't ignore the kind of main when talking about the investment.

Subdivision T is a copy of page 6 of each of the reports made to the Massachusetts commission for the years 1907 to 1911 inclusive for the 6 towns referred to by Mr. Adams, and shows that page exactly as it appears in the returns to the commission. I took them direct from the original returns on file with the commission.

Exhibit 427 is a blank form of return which was used by the companies reporting to the Massachusetts commission from 1907 to 1911 inclusive. Mr. Adams has had that shown in his totals on the items shown on page 6 of the returns, and this exhibit is not only a copy of the portion he has taken out but also all of the figures on page 6 for each of those years for each of the towns, and they show that the figures reported by Mr. Adams are not found in that page for the various years, and all of the expenses are not included. All of the expenditures on that page are not all of the expenses for either of those towns nor are they specifically recognized by the commission as expenditures for the gas department and the Gas and Electric Light Commissioners of Massachusetts, making their own analysis of their own figures don't find the same total for any of the years for any of those towns that Mr. Adams purports to find in those records and reports. The figures I have shown in this subdivision T opposite each of the items were taken by me personally from the sworn returns in the office of the Chief Clerk of the commission.

Subdivision U of Exhibit 425 shows a comparison of the figures found in Exhibits 351, 353, 355, 357, 359, and 361, submitted by Mr. Adams as showing the total salaries, office, distribution, and general expenses per thousand feet sold per year for the 6 cities of Cambridge,
Charleston, Lawrence, Lynn, Taunton, and Haverhill, as
513 against what I found in those same records interpreting them as they must be interpreted by anyone who is willing to accept the statement of the commission as shown by the analysis of those expenses. I have included one item that he has specifically omitted, called other expenses. There is certainly no place to classify this item except under the heading used by Mr. Adams. If you are abstracting from the records the items to show the total under those heads you must include the item called other expenses. You don't know what it is and I don't know any more than Mr. Adams, and he has got to include it just as much as incidental expense, but he eliminates it because he don't know what it is.

Subdivision V of Exhibit 425 shows the total costs per thousand feet of gas sold for each of the years from 1909 to 1912 inclusive, the years ending with June 30th in each case, and the results that are shown are by the analysis of the Board of Gas and Electric Light Commissioners of the returns submitted to them by the various companies. Those reports are here in the court-room for those years and they show that all of the figures shown in this exhibit are drawn from the analysis of the commission, and from no other source.

Subdivision W of Exhibit 425 first shows a comparison, in cents per thousand cubic feet of gas sold, of the net costs of material and labor making gas, plus taxes for the years 1907 to 1912 inclusive, as shown by the records of the gas company and as shown by the records as corrected by me, the corrections being in 1911 and 1912 because of the residuals, and the corresponding costs as Mr. Adams claims they should have been. Below that group of items is another group showing the net cost of labor and material making gas plus taxes for the same years for all of the towns to be found in the classification of the Board of Gas and Electric Light Commissioners as shown by the items and reports of that commission. For instance, in 1912 it shows the Lincoln Gas Company's cost per thousand feet sold, plus taxes of .3887¢; after making the correction for residuals I find
the actual cost was .4003¢; Mr. Adams, .3890¢. In that
514 same year, without taking too much time, Brockton had a cost of .415¢; East Boston, .41¢; Fitchburg, .49¢; Lawrence, .345¢; Newton, .47¢; Pittsfield, .42¢; Suburban, .50¢; Taunton, .46¢; and so on.

The relation of the costs there shown for those Massachusetts companies to the actual cost of the Lincoln company and for those costs as corrected by me and for the cost as shown by Mr. Adams is shown on the sheet following. The chart on the lower left-hand corner shows a list of the cities with numbers attached at their right, number 1, for instance, representing Boston, and the corresponding number on one of these curves beginning in the year 1909 considerably below the figure of Mr. Adams, which is a small dash line. The full heavy line is the gas company's actual records and the long dash line is my figure as obtained by me from the gas company's records in those years, for residuals only in the last two years. I have corrected for residuals and you will notice my long dash line gets above the actual records of the company because I had to add those residuals in those years. Mr. Adams agrees with the gas company for the years 1912, 1911, and 1910, and for the three preceding years he is somewhat lower. For instance, take Boston. It starts down at a trifle over 33¢ and drops in 1909 to a little over 32¢, and jumps in 1911 to over 33¢, with a slight increase for 1912.

The next typewritten sheet is a comparison showing the total repairs, renewals, and depreciation. In Massachusetts there is no statute and no generally-followed or understood arrangement concerning the laying aside of depreciation. The records of the company show in 1912 the charge of 5¢ per thousand feet sold for these items, and the records as corrected by me show for the same items 13.9¢, and the item Mr. Adams included as being correct for that year is 9¢, and in the table below will be found for that same year the figures for Brockton, Cambridge, and the other towns mentioned. Following that sheet is a printed chart giving the representation by curves of the figures referred to. In this in-
515 stance and in all of these curve representations the heavy solid line represents the records of the gas company, the long dash line shows the gas company's records as corrected by me, and the short dash line shows the figures used by Mr. Adams as being correct

for these items for those years in this locality. An examination of the table shows that in the year 1909 there were in Massachusetts, as reported in the analysis of the commission itself, towns which required a smaller amount than the 9¢ shown by Mr. Adams, and the same report shows that there were nine cities requiring a larger amount. For 1910 it shows that there were again six cities requiring a smaller expense for this item than shown by Mr. Adams, and twelve cities requiring more. I don't pretend that any of these figures for any town in any one year can be taken as a criterion and my reason, as I explained sometime ago, I think, is very fully substantiated by the form these curves take, and a casual examination will convince anyone that these costs for these companies do not run uniformly and there is no such thing as uniformity there and unless there is uniformity it is unfair and unscientific to come to Lincoln or any other town and say because they have gas companies in Massachusetts at that rate that 9¢ is right for Lincoln. The facts do not justify any such conclusion.

The next sheet is a treatment in the same manner of items coming under the general head of total salaries, office, distribution, and general expenses. That shows, for example, that the gas company's records show a cost for these items in 1912 of 31.12¢ per thousand cubic feet of gas sold. Mr. Adams says the correct figure or reasonable figure should be 12¢ per thousand cubic feet sold. The same sheet shows for that same year on the same items that Brockton had a cost in excess of 26¢; Fitchburg, 35¢; Haverhill, 30¢. In other years there are shown costs even higher than those. For instance, Haverhill. In one of his exhibits Mr. Adams shows Haverhill, in
516 some earlier years and leaves it out in later years because of the very evident reason that the expenses were larger in the later years. In 1911 the cost was 48¢ in Haverhill, and although Mr. Adams shows the cost for that year for some cities he does not show it for Haverhill. Now the lowest as well as the highest figures are in these reports. I have not omitted them, for I have shown all of the figures for all of the towns for all of the years.

In the next sheet are shown the total expenses. The records of the gas company for the year 1912 show the total expenses per thousand cubic feet of gas sold at 74.91¢, and as corrected by me, 84.98¢, and as Mr. Adams says they should have been, 59.9¢. In the same year the corresponding costs as determined from an analysis of the records of the Massachusetts Gas Commission show that Brockton had a cost of 88¢; Cambridge, 64¢; Charleston, 63¢; East Boston, 65¢; Fall River, 66¢; Fitchburg, 93¢; Haverhill, 68¢; Lawrence, 66¢; Lowell, 70¢; Newton, 77¢; Pittsfield, 84¢; Salem, 68¢; Suburban, 90¢; Taunton, 78¢; Worcester, 63¢. I have recited here only the towns which show a higher cost than Mr. Adams' figures. In the exhibit they are all given. Some of these cities have no depreciation reserve or other charge for depreciation. It is shown where it can be discovered in that analysis.

In the chart of the total costs as shown on the last sheet of this exhibit the full, heavy line is what the records of the gas company show for those several years, the heavy dash line is what I say they

were after correcting for residuals in the last two years, and depreciation for each of the years, and the short line is the representation of what Mr. Adams says should have been incurred in Lincoln during those years. That curve shows by an examination for 1909 that the cost shown by Mr. Adams which he says is the proper thing for Lincoln in that year is higher only than the costs of three towns in Massachusetts. Those towns are Boston, Fall River, and Lynn. Boston is a city larger than Lincoln, sells more gas and buys some gas. Fall River is larger and sells more gas. Lynn is also larger and sells more gas. As against that those records show that
517 twelve cities have a total cost in excess of what Mr. Adams says is right for Lincoln. In 1911 there is only one city out of the entire 20 having a total cost as low as Mr. Adams says the total in Lincoln should have been, and that city is Boston. All the others are higher. I have included in Mr. Adams' figures exactly what he has included.

Some reference has been made to the propriety of determining rates in relation to the net earnings per thousand cubic feet of gas sold. After having deducted the total operating expenses Mr. Adams has attempted to show dividends paid by certain Massachusetts companies during certain years. It is obvious to anyone who is at all familiar with that portion of the business that the declaration of dividends has very little relation to the actual earning capacity of the plant. You may earn an enormous sum of money and declare no dividends or you may as in some instances declare dividends out of money which is not earnings, having to pay it out of the capital. As a matter of fact the only comparison that can be used in talking about net earnings is to find what is the total amount of money left after the payment of operating expenses including, of course, depreciation and the amount which must be considered must be the total which is left for the payment of bond interest and the payment of dividends or for laying aside as unapplied earnings. In other words, your total net earnings above the cost of operating are all that are available for interest, dividends, or unapplied earnings, and in the same analysis by the Massachusetts commission covering those same towns there is shown for each year for each of the towns the total money available in each of the years for dividends, interest, and unapplied earnings, and the aggregate of those items is the difference between the total money taken in and the total expenses which the manufacture, purchase, distribution, and sale of gas, plus depreciation and other reserves, plus this item of other expenses which Mr. Adams has failed to show where I think it should have been shown in his general expenses. I do not know what the "other
518 reserve" means any more than does Mr. Adams. There are some things in the records that give an indication of what it is. You would think in some instances that there are employees' injuries, or benefit reserve, or perhaps old-age pensions but the records are very far from being specific.

Subdivision X of Exhibit 425 shows that for 1912, according to the records of the Lincoln Gas Co., that after the payment of all expenses for manufacture, purchase, distribution, management, and

depreciation, there was 45.48¢ per thousand cubic feet of gas sold available for dividends, interest, and unapplied earnings. After making the correction for residuals for that year and for allowance for depreciation at the figure which I have found for the Lincoln Gas Co., the items for that year should have been 32.38¢ per thousand cubic feet of gas sold. The same exhibit shows the corresponding figures in Fitchburg are in excess of 49¢; in Lawrence, 49¢; Lynn, 34¢; New Bedford, 65¢; Salem, 36¢; Suburban, 55¢; for Haverhill it was a litttle over 23¢; the preceding year, a little over 3¢, and in 1908, 28¢, and as another evidence for my preferring not to accept those records on their face, and it is only one of several, here is the record of the commission which shows its own analysis and in the year 1909 it can be found there was available from the operating returns, for dividents, interest, and unapplied earnings, combined, a sum in excess of $1.03 per thousand cubic feet of gas sold, and it can also be shown from that same analysis that that is more money that they took in from the sale of gas. Exhibit 425, and each subdivision identified, is offered and received in evidence.

HENRY I. LEA, being recalled for further direct examination on rebuttal, testified on behalf of the plaintiff as follows, pages 4304 to 4332, original record:

Direct examination by Mr. Strode:

Exhibit 428 was prepared by me and is as follows:

519 COPY OF EXHIBIT "428".

| | Full year 1912. | Full year 1913. |
|---|---|---|
| Gross earnings gas department as reported | $282,162.11 | $273,595.52 |
| Deduct receipts from gas sales outside Lincoln | 8,986.18 | 8,471.35 |
| Corrected gross earnings gas department | 273,175.93 | 265,124.17 |
| Total operating expense as reported. | 175,573.49 | 183,436.77 |
| Deduct output of gas, gas sold outside Lincoln | 1,873.62 | 2,471.92 |
| | 173,689.87 | 180,964.85 |
| Add for excessive residual credits reported | 2,722.23 | 0.00 |
| Add for depreciation (Minimum shown by sinking fund calculation) | 20,865.03 | 20,865.03 |
| Corrected operating expenses, gas department | 197,277.13 | 201,829.88 |

| | | |
|---|---|---|
| Corrected net earnings, gas department | 75,898.80 | 63,294.29 |
| Corrected net earnings, gas department in per cent of reproduction cost | 5.810 | 5.029 |
| Corrected net earnings, gas department in per cent of then present value | 6.698 | 5.801 |
| Total reproduction cost real estate, buildings, works equipment and distribution system | 976,037. | 928,423. |
| The then reproduction cost of entire property | 1,306,075. | 1,258,461. |
| The then present value of the entire property | 1,133,114. | 1,909,913. |

The date, February 14, 1914, occurring at the head of Exhibit 425 is the date on which I completed the comparison of the matters in that exhibit referring to Massachusetts and was submitted to Mr. Montgomery on that date. At that time I was still at work on the Massachusetts matter and brought the balance of this exhibit on for conference which we had at Lincoln. After February 14, I completed the balance of the Massachusetts work and brought
520 that material out here and inserted it in the same book without re-writing the letter of transmittal.

Cross-examination by Mr. Foster:

That is just to make it plain that a great deal of the work in that exhibit was performed after the date of the letter of transmittal. In my original valuation I put the total value of the real estate in at $21,700. I have reduced that to $19,320, because since making the final report I learned that the south 92 feet of the east half of lot 11, block 77, the west half of lot 11 in block 77, the south 92 feet of lot 12, in block 77, and lots 1 to 12, inclusive, in block 79, were used in part by the electric department and to those portions I credited 80% to the gas department.

521 Cross-examination by Mr. Adams:

In section T of Exhibit 425 are the copies of page 6 for each of the towns referred to by Mr. Adams for each of the years and there will be found the items which are not shown in the city's Exhibits 350 to 361 inclusive. There are two sheets for each town. It might easily be true that a portion of the sheets in this Exhibit T deal

with labor and material at works and various other items of expense, which do not appear at all in the city's Exhibits 350 to 361. I know that the figures do not agree because Mr. Adams has chosen to segregate items which he presumed he was right in doing and the records show the items put in one total in the reports of the commission and I have taken that total. In these particular sheets in this Exhibit I have shown all expenses and only those expenses which are shown on that portion of the annual returns of the gas company required by the Massachusetts commissions. That is headed "Statement of income and Expenses". I have not anywhere in Exhibit T segregated from those expenses included in the city's Exhibits 350 to 361 because it cannot be done accurately. In Exhibit 425-v you will find for each of the towns there shown for each of the years 1909 to 1912, the cents per thousand sold resulting from the addition of the item of "Other expenses" which I say should have been added to what Mr. Adams has included in items 350 to 361. I have attempted to show there all those expenses that are shown in the analysis of the expenses of those companies by the commission itself for each of the years.

In Exhibit 425-v I have taken only those items which it is evident from an examination of the analysis of the commission should be included under the heading, "Total salaries, offices distribution and general expenses" and I believe that includes all of the items included by Mr. Adams under the heading, "All expenses except materials and labor making gas, repairs and renewals and taxes, per sworn return to the Mass. commissions", with the exception of the item "Other expenses" but on that I am not sure, be-
522 cause this is my abstract from the analysis of the Mass. commission figures. All that I know about what Mr. Adams has included, is what could be gathered from his title. It says "All expenses except material and labor making gas, repairs, renewals and taxes." I have not tried to add up and tabulate all the figures appearing in Exhibit 425-v except those called "Other expenses", to see what it amounted to each year, in cents per thousand feet sold, except in so far as they are shown in Exhibit 425-T which does not include other expenses, but those are not segregated there in the form, segregated in the city's Exhibits. I have a rough working knowledge of accounting. I have compiled from Exhibit 425-v what I believe is shown by the analysis of the commission itself to be recognized and included by them as operating expenses and the total of these items is the total there shown.

In the printed form of return required by the Mass. commission, I do not find any place or heading for the entry of an item of expense which is not properly classed as an operating expense. The figures which I have drawn from the Mass. records are not taken from the form of report referred to, but are from the commissioners' own analysis of its own return, by which it does shown the item "Other expenses" as being a part of the operating expenses. The printed report of the commission showing its analysis for each of the years, contains all of the figures included in the original sworn return, but I do not know whether or not it contains any other

figures not taken from the sworn returns. The item "Other Expenses" as shown in the Exhibit 425-v for the year 1912 ending June 30, appears on page 255-a of the commissioners printed report for that year. That is the only place to which I resorted to find those other expenses for each of those years. I recently visited Mass. and the office of the commissioners for the purpose of making the compilations and finding out about those other expenses. I have been advised that the commission has printed instructions issued to the companies as to the way in which the different items of expenses are to be entered in the sworn returns and they
523 must have such instructions when they have a uniform system of accounting. I did not consult those instructions to ascertain whether or not "Other expenses" were expenses properly incurred in the operation of the gas business, because had I consulted them I would have known very little more about the actual facts. I have no information at all as to the actual expenditure represented by those items, no more than I have of the items elsewhere of the incidental expenses. If these printed instructions did not classify these items called "Other expenses" as a part of the operating expenses, it would have made a difference in my compilation and testimony here, but there is no other conclusion to draw when in their own analysis the commissioners include such items as a part of the operating expenses.

Pages 249-a to 254-a inclusive, of the printed report of gas commissioners for 1912, ending June 30, bear the caption at the top "Operating expenses". On page 255-a the caption changes to the words "Net earnings and their application" and the caption operating expenses is missing.

The printed reports contain in one volume the statements of assets and liabilities, operating expenses and profit and loss account for each company, and I looked to see, for the respective companies in each case, if anywhere in the detailed statement of the operating expenses and profit and loss account the items making up those other expenses occurred. Sometimes I found them and sometimes I could not reconcile them with the other statements in the same book, for the same year, for the same company. The item of other expenses for the year 1912 for the Cambridge Company is in cents per thousand feet sold .00537 and in money is $4,091.51. This is as shown on page 255-a. On page 58-a of the report under the heading "Profits and Loss account" there is an amount of $4,091.51 marked "Other items". Because the money happens to coincide I do not know whether it is or is not the item of other expenses. It may be. I did not compare the items shown in the commissioners analysis as to "Other expenses" with the respective operating
524 sheets of companies considered as included in the printed report of commissioners in the respective years, except to get the items of residuals.

On page 57-a of the same report there is a heading of manufacturing account and under that there is a sub-heading "Operating Expenses" and looking at that sheet of the operation for the Cambridge Company, under the heading "Operating expenses", I find

the words "Operating expenses at works for distribution management, taxes and incidentals" followed by figures in dollars and then a footing of those entries, and following that comes the statement "Income from sale of gas" followed by dollars and then "Residuals" followed by dollars and then "Other sources" followed by dollars and then there is a stated balance to "Profit and Loss" and that appears to close the statement of operating expenses as planned by the commission having to do with the gas account. Then on the next page 58-a comes the heading "Profit and Loss" account.

It did not occur to me and I did not as a matter of fact, look into the profit and loss accounts of these original returns of the company to the commission, to see if any expenses were set down there, or to see whether any expenses set down there threw any light on these items of other expenses, because I considered the knowledge of the commission concerning its own business very much more exact and comprehensive than anything I might acquire and I would rather take their statement than anything I might find by my own analysis of their figures. If they are not operating expenses, or if this heading "Other expenses" does not cover operating expenses then the accounting of the commission is wrong in deducting such expenses from total cash income, before showing what is left for dividends, interest and unapplied earnings of the property. If it had other expenses not directly and properly connected with the conduct of the gas business, such expenses ought not to be in any way considered in determining the operating expenses nor the income nor the amount available for dividends, interest and unapplied earnings of the gas business. If they pay out money for other things than the gas business that is no
525 part of the records of the gas business as such.

On page 12 of reputed copy of the return on Haverhill Gas and Light Company for the year ending June 30, 1913, there is written in the profit and loss account in ink the words "Litigation expenses $6,989.95" and I have no specific idea or opinion as to where that *tiem* would appear in the printed report of commission, if it were out. On page 128 of the report of gas commissioners of Mass. dated January, 1888, under the caption profit and loss, in Exhibit D, occur these words "Item of income and expenses not belonging to the operation of the current year, should be carried directly to profit and loss account". I know of no accounting system that has not been overruled or modified in important degrees, since 1888 and I would not consider instructions given at that time sufficiently urgent to compel an examination of the present methods, even in Mass. and had the same instructions been in effect today, I would not have carried my investigation of the nature of the so called "Other Expenses" any farther.

I have not depreciated in my value, the value represented by the cost of paving under which the mains lie in this city, and that element entering into this value is just as great as though the mains under the paving were brand new. When pipe under the paving is discontinued, the value of the paving over the pipe would disappear. That particular element of value goes out of being

at the precise moment that you discontinue that main as a part of your property. The larger consumers here in Lincoln have their effect, as they do in all other cities having large concerns, in representing the average sales of gas per consumer. I have forgotten the ratio here in Lincoln, but I have the figures if you want *you* go into them. I have not presented anywhere here the method of depreciation on each individual piece of apparatus, main and equipment, but I have shows to you the money that should be set aside each year on all of it, and I have explained the method of arriving at that, but I will not present a table showing the depreciation each year for each of those items.

526 HENRY I. LEA, being recalled for further cross examination testified as follows: Pages 3303 and 3304 original record. I know who the firm of Sloan, Huddle & Company are. They did not give me any aid in making this valuation and they had no connection with it, to my knowledge. I know of nothing they did that had any effect on anything I have done. I have not consulted with them on this case. If the officers of the company did it was not at my suggestion. I do not know whether they were consulted before I took charge or not, all I know is that they did take up with that firm something in connection with the procedure of the Wisconsin commission. They do some outside work and somebody took up some matters with them, but I don't know of anything that they ever did for the Lincoln Company.

527 W. F. BRODNAX, being first duly sworn, testified on behalf of plaintiff as follows: Pages 513 to 656, Volume 1, original record.

Direct examination by Mr. Strode:

Bethany, Pa., is my home. I am a gas engineer. In 1900 I came with the United Gas and Improvement Company of Philadelphia as a constructing engineer, and continued with them until 1906. After that I was something over two years in the operating department of the United Gas. One year at Maria, and one and one-half years at Allentown. For two years after that I was in charge of the valuation department of the United Gas. At the end of 1910, I went with J. J. White and Company, incorporated, and engaged in valuation work for them in California, and on the 10th of March of this year I came to the local company.

Our organization in California consisted of the chief engineer, an electrical engineer, myself as gas engineer and a hydraulic engineer. We made a valuation of the property of the Pacific Gas & Electric Company in Santa Fe. Then we made a valuation of another property which covered a period of nine or ten months. Then we made a valuation of the property of the San Joaquin Light & Power Company, the properties lying principally in the San Joaquin Valley. This occupied four or five months. Then we made a valuation of the properties of the Southern California, and of the Pacific Light & Power Company and I made a valuation of the water property in

Fresno, California. My work was principally in the line of gas and water valuation. In all we valued twenty-seven gas manufacturing, and twenty-three gas properties.

In making a valuation we did as I did here. I first put a group of men in the field to make a general outlay of the property. We called a property plan, showing the location of the buildings, their size, location of outside apparatus, materials and size, and located them with regard to each size. Then we took each building
528 separately and made a detailed drawing of it, and after the drawing was completed, we divided and segregated the buildings into their respective materials, known as bills of materials. These bills of materials were classified with each item of material. With the apparatus we simply listed such apparatus as was of standard build. All apparatus about which we were doubtful we made detailed drawings of the items or elements that entered into them. We procured a detailed inventory of the property as a basis for the valuation.

In making valuations I did not rely upon the records of the company. Some engineers who wish to make an easy job of it, do. What records and contracts I have used were simply for the purpose of reference after I had arrived at my own conclusion. I entered the service of Henry L. Doherty & Company of February 10th of this year. The United Gas Company of Philadelphia are both builders and manufacturers of water gas apparatus. They own the Omaha company and about sixty-three or sixty-five other gas and electric companies, among them are the properties in Philadelphia, Syracuse, Johnstown, New York, Sioux City, Iowa, Sioux Falls, S. Dakota, Kansas City, Mo., Vicksburg, Miss., Harrisburg, Penn., Des Moines, Iowa, and some plants in Florida.

My last two years with them was valuation work. I had never examined the Lincoln property before coming here to make a valuation. I had two assistants in making the inventory here. We began on the distribution and followed by an inventory of the gas manufacturing plant. As to the distribution, we first found whether or not we had any suitable map, and finding none suited to our use, we went to the city engineering department and made complete maps, taken directly from the city maps. We then started to plat the mains on the map, because the map of the mains in the company's office was not strictly up to date. From the information we had from the assisting map and record, we platted the mains upon our new map, and then checked that against a close scrutiny of the so-called work orders and records of main extensions. In some few cases
529 we found omissions which we put on the new map. This was all done under the direct supervision of the distribution department. The inaccuracy of the company's map was not due to inaccuracy, but to our inability to read the symbols. It was more a question of size than extent, and those were all checked over and the size was checked as the mains were opened from time to time to put in new services or to discover leaks. When we were in doubt we relied in a great measure upon the information of the distribution department. There were practically no book records as to the

sizes of the mains, prior to 1905. The map from which I got my information was compiled in 1905.

To get at the correct amount of mains, we used the company's map of 1905, and then we went back through the work orders for the main extensions. The work orders are in writing and signed by the superintendent of distribution. They are a direction to the foreman to construct mains of a certain size and length in a certain place. Then we ascertained whether or not the work had been done by examining the records of the foreman who is supposed to do the work. Those records are in a permanent file. If the work orders had not been entered on the map, then we knew there had been an error made and we put it on. It was very evident from comparing the map of 1905 with the work orders that the map was not complete prior to 1905. We ascertained that from the memory of the superintendent and foreman of distribution and checked their information by the fact that there was a service and light adjacent to where the main was supposed to be. We had access in doing that, to the consumer's ledger, and that ledger showed where the people lived. It is very rarely that we ever find a complete map of a distribution system. I feel that my figures are very accurate as I have used all the available means in arriving at them, and I think I have the correct figures. I do not think I have gotten too much. If there is any error it is the other way.

Plaintiff's Exhibit 8, is a tabulation of the exact number
530 of feet of different sized mains of the company in use in the city of Lincoln, January 1, 1913, and of the same thing outside the city of Lincoln, given in separate items. It was prepared by me and under my supervision. On January 1, 1913, there was in use in the city of Lincoln, 2,258 feet of one and one-quarter inch wrought iron mains. During the intermission I found we had made an error using adding machine in our total of two inch mains due to the failure to throw switch at the proper time. Correcting this error, I find the correct total of inch mains to be 315,496 feet, the error threw us off to the extent of 40,000 feet, reducing the number to 315,046. 315,708 feet of two inch wrought iron mains; 403 feet of three inch cast iron mains; 94,274 feet of four inch cast iron mains; 25,873 feet of six inch cast iron mains; 4,568 feet of eight inch cast iron mains; 9,810 feet of ten inch cast iron mains; 3,613 feet of twelve inch cast iron mains; 1,269 feet of sixteen inch cast iron main; and 1,472 feet of twenty inch cast iron mains. They have outside the city, at the State Farm, 2,010 of four inch cast iron main; at University Place, 827,850 feet of two inch wrought iron main; and 14,200 feet of four inch cast iron main. In Havelock they have 12,280 feet of two inch wrought iron main, and 8,300 feet of four inch cast iron main. Exhibit 8 is offered and received in evidence.

Exhibit 9 is identified as a map in two sections. In order to get the actual distance the scale feet should be multiplied by 1.015. This is due to the fact that in making the map it shrinks. Exhibit 9 is a map of the distribution system, and shows the location, size and length of each main. The size and kind of main is shown in the

legend. The location is shown by the streets and the length in scale feet is shown by the figures written on the map above the main. It was prepared by me and made under my direction. Exhibit 10 is a map showing the various kinds of paving under which the mains are laid. It was prepared by me and under my direction. It shows the entire paving in the city, and accurately shows the extent of the paving over the mains. We took the total paving from the city engineer's office by comparing with and checking Exhibit 10 against Exhibit 9. In this way we found the class of paving over the different mains. Exhibits 9 and 10 offered and received in evidence.

I have prepared and have here an inventory of the different sizes and kinds of gas meters in use and in stock by the Company
531 on January 1, 1913. The inventory of those in use was taken directly from the meter record cards of the company. These cards show the actual history of each meter its location and the conditions entering into its past service. If the location is changed that is shown on the card. There is a number assigned to each meter, when it is first delivered to the company, and the card and meter correspond in number. If the meter is destroyed or discarded, the card is taken out and the meter which replaces it is given a new number and card. We took the inventory of the meters in stock directly. The meters are classified by the number of lights and have identifying numbers. There were in service in the city of Lincoln on January 1, 1913, the following: 1*a*-#23; #2-11; #2*a* 15; 3 light 2783; five light 5125; 10 light 40; 20 light 54; 30 light 4; 45 light 12; 60 light 1, total 8038. Meters in stock or out of service on the same date were 1*a* 2; #2 1; 2*a* 2, 3 light 89; 5 light 131; 10 light 10; 20 light 3; 45 light 3, 60 light 1, 151 light 1, total 243. This is the same number and size of meters as was furnished Mr. Lea and shown in his report, identified as Exhibit J-11.

Exhibit 11, comprising pages 51 to 241, inclusive, contains the details of this meter inventory. It is a list of the meter record cards. The column headings on each page are the same. They are the classification for the different meters, three light, five light, ten light, etc., and the number of each meter appears under the proper heading according to whether it is three light, five light, ten light or whatever it is. We determined the actual number of meters in use by counting the service cards. Exhibit 11 is offered and received in evidence. It is found in the inventory marked Exhibit 8. This inventory does not cover any meters outside of the city of Lincoln.

I have also here an inventory of service governors in use in the city of Lincoln. The list of governors was furnished me by the distribution department. The governor is located at the end of the
532 service on the consumer's premises just ahead of the meter. They are of various sizes, three fourths inch, 1¼ inch and 2 inch, conforming to the size of the service. On January 1, 1913, there were 6,797 ¾ inch governors, 1¼ inch governors 199 and 4 2 inch governors in use in the city of Lincoln. There were in stock 284 ¾ inch governors, 34 1¼ inch governors and 1 2 inch governor, making the total number in use and in stock in the city of Lincoln

7116. There were in use on the same date outside of the city of Lincoln, a total of 170 governors. This tabulation and invenotry of service governors is identical with the tabulation of the same articles shown in Mr. Lea's report and identified as Exhibit J-9.

Exhibit 12 is a summary of the inventories of gas services in Lincoln. It shows the length of services, the average size and under what class of paving the service is located. It also shows the location, whether in Lincoln, State Farm, University Place or Havelock. Their location and the kind of paving under which they are located, is shown by the headings of the different columns in the summary. In determining the number of services under paved streets and the number under unpaved streets, we took the total number of mains in feet and divided that by the total number of services which gives us the average distance from center to center, between the services. Then we took each class of paving in feet and divided that by the average distance from center to center between the services, which gives us the number of services under each class of paving. The method of determining whether the services are under paved or unpaved streets is theoretical. The total number of the services was furnished us by the superintendent. Under this method we lost considerable service under pavement as by far the greater majority are located under the paved streets where the consumers reside. Exhibit 12 is offered and received in evidence. Exhibit J-8 of Exhibit 7 being Mr. Lea's report corresponds with Exhibit 12 as to the number of services and where located.

533 I have also a list of the number of service boxes and cocks. They are located just inside of the curb line and are cocks on a line with a pipe that goes down in order that the gas may be easily turned off in case of an emergency. One is supposed to be located with every service so that if a man doesn't pay his bill, we can turn the gas off. On January 1, 1913, there were 6149 of the service boxes and cocks in Lincoln. They are also referred to in the same manner in Exhibit J-10 of Mr. Lea's report.

A street main drip is a low place in the gas pipe into which the condensation in the pipe drains. They are of different styles of construction; some are known as syphon drips and sometimes they are merely an enlargement of the pipes. They are pumped periodically in order to avoid a stoppage of the mains. They pump them by running a pipe down through the drip pipe, which goes nearly to the bottom and then attach a hand pump to that. For a 20 inch main, they are from 24 to 26 inches on the inside and three or four feet deep. For a six inch main, they are eight or nine inches in diameter and from two feet to two feet six inches deep. The street main valves are for the purpose of controlling certain points of the system of distribution so that a particular district can be cut off from the mains if necessary, without cutting off the balance of the service. The district governor is for the purpose of control-ing the pressure of the gas as it is delivered to the consumer.

The railway crossings referred to in Exhibit J-5 are the places where the mains of the company are laid under the tracks of the street railway and steam railroad and show the extra labor and cost

of putting the pipe under those crossings by reason of their being there. I procured an inventory of the drips, street main valves and railroad crossings and the district governor as of January 1, 1913, from the records and maps of the company. The inventory of the drips was taken from a drip register in which the drips are definitely
located. The inventory or tabulation, Exhibit 13, does not
534 show the location of the drips but shows the number and
size. It was prepared by me. The inventory of the street main valves is shown in Exhibit 14. I prepared it from the valve map which is one of the permanent records of the company and it can be checked as to its accuracy. This Exhibit shows the number and size of the street main valves in use on January 1, 1913. The company records show the location of the different street main valves so that its accuracy can be determined. Exhibit 13 and Exhibit 14 offered and received in evidence.

Exhibit 15 is a tabulation prepared by me of the railway crossings, the number was determined by the location of the mains as shown in our map, and checking against that the location of the steam and street railways. The correctness can be determined by going out and checking the location of each crossing. On January 1, 1913, there was a total of 342 electric and steam railway crossings in the city of Lincoln. Exhibit 15 shows in addition, the crossings outside of the city of Lincoln. There are a total of 19 outside. Exhibit J-5 of Exhibit 7, Mr. Lea's report, contains the same information which I have given in Exhibits 13, 14 and 15, with respect to street main drips and valves, district governors and railway crossings.

In making the inventory of railway crossings, I did not make any effort to determine whether the railroads had been out there before or after the gas mains were constructed. The district governor is located at 33rd and Holdridge. This completes the inventory of the distribution system.

I made an examination of the buildings in use in connection with this property, on January 1, 1913, and found that they had a purifying house, meter repair shop, booster house, retort house, old generator house, new generator house coke shed, stable and smith shop, oxide house and oil house. I made an inventory of these buildings
and the details of their construction and in doing so made a
535 property plan showing the location and size of each building.
Then I took each building separately and made scale drawings with such transverse and longitudinal sections and plans as I deemed necessary for our work and after I had completed the drawings of each building I summarized the materials in each by making bills of materials. We would begin with the excavations and show how much there was of that, then the footings, basements, cellars, etc., and after that was completed would take the foundation, showing the kind of material and the quantity. Then I took the walls themselves, secured the dimensions and determined the quantity and kind of material in them; in the same manner I took the roof and trimmings. Then I took the floors, giving the dimensions, quantities and kinds of material, and then I took the fixtures of each building, such as permanent racks and I believe my inventory of the

building material is correct. In determining the quantity of material, for instance, brick in any building, we determined first the number of brick that would occur in a wall of given dimensions and then applied the result to the dimensions of the wall under consideration and we determined as accurately as it was possible to determine in each instance, the number of brick in each building. All of the materials entering into these buildings was determined by its quantity and character.

The details of the materials in each of these buildings are shown in the inventory. The details of the materials shown in my inventory of the purifying house, are shown in Exhibit 16 which is identical with Exhibit 7-B-2 Mr. Lea's report, with the exception of the toilets, which are not included in Mr. Lea's report, through an oversight. The entire outfit of toilets in this building are worth from $65.00 to $70.00. I determined the quantity and character of the materials in this building by being actually on the ground and taking the measurements with my assistants. Exhibit 16 is offered and received in evidence.

536 Exhibit 17 is an inventory of the materials, showing the character and quantity entering into the construction of the generator house. They are identical with the items shown in Mr. Lea's report, Exhibit B. The painting is now shown in this inventory. In determining the number of brick in the pilasters, we stripped them away from the wall to get their dimensions as a separate segment or portion of the wall and determined how much brick there was in that. The doors and windows are counted and reduced to square feet. The floors are measured and reduced to square feet. We measured the dimensions of the roof and got the amount of material in that. We got the dimensions of the excavation by measuring the depth of the building itself, in the ground. In getting at the quantity of brick in a wall, we do not deduct for window- unless they are larger than 12 x 12 for it is the rule that the cost is as much to build around these openings as it is to supply the material for them. It is the ordinary practice among contractors to figure the openings solid. Exhibit 17 is offered and received in evidence.

Exhibit 18 shows the details and quantities and kinds of materials used in the construction of the retort house, made by me from an actual inspection, measurement and inventory of that building, and it checks out with the details of Mr. Le-s's exhibit B-4. Exhibit 18 is offered and received in evidence.

Exhibit 19 was prepared by me and is an inventory and statement of the dimensions, quantity and size of materials entering into the construction of the meter shop and booster house. It was prepared by me and checks out with the materials shown in Mr. Lea's report for the same building, with the exception that it shows separately, 38 yards of concrete for concrete forms, which was absorbed by Mr. Lea in his actual item of concrete. Exhibit 19 is offered and received in evidence.

Exhibit 20 is an inventory showing the dimensions, character and quantity of materials entering into the construction of the coal shed.

It was made by me and checks out with Mr. Lea's report shown
537 as Exhibit B-6 for the same building. Exhibit 20 is offered and received in evidence.

Exhibit 21 is an inventory of the dimensions, quantity and character of materials entering into the construction of oil tank house. The building is entirely under ground with the exception of a one foot wall that comes above the foundation. It was made by me and the same details are shown in Mr. Lea's report as part of Exhibit B-7 for the same building. Exhibit 21 is offered and received in evidence.

Exhibit 22 is an inventory of and shows the dimensions, character and quantity of materials entering into the construction of the Oxide shed and corresponds with the items of materials shown in Mr. Lea's report as Exhibit B-8 for the same building. It was prepared by me. Exhibit 22 is offered and received in evidence.

Exhibit 23 is an inventory of the dimensions of and character and quantity of materials entering into the construction of the stable and blacksmith shop. It was made by me and corresponds in details with the report of the same building shown in Mr. Lea's report as Exhibit B-9 with the exception that the painting is left out of Exhibit B-9. It was made by me. There were 1,310 square feet of painting on this building of a value of about $300.00. Exhibit 23 is offered and received in evidence.

Exhibit 24 is an inventory of the dimensions, character and quantity of materials entering into the construction of the booster house, at the district holder. It was made by me and corresponds in detail with the tabulation for the same building shown in Mr. Lea's report and identified as Exhibit B-10. Exhibit 24 is offered and received in evidence.

I have here also, the original field notes showing the details of these buildings and the materials entering into their construction and they are here subject to inspection by counsel for the city and will be here during the progress of the trial. This completes the inventory of the buildings.

538 I have made a complete inventory of the works equipment of the company as of January 1, 1913, and I have here a compilation showing the character of the different machines and appliances and equipments carried under the head of works equipment. It was made by me and under my direction, at the plant where the machinery and equipment is located. I believe it to be absolutely correct. It was made under my personal supervision and I made the inventory of the apparatus myself because I know something about the history of the different classes of apparatus that are used in gas manufacture, and I can go back in the history of a great many machines and tell what their origin was. This, a man with less experience would not be able to do. I would be able to look at a piece of machinery without any name or identifying number on it and could tell the makers of it by simply seeing it.

The original field notes are all bound together and will be here during the course of this hearing and at all times are offered to the inspection of the counsel for the city. I have the following list of

apparatus: 1 seven foot six inch Western Gas Water Gas Set, which is the same in all details as that referred to in Mr. Lea's report, Exhibit I-2. A second seven foot six inch Western Gas Water Set, which is the same in all details as described by Mr. Lea in his report and identifying his Exhibit I-3, with the exception that I have shown the items of expense for concrete forms separately, while that is shown in Mr. Lea's report as of concrete. He does not separate the forms from the other concrete. I have the condenser and scrubber referred to in Mr. Lea's report and identifying his Exhibit I-4. I have the operating floor which is referred to in Mr. Lea's Exhibit as I-5 and checks with his in all details. The condenser and scrubber are ordinarily considered a part of the water gas set, but when we estimate and consider a set we usually speak of four shells enumerated first. It is merely a matter of convenience. The Water gas set primarily consists of these four shells. I have also a six foot
539 six inch water gas set, capacity 30,000 cubic feet per hour, which is the same item identified in Mr. Lea's report as Exhibit I-6 and checks out in each detail. I have also a six foot six inch springer water gas set, capacity 15,000 cubic feet per hour, which is the same as that identified in Mr. Lea's report as Exhibit I-7 and checks out with that in every detail. I have the operating floor, which is identified in Mr. Lea's report as Exhibit I-8 and checks out with his report. The operating floors are not treated as part of the cost of the buildings but have been seggregated. They are a part of the works equipment rather than a part of the building. I have the seven Sturtevant belted blower, which is the same as that referred to in Mr. Lea's report and identified as Exhibit I-9 and checks out with that report. I have another No. 7 Sturtevant belted blower, which is the blower identified in Mr. Lea's report as Exhibit I-10 and checks out with that report. I also have the No. 1 Root double impellor blower which is the same item as that identified in Mr. Lea's report as Exhibit I-11 and checks with that Exhibit. I have the Turbo blower unit, which is the same blower that is identified in Mr. Lea's report as Exhibit I-12 and checks out with that Exhibit. I have also the No. 8 Sturtevant Booster, which is the same item that is referred to in Mr. Lea's report as Exhibit I-13 and the details check with it. Also a No. 6 Root Exhauster which is the same item that is referred to in Mr. Lea's report as Exhibit I-14 and checks with it. I also have the No. 6 Sturtevant fan type which is the same item as identified in Mr. Lea's report as Exhibit I-15 and checks out with it. I have a McKinzie exhaustor identified in Mr. Lea's report as Exhibit I-16 and checks with it. I have the steam engines identified in Mr. Lea's report as Exhibit- I-17, I-18, and I-19 which check out with his statement of them in every detail. I have the two motors, identified in Mr. Lea's report as Exhibits I-20 and I-21 which check out with his report in every detail.
540 I have the counter shafting which checks out with Exhibit I-22 of Mr. Lea's report in every detail. I have also all of the items identified in Mr. Lea's report as Exhibit I-23 and representing apparatus of the gas generating sets combined, and my in-

ventory checks with Mr. Lea's report. Mr. Lea's Exhibits I-24 operating floor, checks in every detail with my inventories.

The items identified in Mr. Lea's report as Exhibits I-25, I-26, I-27, I-28, I-29, I-30, I-31, I-32, I-33, I-34, I-35, I-36, I-37, I-38, I-40, I-41, I-42, I-43, I-44, I-45, I-46, I-47, I-48, I-50, I-51, I-52, I-53, I-54, I-56, I-57, and I-58, all check out in every detail with the items in my inventory, and I have identically the same items of machinery and details of construction which he has. The Gardner duplex pump identified in Mr. Lea's report as I-39 I have the same item he has except there is a foundation of brick here, 152 brick. Mr. Lea has omitted that. On the items identified in Mr. Lea's report as I-49 I have in addition to Mr. Lea's items, the hot plate and clock which Mr. Lea does not have. In the item identified in Mr. Lea's report as Exhibit I-55 my inventory checks with him with the exception of three-tenths of a cubic yard of concrete. Item I-54 identified in Mr. Lea's report and covering the water piping, checks in every detail with my inventory in determining the quantities of water piping used in and about the plant; on account of complicated conditions of the water piping in the various buildings, instead of taking them off in the regular line of tabulations, we diagramed all of the pipe in the building and gave the number of feet and size of pipe and it gives us a positive check so that we can go back over the account in perfect safety check ourselves if we are in doubt. The pipe outside of the building can be handled differently by making a property plan. Items identified in Mr. Lea's report as Ex-
541 hibits I-60, I-61, I-62 and I-63 are identical with my inventory and checks out accurately. In the item identified in Mr. Lea's report as Exhibit I-64 tar piping, my inventory checks with Mr. Lea's with the exception of one lineal foot of one inch pipe, which Mr. Lea has omitted. Items identified in Mr. Lea's report as I-67, I-68, I-69, I-70, I-71, I-72, and I-73 all check out with my inventory, and Mr. Lea's report and my inventory are the same. My inventory of these items identified in Mr. Lea's report as items I-2, to I-73 inclusive, with the exception of items I-65 and I-66 cover inventory of works tools and office furniture and fixtures are covered by my inventory identified as Exhibit 25 to 54 inclusive.

W. F. BRODNAX, recalled for further direct examination. Pages 696 to 715, original record.

Direct examination by Mr. Strode:

The gas company occupies 10,650 square feet in Lots 11 and 12 Block 77 and there are 126,000 square feet in Lots 1 to 12 Block 79 which includes one-half of the street on the North side and one-half of the street on the East side of the Block, which has been vacated by the city. The ground is shown on plaintiff's Exhibit 16 which is a plat, M street is vacated on one side and 3rd street on the other. The dimensions shown on Exhibit 16 of the lots includes one-half of the street. On the valuation given by Mr. Reed, Lots 11 and 12 in Block 77 would be worth 8 4/10 cents per square foot, giving a total value of $856.00. Lots 1 to 12 on the valuation of $4,000.00

per acre given by Mr. Reed, would be 9 18.100 cents per square foot or a total value of $11,569.00 for the ground alone, making the total value of the property in the two blocks $12,423.00. Those are the same lots that are referred to under subdivision G of Mr. Lea's report, identified as Exhibit 7. He shows their valuation to be
542 $11,900.00. On Exhibit 9 the figures between the arrow heads along each of the mains indicate the distance in scale feet. We have also indicated on Exhibit 9 in red, consumers on certain of the stub ends. In order to determine whether or not there was a consumer there we went through the consumer's ledger and found the house number which would correspond to the street and to the nearest point to the dead end of the main. We took every stub end and located a consumer from the books of the company. Exhibit 10 is the paving map and shows the number of scale feet of mains under the different kinds of pavement. The figures are indicated between the arrow heads and are correct as to mains under paving.

Cross-examination by Mr. Foster:

On the East half of Block 79 there is located the Meter repair shop, the 200,000 and 100,000 holder and the Oxide shed. We made no excavations to determine the size of the mains in making this inventory. Our information came from the superintendent of the distribution and the street foreman principally, and also from the original map of 1905. I simply used this map which was supposedly correct and checked that against the work order and saw that practically everything that had been constructed of recent date had been entered. When I made the check I found a few instances where there had been omissions, where the work orders had not been properly entered on the map and I corrected those; and in a few instances where the street foreman actually knew of the existence of a main which had been overlooked, we entered that. I did not keep any record of the corrections which we made. The work order gives the length and size of the main, and we entered that directly on to the map. We went over all of the work orders to see whether or not they had been entered on the map. A good deal of that was done by my assistants under my supervision. The points to which the mains are to be extended are definitely stated on the work order and
543 by comparing that to the map you can tell whether or not it has been shown on the map. The map shows the location of the stub end so that you could go out and dig at that point and find the end of the stub. I considered the main map and the information secured from the foreman to be more reliable than the companys' report and inventory of its mains. On D street the map shows 690 feet less of four inch mains than my inventory and a difference of 80 feet on the two inch mains, making the total difference of 770 feet on D street. On 18th street, the inventory shows 270 feet more of all kinds of mains than the map.

W. F. BRODNAX, recalled for further examination, pages 717 to 730 original record:

Cross-examination by Mr. Foster:

As shown by the map there are 7200 feet of four inch pipe on P street and the inventory shows 7460. On R street the map shows 11,135 actual feet and the inventory shows 10,970. We did not consider abandoned mains. That question has never entered into our calculations. I was unable to find anything in the company's records indicating or showing the taking up or abandonment of any mains. We knew that the mains that we did take were in active operation from the fact that there were services connected and consumers were burning gas. I know of no mains that were not in active operation. It is very likely that the street foreman, if he laid any main, would remember as well as any one where the main is and the extent of it. Exhibit 9 shows 452,467 scale feet of mains in the city of Lincoln. The actual distance in miles is 98.84 miles inside and outside of the city; 86.98 miles inside and 11.86 miles outside. That is arrived at by taking the sum of the figures on the map and multiplying by 1.015. I have not shown, in this inventory, anything in the way of service pipes or mains paid for by private parties.

Exhibit 9 shows the mains in service on January 1, 1913.

544 I got the size of the mains from the existing map and from the fact that the street foreman is constantly uncovering pipe and attaching services and looking for and testing for leaks. The number of services was secured from the manager's monthly report, which began in 1902 I think. It shows the number of services installed that month and the number installed prior to that time. From the manager's report I found that over 90% of the services in the city were one and one-fourth inch. I have only taken the services shown in the report to be in actual operation. If any have been abandoned they would have been deducted from that number by the person making the report. I did not inventory the stop boxes. The average length of the services in Lincoln is 73 feet. The manager's report shows the total length of services for each year and shows the total number and gives the average length and we arrived at the average for the whole time by taking the average of the total years and averaging that. In doing this we considered that the company's pipe ended at the consumer's meter. I did not furnish Mr. Lea with any figures as to the depths of the mains or services. He procured that for himself while he was here. I gave him the total amount of paving over mains, and I gave him the number of the street and railway crossings.

W. F. BRODNAX, recalled, testified on behalf of the plaintiff as follows: Pages 838 to 841, original record.

Direct examination by Mr. Strode:

The discrepancy of 600 feet between the map and inventory on D street to which Mr. Foster called attention, is probably due in a limited degree to the transposition of the paving to the mains, for in-

stance, on D street the actual amount of paving which we attributed to that street was probably in excess of what was there, and the excess on D street was taken away from some other street in the transposition.

545 Exhibit 21 shows the actual distance in feet on each and every street in the city of Lincoln and gives the total number of feet as shown on Exhibit 9 for each street, and paralleling that is a tabulation showing the number of feet shown in our inventory and the two figures agree. If it shows 600 feet short on a certain street on the map, it will show where the 600 feet are picked up in the other side. While the map and tabulation do not agree on each and every street, they do agree when we take all of the streets together. Exhibit 21 is offered and received in evidence.

W. F. BRODNAX, recalled for further direct examination, pages 1112 to 1133 inclusive, original record.

Direct examination by Mr. Strode:

Exhibit 65 is a compilation of the cost of the buildings shown in my inventory, taking into account the quantities and character of the materials from the unit costs given by Mr. Davis and shows the amounts estimated and the total amounts in dollars for each of these buildings on that unit price. It shows in detail the character and quantities of materials and shows what unit price is applied to each, and I have shown in this compilation the construction cost of these buildings as given by Mr. Lea in his report, and in a parallel column I have given the construction cost, taking the unit cost furnished by Mr. Davis. This was done by me and my engineers under my supervision. We used Mr. Davis' units with the exception of the unit on excavation. On that we used the unit cost given by Mr. Malone On the purifying house Mr. Lea's net construction cost was $16,620.00. The net construction cost according to Mr. Davis' figures was $18,426.00 or a difference of $1,806.00.

546 On the reproduction cost Mr. Lea's is $19,279.00 while Mr. Davis' is $21,374.00 or a difference of $2,095.00. On the generator house Mr. Lea's net construction cost is $3,738.00, Mr. Davis' $3,902.00, a difference of $163.00. The reproduction cost, Mr. Lea is $4,337.00 and Mr. Davis' $4,526.00 a difference of $189.00. Of the retort house, net construction cost, Mr. Lea $7,689.00, Mr. Davis $8,340.00, a difference of $651.00. The reproduction costs, Mr. Lea $8,919.00, Mr. Davis $9,674.00 a difference of $755.00. On the meter repair shop, net construction cost, Mr. Lea $2,016.00, Mr. Davis $2,846.00 a difference of $230.00. Re-production cost, Mr. Lea $3,035.00 Mr. Davis $3,301.00 a difference of $266.00. On the coal shed net construction cost, Mr. Lea $1,793.00. Mr. Davis $1,901.00 a difference of $108.00. Reproduction cost Mr. Lea $2,000.00 Mr. Davis $2,205.00, a difference of $125.00. The oil tank house, net construction, Mr. Lea $1,558.00, Mr. Davis $1,700.00 a difference of $142.00. Reproduction cost Mr. Lea $1,807.00, Mr. Davis $1,972.00 a difference of $165.00. For the outside shed, net construction cost, Mr. Lea $60.00, Mr. Davis $63.00, a

difference of $3.00. Reproduction cost Mr. Lea $70.00, Mr. Davis $73.00, a difference of $3.00. For the stable, net construction cost, Mr. Lea $818.00, Mr. Davis $899.00 a difference of $81.00. Reproduction cost, Mr. Lea $949.00, Mr. Davis $1,043.00 a difference of $94.00. Booster house, net construction, Mr. Lea $721.00, Mr. Davis $691.00, a difference of $30.00, in favor of Mr. Lea. Reproduction cost Mr. Lea $836.00, Mr. Davis $802.00 a difference of $34.00 in favor of Mr. Lea. The total net construction cost of these buildings, Mr. Lea $35,614.00, Mr. Davis, $38,768.00. Mr. Davis' net construction cost being $3,154.00 more than Mr. Lea's. Reproduction cost, Mr. Lea $41,312.00, Mr. Davis $44,970.00. Mr. Davis' reconstruction cost being $3,658.00 more than Mr. Lea's. Exhibit 65 offered and received in evidence.

547 If the meters in stock were apportioned, according to consumers, between those in Lincoln and outside of Lincoln, 4% of the 243 meters in stock would be apportioned to those outside of Lincoln, which would amount to less than $50.00 and all items carried in stock would bear out in about the same proportions.

Cross-examination by Mr. Foster:

I secured the ages of the various pieces of apparatus making up the works equipment from the chief engineer of the electrical plant and the foreman of the gas plant. I did not make any check of the company's books. The ages shown in Mr. Lea's report are the ages which I furnished him. I included in the inventory everything that the company owned, some of it was not in use, but I considered it useful and could be used, it being held in reserve.

Exhibit 66 is a plan showing the location of the various pieces of apparatus, but it is not connected except those connected by belts. The piping is not shown. The total gas apparatus is located principally in the south end of the purifying house. In the same room with the coal gas apparatus, is located one Sumner & Sayre 4 x 6 x 5 scrubber, 1 Roots positive No. 1 blower, 1 Sturtevant No. 6 Exhauster, 1 Sturtevant 5 x 5 vertical engine, 1 McKinzie exhauster, 10 inch connections, 1 Greenfield 4 x 5 vertical engine, 1 Root No. 6 exhauster, 1 six foot station meter, 1 6 x 4 x 6 black duplex pump, 1 condenser 4 x 6 x 25 feet, 1 scrubber 5 x 6 x 31 feet. The booster No. 3 exhauster and No. 5 is held in reserve for No. 3. It is, in other words, an alternate and the No. 4 and No. 6 engines are the driving units for these two exhaustors. The exhaustors are directly connected with the water gas apparatus by a line laid from the relief holder through the purifying boxes to the storage holder. The water gas goes first into the relief holder, thence through the ex-

548 haustor into the purifying boxes, and then into the storage holder. I do not know what connection the meter has with the water gas apparatus. The coal gas retorts are in the retort house at the west of the apparatus in a separate building. The six foot eight inch Western Gas Company and the six foot six inch springer gas sets are in the north end of the retort house, and the two 7 foot 6 inch Western Gas water sets are in the generator house. They are the

ones in operation. Those in the retort house are not used at present. The two sets of water gas machines are connected with each other and both are directly connected — the relief holder. As soon as the gas is made in the water gas sets, it is driven at once into the relief holder and from there it is sent through the various gas apparatus into the storage holder. The blowers for the water gas machines in the retort house are located in the generator house.

The No. 7 Sturtevant blower is in an annex to the retort house and supplies air to the six foot six inch western and the six foot six inch springer. In the same place is located a combined Knowles 6 x 10 x 5 x 10 pump. I think that pump is there as a circulating pump between sets of 7 foot 6 inch western gas. There is nothing else in the retort house except condensers and scrubbers which belong directly to the water set. The various circles there indicate the various generators, carbureters, super heaters, scrubbers and condensers, forming practically the same series as we have in a generator house. The two water gas sets and apparatus in the retort house are held in reserve. The scrubber and condensers in the extreme south end of the purifying house are also held in reserve. They can be used in connection with the water gas machines in the generator house. In the generator house there is one scrubber and one condensor. There are two scrubbers and two condensers carried with the water gas apparatus in the retort house, making a total in all of four scrubbers and four condens*ors* in the entire plant.

549 I and my engineers made the measurements for the foundation for the 27 foot 6 inch water gas sets, set forth in Exhibit 7-I-2. In estimating the excavation for the foundation. I used a one foot clearance around the footing of the foundation and sloped the bank on an angle of thirty degrees. By clearance I mean I took one foot from the foundation to give room for the work in order to get in the forms for the foundation. In estimating the depth of the excavations and foundation on the gas company premises, I considered the fact that when they dug the foundation they had to dig down to suitable earth to maintain it. The fact that there has been considerable filling there does not enter into it. The depth of each foundation is shown in Exhibit 7.

The Knowles duplex water pump shown in Exhibit 7-I-38 is a circulating pump used in connection with the circulating system of the two seven foot six inch water gas sets, which are carried in use. Of the works tools I made no seg*g*regation between the electric and gas department. The list was furnished me by the company. I could not say positively whether any of them are used by both departments. The building at 14th and O is used by both departments, in what proportion I do not know. I did not show it in the inventory. There is a repair shop in that building and both electrical and gas apparatus*es* use that. I made no division of the tools in that shop and don't know what the division ought to be. I think I have enumerated everything that is used, outside of office furniture and fixtures. The piping for the steam and gas mains is about the same. All of the steam pipe they have is known as common black pipe and I think it is the same kind they use for mains. It is a steam pipe.

A different name is applied to it in the inventory books because we have a greater number of fittings.

550 The pipe is cut into shorter lengths for steam piping. I think Mr. Lea furnished the number of fittings per one hundred feet. He gave the unit cost. The coverings for the steam piping in the gas company plant I think is 85% magnesia and asbestos. That is the difference between covered and uncovered steam pipe. I think the same class of piping is used for that piping as in the gas mains. The only thing that would make it more expensive is the additional number of short pieces. We usually estimate the fittings on averages. Mr. Lea estimated them in this case. I just furnished the total length in feet of pipe. It usually takes the same number above as below ground for such pipe. The steam pipe costs more than the gas pipe under ground, because of the excavating. I do not recall the depth assigned to the steam pipe. There must have been an average depth assigned to it. It might be shown under notation furnished Mr. Lea, I don't remember.

Redirect examination by Mr. Strode:

In looking over Mr. Lea's inventory, I don't think there was anything furnished him for the valuation of the gas property that is used or to be used in the electrical department. Mr. Lea made an apportionment of any property that was used jointly, such as office furniture and fixtures, and as far as I know there has been no attempt made here to slip into this report any property belonging to the electrical department, as a part of the gas department's property.

Recross-examination:

I had nothing to do with the apportionment between the two departments.

551 Redirect examination by Mr. Strode:

As far as machinery is concerned, I had nothing to do with determining what the machinery was used for. It was my sole duty to know that it was there and located in the building.

552 W. F. BRODNAX, recalled for further cross examination, testified as follows: Pages 756 to 762 original record.

Cross-examination by Mr. Foster:

I have not located the railway crossings nor do I have any information showing how many were actually paid for, nor do I have any information showing the amount of pavement actually taken up and relaid over any of the mains. Mr. Lea's report shows 95.29 miles of main, while my map shows 86.98 miles of main. I have not worked out the difference, but there was an error made in the total given Mr. Lea, principally in the two inch mains. There was only a variation of one foot in the six inch mains, and of the four inch mains, four feet. The meters and service governors in stock in

Lincoln are carried both for the plant in Lincoln and outside of Lincoln. I secured the inventory of the main valves from the map of them in the boxes of the company. I arrived at the quantitity of material in the buildings by first making a drawing of the building and then securing the necessary dimensions and taking the material off in the form of the bills of material classified according to the classes under which they belong.

W. F. BRODNAX, recalled for further cross examination, testified as follows: Pages 804 to 811 original record.

Cross-examination by Mr. Foster:

I kept no separate notations of the additions which were made to the mains shown on the map dated 1905. The changes were not made on that map, however. It was an original tracing. If you check that map against Exhibit 9 you can tell what additions have been made in the company's inventories.

The item of railway crossings represents the actual expense required in laying the mains under the crossings. You have
553 to put longitudinal stringers at the ends of the ties in order to support the track during the time you are placing the pipe in and in addition to that there is usually required a watchman to see that the road continues safe while the work is going on and to supervise the work. That also represents the inconvenience and additional expense required in making joints underneath the tracks and delay caused by the movement of trains back and forth over the track. The pipes are twelve feet long and the tie is eight feet long, and if the joint comes under the track it is very inconvenient to make it. I do not know how many of the crossings in Lincoln have joints under them. I had nothing to do with preparing the estimate of these costs. All I did was to furnish the number of crossings. There is nothing in the nature of special construction detailed to me, of the crossings enumerated by me. In preparing Exhibit 9 such additions that we made on information received from the superintendent of distribution or the street foreman, were made directly on the map while in the presence of these men. They were the last resort. The legend on the tracing of 1905 showed the material of which the mains were constructed.

W. F. BRODNAX, recalled for further cross examination, testified as follows: Pages 1584 to 1633 original record.

Cross-examination by Mr. Adams:

In making the inventory of the mains, I examined the book records of mains in a general way, but I considered the map of 1905 a better basis. On January 1, 1914, my inventory shows 2,238 feet more of 1¼ inch main than the books of the company at this time. On 2 inch main, the books of the company show 1,229 feet more than my map. 3 inch main my inventory shows 306 more feet than the books of the company. 4 inch main the books show 589 feet more

than my map. 6 inch main my inventory shows 9,350 feet
554 more than the books of the company. 8 inch main the books of the company show 234 feet more than my inventory; 10 inch main, the inventory shows 710 feet more than the books of the company; 12 inch main the books show 337 feet feet more than the inventory; 16 inch main the books show 31 more feet than the inventory; 20 inch main, the inventory shows 72 feet more than the books of the company.

The dates on Exhibit 20 have nothing to do with the age of the map. It was supposedly complete to January 1, 1913. There was some confusion on Exhibit 19 about the symbols relating to the sizes of the mains. That was straightened up in our new map, Exhibit 9. When I started this investigation of the mains, in a general way I looked through the drawings of the company. In this work, the work orders were brought in by the foreman or superintendent of the distribution, to settle matters in dispute, and to that extent they were used in the tabulation of my main map, Exhibit 9. The number of services that I have assigned in my inventory was taken from the managers report sent in to the home office. That is shown in the same report that the company's report of mains appears. I considered that it was the best source of information available for services. To get at the average length of the services, we took the length of a certain number each year over the entire period, found out the total in feet and divided that by the total number, which gave us the average length of 73 feet for the services. We secured this information from the records of the company and it is based on the 1¼ inch services. The services that we selected each year we considered were of the fair and average length and the length that we selected was the total length from the main to the meter.

The excavation for the purifying house as shown in Exhibit H of Mr. Lea's report, was arrived at by taking the depth, eight feet, and other dimensions of the building, and giving a clearance of one foot around the width of the footing and giving the bank a
555 slope of thirty degrees. The item of back filling and removing surplus matter is my estimate of what it would be necessary to do in that line. In arriving at the quantity of brick in the purifying house, I measured the walls and estimated their thickness, and I think Mr. Lea in his report, used the same number of brick that I furnished him for this building. I figured out the number of brick based upon their size and superficial feet of wall area. All of the mortar used in this building is Portland cement. The thickness of the concrete floor, eight inches, was given to me by Mr. John Irvine, who had cut through and knew what it was. I determined the weight of the steel in the roof trusses by measuring and figuring each member separate, and the wood framing was determined in the same way. From the generator house I figured the foundation as three feet six inches and the same depth for the excavations. The steel in the roof of the generator house was arrived at by measuring each member separately

and estimating the weight per foot and all of the woodwork there was measured by me. I secured the information as to the depth of the foundation of the generator house and retort house from the works foreman, who was the oldest man on the ground and knew more about the construction of these buildings than anybody else. I did not make any excavations to determine the depth. The depth of the foundation for the seven foot six inch water gas sets was determined in the same way, as was all of the other machinery foundations at the gas works, with the exception of the 500,000 foot holder. The information as to that was secured from a drawing from which the holder was built. The length and width of the foundation for this machinery was actually measured. The steel in the foundations for the purifying boxes was actually measured, and I took Kent's average weight for cast iron columns of a certain diameter and applied it to those. In figuring the brick for the purifying house, the retort house, the coal shed and the booster house, in the storage plant, I found they used a brick
2½ x 4 x 8½ and I figured 16 brick to the cubic foot for a
556 thirteen inch wall. For a nine inch wall I used 10 7/10 brick;
for a 17 inch wall 21 3/10; for a 21 inch wall 27. In the generator house, meter shop and oil tank they used a brick 2¼ x 4 x 8 and for a 9 inch wall there are 12 3/10 brick per cubic foot; for a 13 inch wall 18 5/10 brick, for a 17 inch wall 24 6/10 and for a 21 inch wall 30 8/10. The concrete used there is first class concrete and was not broken, that I recall.

In my inventory of mains I reported to Mr. Lea the number of feet of each sized main, whether or not it was under paved street and if so under what kind of paving. I know that the mains are under this paving because I secured a map of the paving from the city engineer's office and compared my tabulation of the location of the mains with that map. I assumed that all of the mains were between the curb lines of the street. I secured the width of the pavement on the various streets. The mains are located anywhere from nine to twelve feet from the curb line. Mr. Lea used my figures for concrete and excavation for the 500,000 foot holder. On the 200,000 foot holder I determined the quantity of material and labor from my experience with the light type of holders constructed during my experience. I did not determine the actual dimensions of the masonry tank. I recorded 10,000 square feet of plastering for that holder tank, to Mr. Lea, and determined that quantity by figuring the inside surface. I was unable to determine whether it was actually there or not as I am not a diver, but it would be foolish to build the tank without it. I arrived at the figure for the cement plaster on the interior of the tank of the 50,000 foot holder in the same way, and in reporting the excavation for the 50,000 foot holder I noticed and took into consideration the relative elevation of the tank and its surroundings. I reported the number of drips in the gas mains. I secured the information from the company's records.

557 Redirect examination by Mr. Strode:

It is the ordinary practice to plaster the tanks of the holders. If they are not plastered at the beginning they will have to be plastered later. I believe if we were to take into account the additions in mains shown in the annual report of each year, starting with 1901, that it will come out about the same as my map. There are three or four independent sources by which my map can be checked with the records of the company. One is the map of 1901, another is the annual report each year since 1901, then there are the accounts of the company and then there are the work orders, and there is not a single one of these records that check out the same results. My statement that my map showed 9,000 more feet of 6 inch main than the records of the company, was based upon a misapprehension and was on the assumption that the annual report of 1912 contained the additions of main made each year.

558 EDWARD W. STEINMUELLER, being first duly sworn testified on behalf of the plaintiff as follows: Pages 2807 to 2917 original record.

Direct examination by Mr. Strode:

My home is in New York. I am now manager of the eastern territory of the Western Gas Construction Company of Fort Wayne. They manufacture and install everything for a gas plant, including the items of equipment listed in Mr. Lea's report, but nothing in connection with the distribution system except the gas or storage holder. I have been in this business 25 years. I was 18 years with Bartlett, Hayward & Company, who are manufacturers of the larger equipment of gas plants, such as holders and appliances for the manufacture of coal gas. They are located in Baltimore, Maryland. I was with them until July, 1906. I started out with them as assistant to the general manager in charge of the engineering end and the office end, later took care of estimating and part of sales. Then I went with Kruse-Kemper of Philadelphia. They are manufacturers of plate metal work, connected with gas works, such as holders, purifiers, oil tanks and works of that character. They do not have any foundry or machine shop but simply do the plate metal work. I was manager of their plant, and while there I did the designing of the equipment which they manufactured. Their principal business is holder manufacturing. They were competitors in a small way of Bartlett, Hayward & Company, but the last named concern did not attempt to make any of the smaller works and the output of the Kruse-Kemper Company was limited to light equipment. I was with them until January, 1908, when I went with the Kerr-Murry Manufacturing Company of Fort Wayne Indiana. I was assistant to the general manager and there had charge of the engineering department and did the designing of the gas holder and equipment. Their business was to design and
559 install coal gas equipment, gas holders, containers apparatus, purification apparatus, iron work for valves, etc. They have

been in the business probably fifty years or more. Their business extends throughout the country and in Canada and in Mexico. I continued with them until July, 1909, when I went with the Chicago Bridge & Iron Works of Washington Heights, Chicago. They are manufacturers of water tanks, railroad bridges, structural works and plain metal works of that description. After I went there they decided it was advisable to enter into the manufacture of gas holders and I furnished them designs and details of every description, and secured contracts for and equipped and installed about eleven holders during my stay with them. I continued with them until January, 1911, when I went to my present concern.

The Western Gas Construction Company supplies practically the North American continent and part of Brazil. They come in competition with the United States Gas Improvement Company, the Gas Manufacturers Company of Cleveland, with Bartlett, Hayward & Co., Riter Conley Company, R. D. Wood & Co. and Stacy Manufacturing Company, and many others. They have furnished equipment for the Lincoln Gas & Electric Light Company and I personally contracted for the last 7 foot 6 inch water gas set. On such equipment as we furnish ourselves, I could give very accurately the prevailing prices from 1907 down to the present time, but on equipment which we do not furnish, I would have to make an examination and get the capacity and size. There is a standard price for such a piece of equipment as a condens*or* and you can tell the price by knowing the size of the condens*or*. Its cost is also effected by such things as freight, and rates and traveling expenses of erectors. The 7 foot 6 inch water gas set being the first item of Mr. Lea's report under works inventory, was sold to the company by me. There was included in the sale at that time a generator, a carbureter, superheater, wash box, and part of the operating floor, the oil equipment and piping.

560 We did not include the building of the foundation. It is only in very isolated cases that we include the foundation for the reason that the gas company can provide that much cheaper than we can. We do design the foundation, however, if we are familiar with the land on which the apparatus is to be located. The cost of furnishing and erecting on their foundation the apparatus I have just mentioned, would be about $8,400.00. That is what the company would have to pay for it if they went out to buy it. I know of no place where the same could be purchased for $7,500.00.

The seven foot six inch water gas sets are a standard make of water gas sets and are called the Lowe process. The two seven foot six inch water gas sets mentioned in Mr. Lea's report would cost about $8,300.00 because there are some improvements on the second set. It would cost that much to purchase it on the market. This covers the generator, superheater, carburet*or* wash box and equipment for the oil and steam, but does not include the foundation and the floor. It does include all steam and oil connection brought within five feet of the machine. We furnished the floor in connection with the last water gas set. The price is usually summarized in a square foot figure, which includes the supporting I beam, the floor plates and

hand railing and stairway and is usually figured at $1.25 per square foot. $1,600.00 would be the reasonable cost on a floor 32 x 40 furnished with those water gas sets at $1.25 a square foot. That figure of $1.25 is over the whole area of the floor without deducting for the openings. No such price could be secured if the floor was treated as a separate item, but it must be treated in connection with the water gas set.

My prices of $8,400.00 and $8,300.00 on the two water gas sets include the price of $1,600.00 on this floor. A very small section of railing was furnished with it. In connection with a water gas set, it is necessary to have a condensor and scrubber, but one condensor and one scrubber can be used with two water gas sets.

561 The cost of the condensor depends upon *upon* the number of tubes. We furnished W. G. Condensors 16 x 20 and water gas scrubber six feet six inches by 21 feet shown in Mr. Lea's report, and the fair market price for those two apparatuses at any time since 1907 is $1,675.00 erected on the company's foundation. This does not include any part of the foundation nor any of the connections except the nozzles, which are a part of the shells.

The six foot six inch water gas set which is the old set referred to in Mr. Lea's report and consisting of the generator six foot six inch by thirteen feet, superheater, six feet by eighteen feet, carburetor six feet by twenty-four feet, wash box, five feet by two feet six inches, condensor, five feet six inches by twenty feet and scrubber five feet six inches by twenty feet, since 1907 to this time has had the reasonable price of $8,100.00 to $8,200.00 erected on the company's foundation, but without the foundation, and this equipment could not have been purchased for less money since 1907.

The number seven Sturtevant blower belted, without its driving apparatus and referred to in Mr. Lea's report, would cost anywhere from $210.00 to $235.00 at any time since 1906. This would be erected on the company's foundation. The company would have to pay in addition for the foundation, and the driving mechanism. The F. O. B. factory price of the No. 8 Sturtevant Turbo blower, type G-3 steam pressure 100 pounds, is $1,025.00 and in addition to that they would have to pay the cost of the foundation, freight and bringing the steam and air connections to the machine. About $65.00 or $75.00 should be added to this for freight, erection and Lincoln connections. The fair market price since 1906 of six benches three-fourths depth, exclusive of the cost of foundation, would cost on an average from $2,500.00 to $2,700.00 per bench up to the outlet of the main and erected on the gas company's foundation. That is a fair cost.

If the multi-tubular condensor four feet six inches by twenty-five feet contains 81 three inch tubes, the price is between $675.00

562 and $700.00 on the gas company's foundation excluding the cost of the foundation. This price is exclusive of the transportation of the men and tools to and from the place of erection. The scrubber five feet six inches by thirty one feet at any time since 1906 would cost about $425.00 located on the gas company's foundation. This price is exclusive of the foundation. I am acquainted with

the selling price of purifying boxes throughout the country. At any time since 1906 the four purifying boxes 20 x 24 x 4 referred to in Mr. Lea's report on the usual cast iron columns in a straight line, exclusive of the building and foundation tiers, on which the columns rest and exclusive of the main connection and main outlet, but including the connections between the center seal and out of the four boxes and including the hydraulic cover hoist, would cost between $14,500.00 and $15,000.00 and that would be the price that the company would have to pay for that equipment exclusive of the foundation at any time since 1906.

The ten foot McDonald station meter, with a Hinman drum, exclusive of the cost of the foundation, would cost between $3,900.00 and $4,000.00 erected on the company's foundation, which includes adjustment, etc., of the meter, and that would be a fair cost for that equipment, if it was purchased at any time since 1906. The last item, a six foot station meter, Parkison drum, would cost at any time since 1906 $1,250.00 erected on the company's foundation, but that does not include the cost of the foundation. Our company constructed the 500,000 foot gas holder. The fair cost of that gas holder at any time since 1906 exclusive of the foundation and including the in and outlet connections, up to the drip pots, the gas company furnishing us the steam for the erection and furnishing the water, is $40,000.00, which includes the permanent wooden frames inside and all of the scaffolding. That is a fair price, although the company did purchase it for a fraction less than that, because we had contracted to sell this holder to a southern city and some complications arose in the matter of payments and we cancelled the contract. We
563 held the material for eighteen months or two years, and kept it in shape during that time, and in order to realize on the money invested in it we decided to dispose of it at a sacrifice and as a result the Lincoln Company saved some thousands of dollars and got it cheaper. We received $37,500.00 for it.

Not figuring any piling, I would say that the foundation for this holder would cost anywhere from $4,800.00 to $5,000.00, figuring on a four foot frost line, and a foundation to be five feet deep for the outer wall, and for the inner pancake I am figuring on twelve inches re-inforced. The fair cost at any time since 1906 of the 200,000 foot holder, just the holder proper and the guide frame, is between $16,000.00 and $16,500.00 and in addition to that you would have to pay the cost of the brick tank with a concrete bottom and the excavation and the water. The tank forms the foundation itself. Our company does not build a brick tank with concrete foundation. We design them, depending on local conditions and the gas company furnishes the tank. The brick tanks are antiquated. Sometimes there are local conditions that would make it advisable to put in a brick or concrete tank, but the steel tank construction is the accepted construction of today.

The figure I have given you is about one-half of the total cost of the holder. This being a two lift gas holder, is about 60 or 65% of the total cost of the gas holder. On the 50,000 foot gas holder I can only give you again the cost of the holder and the guide frame.

That portion of that holder would cost in the neighborhood of $4,-200.00 and that is about 42 or 45% of the total cost of the holder. The fair cost of the 20 inch Conelly automatic governor is between $850.00 and $900.00 erected on the company's foundation. The fair cost of the 12 inch Reynolds station governor is about $450.00 erected on the company's foundation. The fair cost of the last item in Mr. Lea's report the two steel tar tanks 10 feet 6 inches by 29 feet 3 inches, thickness one-fourth inch, would cost about $1,300.00 to $1,350.00 erected, exclusive of the foundation.

564 The fair cost of the two steel oil tanks twenty feet two inches by twenty-nine feet three inches for 25,727 pounds of steel would cost about the same price. The last two items, two oil tanks, one 8 feet x 24 feet, 7,926 pounds of steel and the other 8 feet x 30 feet, 10,261 pounds of steel, would cost about $1,200.00 for the two tanks, exclusive of the foundation and without any connections. The fair cost of the gas holder and guide frame erected complete, with the in and outlet pipes and iron works for the tank, delivered, of the 100,000 foot district holder, single lift, is between $7,000.00 and $7,200.00. This does not include the cost of the brick tank. This represents about 40 to 45% of the total cost.

These figures which I have given represent the fair cost of the equipment if the company had to go out and buy it at any time during recent years, under ordinary conditions. That would be what is known as the net construction cost, with a number of the other items of cost added to that for overhead expenses. Where we furnish an entire plant, we add to the construction cost a percentage of some 15% to 20% for overhead expenses or overhead burden, and that is over and above the amount we are paid for equipment.

Cross-examination by Mr. Adams:

Through my connection with the business of the Western Gas and Construction Company, I have become well acquainted with the size and types of all the equipment which they sell. The eleven holders that I designed and built were with the Chicago Bridge & Iron works, and ranged in capacity from 10,000 to 300,000 cubic feet. Since I have been with the Western Gas & Construction Company, they have built 35 or 40 holders, ranging in capacity from 10,000 to 1,000,000 cubic feet. Outside of one, none with a capacity of over 200,000 cubic feet had a masonry tank. That one was the 1,000,000 capacity holder at Saint Louis. My recollection is that it was composed entirely of brick. None of the holders sold while I was with the

565 Chicago Bridge & Iron Company, of over 200,000 capacity, had masonry tanks; they were of steel tanks. We build all types of purifying boxes. The cast iron rectangular style; in fact every type except concrete.

The tendency at the present time is toward the construction of outdoor boxes, except in extreme northern climates where climatic conditions are adverse to having the box unprotected. There we do not advocate the steel boxes and the old style of cast iron box in a building is followed. Our company furnished some steel boxes

at Racine, Wisconsin, for the Racine Gas Co. They are protected against temperature conditions by the steel coil inside of the box, which is quite advisable in that territory. The smallest box shown in my list is 12 x 12 x 10 feet, and the largest is 24 x 32 x 10 feet. All of the boxes in my list have a standard depth of ten feet. These are the prevailing type of cast iron boxes, but as to the depth that varies with the space available and the equipment required. It depends upon how much floor space we have. The capacities of the boxes made by my concern are as follows: All are 10 feet deep, 12 x 12 432,000 cubic feet every 24 hours; 12 x 16, 576,000 cubic feet every 24 hours; 16 x 16 768,000 cubic feet every 24 hours; 16 x 20, 960,000 cubic feet every 24 hours; 20 x 29, 1,200,000 cubic feet every 24 hours; 20 x 24, 1,440,000 cubic feet every 24 hours; 24 x 24 1,730,000 cubic feet every 24 hours, 24 x 32 2,300,000 cubic feet every 24 hours.

The seven foot six inch water gas set sold to the local company by our company in 1912 was for a consideration of $8,000.00 and on this consideration we allowed them $400.00 for an engine which our company took back. This is indicated by Exhibit 320 although my recollection in the first instance was that the engine returned was to be in addition to the contract of the $8,000.00. The contract covered the generator, carburetor, superheater, wash box, or seal, the oil connection to the carburetor and including the pump and
also probably the oil heater, and one-half of the operating
566 floor required for this set. The equipment covered in the purchase of the seven foot six inch water gas set in 1908 shows a generator, carburetor, superheater, seal an operating floor 15 x 28 feet, which includes the stairway and railing, scrubber, condensor, oil supply system, consisting of pump meter, oil heater and the injectors and the small piping between these various pieces of apparatus, up to a point five feet from them, and the nozzle, with its accessories and the firing tools for the set, and naturally the lining for the apparatus. We delivered and erected this stuff on their foundation for $11,075.00.

The pipe for construction of the condensor and scrubber is set out in this list of specifications which I hand you and of which you are permitted to make a copy, and it also shows the number and size of tubes, metal, thickness, etc. This is the condensor and scrubber which I testified would cost $1,675.00 erected and which is included in this total price. The apparatus which has been turned out by the Western Gas Construction Company since about 1900 is better than it was at and prior to that time, and by that I mean it is more economical. The price of $8,100.00 or $8,200.00 that I gave you on the six foot six inch water gas set, includes the generator, carburetor, superheater, seal, scrubber, condensor, oil equipment, gauge bored, operating floor, small pipe around the apparatus, gas connections to the outlet of the consumer, all erected on the company's foundation in their building. This did not include any blowing apparatus.

I do not have the detailed specifications of the condensor and scrubber in this set. The scrubber which we would furnish for this

price with this set, would be six feet by 21 feet, with 131 three inch tubes, eighteen feet in length. The company actually paid for this set $7,976.15. The Sturtevant blower with the steel Turbo blower was sold to the local company by our company for $1,060.00 delivered at Fort Wayne. I said the fair cost price would be $1,025.00. I do not have a copy of the proposition on this which shows exactly
what we furnished, but at this time we furnished the No. 8
567 blowers with 52½ horse power, and a Turbo blower for a six
foot six inch set, which probably accounts for the apparently high price of that blower F. O. B. Fort Wayne.

Our company furnished the iron to the Missouri Fire Brick Co. for three of the benches of ½ depth sixes, in October 1900, and in April 1906 we furnished the Improvement Equipment Company the iron works for three benches ½ depth. I am not at liberty to disclose the price at which we furnished this iron, for these companies. I would be divulging some of their business. If our price had been direct to the Lincoln Gas Company, I would not hesitate to give you the figures. The iron work included in the construction of a bench of six retorts, is divided into three parts, the furnace iron works, which is usually furnished by the brick manufacturers themselves, the mounting and the bindings, which consist of I beams, and tie rods and anchoring. The weights of six mouth boxes complete, six sets of sand pipe, six bridge pipes, six drip pipes, steel hydraulic main and the supports, will run in the neighborhood of 9,500 pounds per bench, and this is the weight on this material which has been used substantially since 1900, and is the same on all of the benches furnished to the Lincoln company. This rating is for the metal on the bench mountings only, and does not cover floors, bindings, furnace castings, foul main, or tar displacement system.

I gave the cost of the three-fourths depth benches on my direct examination as from $2,500.00 to $2,700.00 and one-half depth benches would not be more than $100.00 less. I am unable to give you the items that make up this figure. We are frequently called upon to make prices for a complete plant, and on the benches we simply get the price quoted us by the bench people and apply the price that we think most favorable and sublet the bench work. I have obtained these figures within the last three months. This price includes everything, the brick work and iron work up to the offtake to the hydraulic main, but does not include the foundation. The bench trimmings or irons for benches like the six retort bench used
by the Lincoln company will cost from $550.00 to $600.00
568 delivered on cars Lincoln. These parts weigh about 9,500
pounds. The retail price of the repair parts making up the iron on a complete bench would probably exceed the price of $550.00 to $600.00 delivered on cars Lincoln.

These prices of $675.00 to $700.00 which I gave on my direct examination on a four foot six inch by twenty-five foot condensor contemplates 81 three inch tubes 22 feet in length and represents a good condensor erected on the company's foundation. The price of $425.00 which I gave for the five foot six inch by 31 foot scrubber, contemplates the regular steel top with three ankle iron rings on the

inside, spaced about equally so as to divide the condensor into four compartments. These ankle rings would serve as supports for wooden trays, which in turn would support the agent provided by the gas company for scrubbing purposes. The price includes the layers for these trays. I do not know whether that construction is the same in the scrubber used here in Lincoln.

The price which I quoted on the purifying boxes erected in position is for the reproduction of just the same boxes as now exist here in the Lincoln gas works. The purifying boxes in my list nearest in capacity to these boxes is 12 x 16 x 10 and four of these with such equipment as is found in the present plant would cost about $12,000.00 with the wet lute. The cubic capacity of the boxes located down at the plant is 1,920 cubic feet. I would recommend these in place of the 4 boxes 24 x 20 x 4 foot boxes now found in the plant of the company. These four boxes have about the same purifying capacity, which is dependent upon the cubic feet of Oxide which is contained in the boxes to treat the gas, and these four boxes could be used with about the same economy or capacity as the space now found within the present boxes. The four 12 x 16 x 10 foot boxes would have something over 600,000 feet, while the four 20 x 24 x 4 boxes would have 700,000 feet capacity. The cubic interior contents of the two sizes of boxes is identical, but the purifying capacity of the boxes now here is a little greater than that of the 12 x 16 x 10 foot boxes.

569 One cubic foot of Oxide will purify from 150 to 160 cubic feet of gas during a period of 24 hours, and in the purifying boxes now found in the plant I am figuring on an Oxide layer of 20 x 24 x 3. The cost of the six foot meter there, if it had a Hinman drum instead of a Parkison, is from $1,400.00 to $1,450.00 and the cost of a ten foot meter with a Parkison drum would run from $2,500.00 to $2,800.00. The latter would have a capacity of 63,000 cubic feet per hour. The 500,000 foot holder here was first sold to Augusta, Georgia. I have known them to sell for less under certain conditions, during the last five years. The iron and steel work on a 500,000 foot holder will run from $75.00 to $80.00 per thousand depending entirely upon the details of the construction and the design. $75.00 on that size holder is extraordinarily low, on designs as they now run.

I estimated the valuation for this holder to cost $48,500.00 figuring on 400 yards of concrete at $8.00 per yard and 30,000 pounds of reinforcements at two cents a pound, with the outer wall or foundation extending five feet into the ground. If the outer wall goes in only three feet, it will make a difference of 31 or 32 less cubic yards of concrete and $248.00 less in the cost. When I figured upon the thickness of one foot in the pan of this foundation, I assumed that the ground underneath would be capable of withstanding a weight of 1½ tons per square foot. This requires absolute absence of running water of any kind. Good sand or clay to the depth of six or eight feet would be an excellent soil, the underlying soil to be ordinary rock or broken stone, or anything but water and quicksand. In this foundation I am figuring on the absence in the excavation of water

and quicksand. Under those conditions you ought to have a thickness of one foot for the pan. In addition to the concrete, I took into consideration the expense of excavating and backfilling and a layer of dry cement on top of the concrete. For the excavation and back filling, I figured $1.00 per cubic yard, which is the entire cost of handling the soil.

570 The weight of the steel and iron parts in this 500,000 foot holder is 710,000 pounds. In this is included the twenty inch inlet and outlet pipes, erected and in place, which I figured at $700.00, with the drip pots, which is about 120 feet of pipe of a weight including the drip pot of 20,000 pounds, figured on the gas institute weights. On the 200,000 foot holder I figured a total weight of iron and steel of 276,000 pounds which includes the inlet and outlet pipes. These weigh about 29,000 pounds, which leaves the weight 247,000 pounds exclusive of the inlet and outlet pipes. The counterbalance weights and the apparatus with it, aggregates 19,170 pounds, leaving for the steel and iron works 227,830 pounds.

When I said that the cost of this holder represents from 60 to 65% of the entire cost of such a holder, with a masonry tank, I made that statement entirely dependent upon the character of the masonry work, and had in mind the construction under ordinary soil conditions required no blasting and no water and no shoring up of the embankment, and figured on a tank laid in cement mortar. Of the 50,000 foot holder, the steel and iron, I estimated, would weigh 66,500 pounds of which 9,600 pounds would be represented by the inlet and outlet pipe, which would leave the weight of steel and iron 56,900 pounds. A steel tank holder of 200,000 feet capacity is somewhat cheaper than a masonry tank holder. A steel tank holder of that capacity would cost approximately $25,000.00 including the foundation.

The type of construction is turning to the steel tank type, because it is somewhat cheaper and in addition they have absolute control over the physical conditions of the tank at all times. If leaks develop they are easily taken care of in a steel tank. It is directly opposite in the case of a masonry tank. A twenty inch Conelly governor F. O. B. Lincoln, unerected, would cost close to $800.00. The twelve inch Reynolds station governor F. O. B. Lincoln would cost probably $415.00 to $420.00. The tar and oil tanks would cost F. O. B. cars at Lincoln, unerected, about $1,200.00 to $1,240.00 per

571 pair, based upon a weight of 25,000 pounds for the pair, with a thickness of five-sixteenths inch and one-fourth inch shells.

If the tanks were substantially less in weight, it would not make any difference in the cost on the cars here, as the labor entering into the fabrication of these tanks is about constant for light or heavy tanks.

I do not know who furnished these tanks. Our company furnished the 100,000 foot holder, which included the gas holder and the guide frame erected, and the twelve inch inlet and outlet connections and the necessary iron work for the tank delivered on the ground. There were 18,000 pounds in the inlet and outlet pipe and 102,000 pounds in the tank iron guide frame and holder, of which

4,000 pounds was for the tank iron. The Western Gas & Construction Company was paid $7,000.00 for what they furnished on this holder, which covered the erection of the guide frame and holder. The inlet and outlet pipe- were figured at $607.00 and the tank iron $240.00. Under certain conditions steel tank holders of 150,000 to 250,000 capacity are sometimes sold for less than $100.00 per thousand foot capacity.

In selling gas equipment for a whole plant, we ordinarily make better prices on it than we would for the separate parts, and the price which I have given was made on the basis of purchasing each part separately. This is due to the fact that many of the arrangements which make up the price, such as traveling expenses of our erectors, and the keeping of accounts and contracting expenses, is constant on both the large and small contracts, and when the number of contracts is reduced and all included in one contract, this necessarily reduces the price on each individual piece of equipment. There is ordinarily included in the contract for the erection of the large pieces of gas equipment a clause placing upon the contractor the liability on account of injury or damages received by any party by reason of the contractor's negligence during the construction and until the completion of the work.

572 Cross-examination conducted by Mr. Morning:

H. L. Doherty & Co. is not interested in any way in the Western Gas Construction Co. Our company has in times past furnished and sold to other companies than the Lincoln Co. operated and controlled through Doherty & Co. various pieces of gas equipment. I do not think it comes through Doherty & Co. but through the management of the individual plants. Doherty & Co. do*es* not get a discount or compensation from our company on account of the contracts or supplies and equipment which we have with their control companies. The price at which we furnish the iron work in the benches which were built by another company was slightly less than the value I have placed on that item of construction. The difference was the discount allowed to the manufacturer of the benches. We have furnished iron work to the Improvement Equipment Co. which Improvement Co. is one of the subsidiary companies. The Improvement Co. is, as I understand it, one of the Doherty interests.

"On examining Exhibit 320 and refreshing my memory, I think that the $8,000 contract price included an old engine we took from them and the amount we realized for the engine was $400, and this was to be and was credited by us on the $8,000."

Redirect examination by Mr. Strode:

In view of the fact that the Lincoln Company, for instance is operated and controlled by the Doherty people, who have a large number of companies in the same situation, would tend to reduce slightly our prices to any one of these companies on equipment which we furnish them. The prices I have given here for condensors and scrubbers I have figured as the furnishing of single equipment, without

any other contract and it is the same on each of the items I have covered. With reference to the three water gas sets the six foot six inch and the two 7 foot 6 inch sets, the aggregate price, including the condensor and scrubber and the operating floor, would amount to in the neighborhood of $26,500.00 exclusive of the foundation. In the case of a purifying box, if the box is not so deep, and is spread out more, the gas will come in quicker contact with the purifying materials in the box and the deeper the box the greater pressure you have to use to increase your velocity and when you increase
573 the velocity there is an interference, to a certain extent, with the purification of the gas. I think it is more desirable to have a box four feet deep than to have one ten feet deep. My figures on the 500,000 foot holder, the 200,000 foot holder, the 50,000 foot holder, the Conelly automatic governor, the Reynolds station meter, are all equal to or a little higher than Mr. Lea's figures on the same items. In figuring the pan of the foundation for the 500,000 foot holder, I figured on a depth of one foot and an extension of three feet beyond the holder. If the depth, instead of one foot, is one foot nine inches and one foot six inches, at different places, and the pan extends six feet nine inches beyond the holder, that would increase my estimated cost.

Recross-examination by Mr. Adams:

With reference to the weights I have given on the 200,000 foot and the 50,000 foot holders, these were secured by estimating from the gas company the pressure that the holder threw. I was in the works and looked over the guide frame and made an estimate covering approximately the weight as it now stands. Of course the iron work for the tank and in and out pipes I had to assume as standard. The diameter of the pipe I ascertained from the plan. The guide frame consists of nine columns, latticed type. The cross sections of the columns are eighteen inches wide and twenty-six inches deep radially. They are constructed of 2½ x 2½ quarter inch angles at the corners, with 2 x 5/16 flat bars for lattice work. Every column is provided with a railroad bar as a guide and there are two rows of horizontal girders, each approximately 24 inches deep, of I shaped. The diagonals are round bars provided with eight turned buckles: the bosses are heavy cast iron base plates and are included in my figure for the holder and guide frames. The foundation parts are both of iron work for the tank. I had the cross sections of the material entering into this construction measured. I took the weight per lineal foot on shapes and per square foot on plates, which
574 were based upon actual measurements. The nearest standard size of box in cubic capacity, to the boxes at the plant, are two boxes 25 feet diameter by eleven feet six inches high. These would have a cubic foot capacity of 9270 as compared with 7680 cubic feet of boxes now there. These boxes would have a capacity of 1,100,000 cubic feet of gas per twenty-four hours and the boxes there would have a capacity of 700,000 cubic feet. These would cost erected on the company's foundation, $5,500.00 for the two boxes. They are dry lute purifiers of the type commonly put out of doors. The pre-

vailing type of box being sold to any gas works, is the cylindrical steel box outside and for the inside boxes cast iron. We adhere as closely as possible to the duplex type which calls for from nine to ten feet in depth.

Redirect examination by Mr. Strode:

The price of $5,500.00 mentioned for the two boxes above does not include what is in the boxes in the plant at present, nor does it represent what it would take to replace those boxes. The steel used for the reinforcement of the foundation for the 500,000 foot holder is not fabricated, but is purchased direct from the mills.

Recross-examination by Mr. Adams:

In figuring on the two boxes for $5,500.00 I figured on whatever connections were necessary between them and included that.

Redirect examination by Mr. Strode:

There is an advantage in having four boxes over two, which depends upon the variation in the make of your gas. It is always preferable to have one of your boxes out of commission and if you can divide it up into smaller units you would naturally put out of commission a smaller unit and when anything happens you have a chance to shift in order to make repairing.

575 Recross-examination by Mr. Adams:

The tendency of today in outdoor boxes is to put in two, of course depending upon the size of your plant and the fluctuations of the gas.

Recross-examination by Mr. Foster:

In 1912 our business with the Lincoln Gas & Electric Co. was $8,000.00; in 1910 it was $8,066.00; in 1908 it was $48,575.00; in 1901 and 1902 it was $7,976.15. I can not tell you whether or not there was any business done in the other years, for I do not have the records here.

Recross-examination by Mr. Morning:

We have sold equipment to companies operated by Doherty & Company at the same price that we sell to other individual companies not controlled by them.

576 GEORGE L. CAMPEN, being first duly sworn, testified on behalf of the plaintiff as follows, pages 1292 to 1392 original record:

Direct examination by Mr. Strode:

I have been assistant city engineer, city engineer, sewer engineer, sewer inspector, plumbing inspector, and superintendent of public works of the City of Lincoln during the period from 1891 until 1906.

I was also superintendent and water commissioner for the Canal Zone in Panama, and superintendent of public works. I was assistant city engineer of Omaha for three years. As engineer in Lincoln I was in charge of the construction of paving. The greater portion of the paving in the business portion of the city was done while I was city engineer. The work of constructing sewers was under my direct supervision. The city would do the work instead of letting the contracts.

The gas plant was formerly located about 6th and N streets. I was here at the time it was moved to its present location in about 1893. I was by there frequently during the period of construction. It is my recollection that there was no piling used in the foundation of any of these buildings. I know there was none used in the construction of the stack, and the use of other materials about doubles the cost of the foundation. I am not clear as to whether or not piling was used in the foundation for the purifying house. As city engineer I had charge of the construction of sidewalks and the matter of opening streets and laying out gas mains came under my supervision. If there was to be a gas main extension the company had to get a permit from me. If they desired to open a paved street they had to put up a bond to cover the cost of any opening. In all cases where a paved street was opened for any purpose the matter of repairing the opening and keeping it up was controlled by the contract by the man who built the pavement. He would replace it and maintain it under the charges fixed in his contract. Whenever a paving
577 contract was let it provided that the contractor should maintain it for ten years and any repairs and replacements on account of openings were made by him. Any payment to him for this was usually made according to the stipulated price in the contract and neither the gas company nor the city was permitted to make its own repairs on its own account.

The ordinances required that the mains be located one-third of the width of the street from the south and west lines. The gas mains were required to be on one side and the water mains on the other and they were required to be in the street. Streets of 120 feet in width with a 30 foot roadway had gas and water mains lying under the parking of the street but where the roadway is 40 feet in a 100 foot street both the water and gas mains by ordinance were required to be put under the pavement. The gas mains were placed in O street immediately previous to the paving as the paving proceeded. The city required the trench for the main from 16th to 27th streets to be filled with broken stone. That cost five or six times as much to fill than with ordinary dirt.

I have been furnished with a statement of the number of feet of different sizes of mains under the pavement in this city and have made a tabulation and compiled the cost of reproducing that service. I made physical inventory for the reproduction cost for the gas plant in Omaha. I finished that within the last eleven months. The services are not included in my tabulation of the mains in the city nor are the drips and valves. My tabulation is exhibit 67 which shows the size, kind, and length in feet of the different mains under

the different kinds of pavement and gives the cost of all of the different sizes and the cost of taking up and replacing the paving under the different sizes. This is as of January 1, 1913 and is the reproduction cost of that date. Prices were taken as of that time.

In considering the 2-inch pipe I have used, as a basis, 315,708
578 ft. In Mr. Lee's report the same item is 359,601 ft. The figures given for removing and replacing the paving over mains under paved streets represent what it would cost the company to have the paving contractor do the work, and does not include any over-head charge carried by the company in the general supervision of the entire property. The total cost of the mains referred to in exhibit 67 is $284,701.27. After eliminating the error in the tabulation of 2-inch mains furnished Mr. Lee my figures are 3% lower than his on the total net construction cost of these mains. They are my figures based upon my judgment, assuming the amounts and feet to be correct.

Exhibit 67 is offered and received in evidence.

Cross-examination by Mr. Adams:

At the time the plant was moved to its present location I was down in that part of the country a good deal. The buildings of the old place, I think, were brick. It is my recollection that there was piling driven under the stack. I think it was for the boiler plant. The ground there is very poor and piles have to be put in very thick. There is about a foot of quicksand in there. G and C streets are streets in which the gas and water mains are laid outside the curb line as on those streets the curb is more than one-third of the distance from the edge of the street. The mains from 10th to 18th streets on C street are outside of the curb and under no pavement except where they cross intersections. The same is true of D street from 8th to 20th. In computing the cost of reproducing these mains I have assumed that they were to be reproduced by laying them in the parkway where they now are and not under the pavement, and for such lengths as now lay under the pavement. I have added what I estimated to be the cost of putting them there at this time. In figuring the reproduction cost of the mains in which the trenches were filled with broken stone on O street from 16th to 27th I have not figured on reproducing them in that way. My figures I have used
579 are an average of $1.90 per square yard for replacing asphalt on concrete and the concrete under it. For replacing the two-course brick I have figured 60¢ a square yard. I have figured the concrete under cedar blocks at 25¢, or $6.40 a cubic yard, on an 18-inch ditch with 26 inches of concrete to remove. I figured .4 of a cubic yard for it, which would make per lineal feet 25.6 to replace it.

I think on an 18 in. ditch you should have 26 inches wide of concrete, when I dig a ditch I dig the concrete down 4 inches wider than the ditch, so it is 26 inches wide on an 18 inch ditch, or .24 of a square yard per lineal foot of ditch. I figure 25.6 cents on an 18 inch trench under concrete or 6 cents per lineal foot taking it up and 5% for bonds and contingencies, and insurance — my men, mak-

ing a total of 33.2 cents for taking up and replacing everything. For removing concrete per lineal feet 6 cents, the asphalt on concrete removing 12 cents per lineal foot. Brick on concrete removing 12 cents. For removing the asphalt on concrete paving I have figured on 23¢ per lineal foot. On the two-course brick I have figured 7½¢ per lineal foot. I have to make the ditch wider there. In figuring on the cast iron pipe, on the 3 and 4-inch pipe I figured $30 per ton and on the balance of the cast iron I figured $28 per ton, F. O. B. the cars here in Lincoln. The weights used here were, on a 3-inch pipe, 139 lb. per foot; 4-inch pipe, 20 lb. per foot; 6-inch pipe, 30.8 lb. per foot; 8-inch pipe, 42.9 lb. per foot; 10-inch pipe, 57.1 lb. per foot; 12-inch pipe, 72.5 lb. per foot; 16-inch, 108.3 lb. per foot; 20-inch pipe, 150 lb. per foot.

I secured these from the United States Cast Iron Foundry Co. The standard shown by their latest catalog are these. I think they are about on an average with the weights of pipe of the gas company used in the streets of Lincoln. I think some of the pipes laid are heavier because I saw some of them laid and I noticed the weights marked on the ends of the pipe and things of that kind. I know that in a number of particular cases they had good heavy pipe. I also used an old catalog of the South Pittsburg Co. of about 1901. A great deal of the pipe was laid previous to 1900. Much of it has been relaid. I do not know when the 20-inch pipe was laid. If 16-inch pipe was laid on M street between 8th and 16th I know it was between 1900 and 1905. I don't think this is the heaviest pipe I ever heard of. I understood it was what was the standard at this time. They furnished me with the length and the sizes of their mains and I made a fair valuation figuring on what I would replace them for as a contractor. For the 1¼ wrought iron pipe I have figured on 5.96¢ per foot. On the 2-inch, 9.58¢. I have dealt with no other sizes
580 of this kind of pipe. I took these prices from the price list. I have just paid them to Crane & Co. of Omaha on another job, and after computing the difference in freight rates, a job of about four miles in length, 1½, 2 and 3-inch-s. The total number of feet in Lincoln are 2,258 feet of 1¼ inch and 315,708 of 2-inch.

I also took the price paid by the United States government in New York City. The price given in the Engineering News would be fairly right for long-time shipments. On steel, at $1.60 net prices if you want a 30 to 60 day delivery they will charge you possibly 25 to 50¢ a hundred more. I figured on 2 years' time to install this pipe system. In my estimate I have figured a cost of 4½¢ per foot, 10 months, and 9¢ per foot, 2 months, for digging an 18-inch trench for 1¼ wrought iron pipe, making an average of 5.25¢ per lineal foot. The average cost of back filling I figured at 2.33¢ per foot. The same is true of the 2 and 3-inch pipe. For the 4-inch pipe I have figured 5.633¢ for digging, and 3¢ for back filling and tamping. The digging for the 6 and 8-inch pipe I figured at 7¢, and the back filling at 4 2/3¢. For the 10-inch pipe I have figured 7.6¢ for digging and 4 2/3¢ for back filling and hauling away some of the dirt. On 10-inch pipe you have to allow for hauling away about .6¢ per foot which is in addition to the digging and tamping price.

For the 12-inch pipe the digging is 8.4¢ per foot, back filling, 4 2/3¢, disposal of extra dirt, .9¢. For the 16-inch pipe the digging is 9 1/3¢, the back filling, 4.9¢ and 1½¢ for removing the dirt. For the 20-inch pipe the digging is 11.86¢, and back filling, 5.945¢, and the hauling away, 2.4¢.

These prices are not based upon any unit price per cubic yard. They are based upon the prices used here in the city for a good many years. They are the average prices the entire year round. The frost goes down three or four feet here and you have to figure on
double cost for two months. At these prices you can get ex-
581 cavated 137½ cubic feet for $1. This would be a ditch 12 ft.
long, 5½ ft. deep, and 2 ft. wide. That amounts to .00727 per cubic foot. In my estimate I have used the trench 3½ ft. deep to cover it. When the pipe becomes 6-inch I have added to it the depth of the pipe.

In digging a trench down to 7½ or 8 ft. the depth does not make very much difference per cubic yard. A 5½ foot ditch would cost more than a 3½ foot ditch. The total material cost on 1¼-inch pipe is 6.51¢ per foot. That includes pipe, digging, tamping, fit-ing the pipe, cementing, and storehouse charges. My present line of business is engineering and contracting. I have bid on water pipe mains and have been awarded contracts but on account of litigation by the city over the assessment I refused to perform them as I was not sure of my money.

In the previous prices which I gave you I gave a price for concrete alone where the paving was wooden blocks on concrete as the wooden blocks had rotted away. The other prices on paving include the price of the concrete on which the paving rests. I have followed the same method on all of the different sizes of pipe, substantially. I have figured on lead joints through this job. Up to the time I left in 1906, while I was city engineer, they were all lead joints. Prior to that time those that I saw I know were lead. In taking lead joints I have gone on the assumption that wherever there is a cement joint the cost will be more in repairs. I figured the price of lead at 6½c. That was the market price in large lots, F. O. B. Lincoln, in December. The cost of lead joints is about four times that of cement. It is a very poor practice to put in cement joints. In Omaha they use cement joints except on high pressure mains. I know of no practice of making lead joints except by melting.

I have added the cost of coal in melting and 4¢ for storehouse charges. Taking 100 ft. of 16-inch pipe I figure it will cose $151.62, and I figure 4 or $6 would be fairly included as a storehouse
charge. Here pipe is commonly piled out-of-doors. The
582 storage includes unloading the pipe from the car, loading it
into the wagons and checking it in and out. My average price for digging the trenches is proportioned $1 per section for 24-inch and I assume that one-sixth of the pipe would be laid in the winter time. They lay more sewer and water pipe here in the winter time on account of labor conditions, although it costs twice as much. The kind of labor used in digging trenches is only plentiful in the winter time. After getting the cost of the other items in the schedule I add

20% to that total footing, 5% to cover incidentals like putting out lights, watchmen, and things of that kind, and 15% profit, which would include the insurance on my men and the price of my bond. Exhibit 68 is offered and received in evidence, being schedules of the witness' estimate for the detailed cost of laying his main.

After taking out the cost of the pipe and specials, 100 ft. of 6-inch pipe costs $36.755. This leaves 36.7c per foot. $80.75 covers every item of cost for putting 100 ft. of 6-inch pipe into the system. $43.99 covers the bare cost of iron and specials, F. O. B. the cars. The 20% figured for profit is figured on both material and labor and when you deduct the bare cost of the material from the total you have an exaggerated cost of the labor alone as the percentage of profit on the material is included in it, and the $36.75 per 100 ft. of 6-inch main, while it is the difference between the total cost and the bare cost of the material, is a little more than the cost of putting the pipe in. It could be done for a little less. I would say that my footing, .8075¢ per foot on cast iron pipe is a fair price for a contract to take the job. There is no comparison between the country and city jobs. In the country they do not require tamping and picking as they do in the city.

In figuring the allowance for specials I used one special for each 800 lb. of pipe figuring 3½¢ a lb. or $70 a ton, which was
583 a fair price on January 1st of this year.

Redirect examination by Mr. Strode:

In figuring the item of replacing the paving here in Lincoln in this estimate I took the price they specified in the specifications to the contract between the city and the contractor. I had the data assembled from the city engineer's office showing it so I could tell definitely the cost on each street. In figuring on the small amount of wooden block paving here I simply figured on the cost of replacing the concrete as the wooden block pavement is worn out. Contracts for furnishing pipe for sewer and water for the city were let on bids. R. D. Wood & Co. never submitted any bids because their freight rates are against them. The city bought many miles of pipe while I was in the city engineer's office and part of the time it was under my supervision. There is but little difference in the weight of cast iron pipe whether it is used for gas, water, or sewer purposes, outside of the fact that it is made by different people. The lighter weight pipe is sold by the United States Steel Pipe Co. and that is the pipe that I figured. You can use a lighter pipe for gas than for water as the pressure is lighter. It is generally known and accepted that gas pipe costs $1 a ton more than water pipe.

The figures that I have given with reference to the reproduction cost of the gas mains in this city are what I regard as fair prices for that work with a legitimate contractor's profit and would be the price which the company would have to pay to get the work done by a reputable contractor. It costs more to lay gas mains than water mains because the gas mains must be laid on a grade so

they will drain through a drip, while water mains can be laid up and down grade. It requires more care in digging trench for gas which adds to the cost of the trench. Using the proportions or scales that I have given here in digging ternches, men would rather dig a trench 5½ ft. deep than one 3½ ft. deep as the first 1½ ft. is hard to get through. When you get below 5½ ft. the
584 cost is increased. The prices of the cost of digging which I have used are based upon my knowledge of it, covering a range of a good many years. In all of these estimates that I have ever prepared for the city while I was city engineer I always added 20% for the contractor's profit. The contractor was always required to bid within my estimate on city jobs. If not, he did not get the contract. I have always considered that a fair profit and do not think a contractor could do business on less than that and maintain an organization. Of this 20%, 5% is for incidentals. You can never determine exactly what everything is going to cost and that is a fair allowance.

Recross-examination by Mr. Adams:

The city is now using cast iron pipe for sewer work but I do not know how much. It is the exception. Clay pipe is the usual thing. The weights of pipe which I used here were taken from the catalog of the United States Cast Iron Pipe Co., which is a reprint of the standard specifications of the American Waterworks Association, and the weights are head Class A, 100 ft., 43 lb. pressure. I understood from the agent of that company that this cast iron was the lightest weight pipe that they made, and for that reason I adopted it. I know that this foundry is the one that furnishes the majority of pipe used in this territory. The 43 lb. pressure means 43 lb. pressure to the square inch. I do not think any of this class of pipe is used for water systems in which the pressure runs up as high as 43 lb. The gas pressure in this city is .43 lb. to one inch.

When gas escapes through the main it is very damaging. It ruins all asphalt paving. There is a limit in the weight and thickness of cast iron pipe. They cannot make them any thinner. The external stress put upon the gas mains is much greater than the internal stress. There is not much connection in gas works of this kind between the weight of the pipe and the internal pressure.

My figures in exhibit 68 are for laying pipe in dirt streets
585 and knowing the conditions in the town. In DeWitt there are not so much obstructions to be contended with as there are here. There is no radical difference in the soil generally.

Redirect examination by Mr. Strode:

Exhibit 79 is a circular of the United States Cast Iron & Foundry Co., showing the weights of water, gas, sewer, culvert, flange pipe, and pipe fittings. Exhibit 70 is a circular of the Massillon Steel Co., showing the same. The weights of gas pipe showing in ex-

hibit 79 correspond exactly with the Class A weights of the catalog of the American company for water pipe and are the same weights that I used. Exhibit 70 shows the same weights for 4-inch gas pipe, Class A. The weights I used in my tabulations is the lightest gas pipe made by these companies.

Exhibits 69 and 70 are offered and received in evidence.

These weights appear to be the standard of the American Waterworks Co. This company ma-ufactures pipe for gas and water and their agent informed me that this was the smallest and lightest weight pipe which they made. I do not know anything about the American Gas Lighting Association or the American Gas Institute adopting standards for pipe, but their recommendations would be entitled to some consideration as well as water associations if they embodied as good pipe as could be gotten in this territory at as reasonable a price. They allow a variation of 5% in the weight. I have estimated my 4-inch pipe at 20 lb. per foot.

586 R. H. FAIR, being first duly sworn testified on behalf of the plaintiff as follows: Pages 2992 to 3028 Volume Three, Original Record.

Direct examination by Mr. Strode:

I live in Omaha and am at present construction engineer for the Northwestern Bell Telephone Company. I have been with the telephone company since 1896. For five years I was general foreman of the construction for the Nebraska Telephone Company in Nebraska and I had supervision over the underground conduits, then for two years I was superintendent of construction and had general supervision of the construction of subways and during the last four years I have been construction engineer with the duty of making specifications and figuring the cost of underground conduits construction, along with other duties. My work was particularly in Omaha and to some extent in Lincoln.

I figured the cost of the Lincoln plant very closely in connection with the selling of that plant to the Lincoln Telephone Company and during the last four or five years I have been approving estimates of costs for conduits construction for the telephone company and I have prepared in my experience an estimate of the cost of trench work such as is used here in Lincoln for trenches 22 inches wide by 4 feet deep. I have had experience in the matter of taking up and relaying pavement in connection with this trench work. For a trench 22 inches wide and 4 feet deep, covering the digging is .1123. The back filling is .084 and to these figures should be added some items which I have not yet reduced to a cost per foot basis, to cover the cost of loading teaming and moving tools and items that might be compelled by other companies for the removing of other obstructions, sewer, water, gas and other pipe that we would run across and have to get out of the road, miscellaneous labor, cleaning streets and placing guards along the trench and for caring for tools and materials and for moving store house and street car fare of the supervisory people. Thirty-five per cent of the conduits

here of the telephone company are under unpaved streets
587 and sixty-five per cent under paved streets. Twenty-seven per cent of it is practically under concrete, seventeen per cent brick on sand; ten per cent asphalt on concrete; eleven per cent stone and thirty-five per cent unimproved streets.

The average cost of a trench 65% under paved streets, in the propertions given and 35% under unpaved street, the cost is 64¢ plus per trench foot, which does not include any cost of supervision, nor engineering, above the cost of foreman on the job. The cost of hauling the surplus earth away, after it has been back filled is .054¢. The overhead expense in connection with that same work is about 20% of the figure I have given. The average cost of digging trenches 22 inches wide and four feet deep, not including paving, is 29 79/100 cents per foot. The cost of taking up and relaying brick pavement on 6 inch concrete base, is .533 per foot; for asphalt pavement on 6 inch concrete base .713. This is just the field cost and the overhead expense is 20% additional. With my knowledge and experience as an engineer for this construction, I would say that this was a fair cost, and I believe that is what the Lincoln Gas Company would have to pay in digging a trench 22 inches wide and 4 feet deep for their gas mains in this city.

Cross-examination by Mr. Adams:

The only work that I have had to do in Lincoln since 1909 was in connection with a joint appraisal of telephone plants there. Prior to that time I had general supervision of the construction of the Nebraska Telephone Company's plant in Lincoln, covering a period of about seven years, between 1902 and 1909. During that time I recall the construction of 200 feet of trench here in Lincoln for telephone conduits. In connection with that work I probably supervised the making up of the estimate, ordering the material and wrote instructions to the local people to do the work and was likely on the job some time while it was going on. It was constructed by day labor.

588 The written record of the construction cost of that trench is probably on file in Omaha with the telephone company. Most of my knowledge of trench cost is arrived at from sources elsewhere than Lincoln. I have had charge of work in Omaha, Minneapolis, Des Moines and Duluth, also Norfolk, Fremont, Grand Island and North Platte, about two miles in Omaha, one-half mile each in Fremont, Norfolk and Grand Island, and 500 to 1000 feet in North Platte. My work consisted of approving the plans and estimating the cost. The work outside of Omaha was done by day labor. I have also seen the actual cost figures and have had some within the last year in Omaha. I do not now remember what any of the figures were on any particular work.

I have directly supervised about two miles of trenches in Omaha, about half of which were under paved streets. I made up the preliminary estimates and plans, ordered the material, appointed the foreman and time keeper and was out on the work every day. The

work was done by day labor. Afterwards I saw the figures of the actual cost, showing the separate items of material and labor. I have none of the figures here. I do not remember what they actually were. The plans on part of the work showed the depth and width in trenches made in Omaha, in ducts varying from two to eight per trench. I measured some of these trenches while they were under construction, but I can not say now where they were located, nor can I tell you how many ducts there were in any trench that I measured. For a two duct conduct our specifications require a four inch concrete base at the bottom of the trench, the ducts nine inches high on a three inch concrete base and then not less than 24 inches of dirt between the top of the duct and the surface of the street, in all amounting to 40 inches. On eight duct conduits the specifications are the same except that the depth of the conduits would be eighteen inches; for a two duct conduit the specifications would require a trench 15 inches wide, and 18 inches is about as narrow as a man can dig in, and that is a practical width.

589 I regard the record of costs in the office of the telephone company in Omaha as a reliable source of information of the cost of digging trenches and laying conduits. I do not know how much of the 64 7/10 cents per foot for trench digging is for the paving. I have not got all the details. The 19 63/100 cents per foot is simply the digging the dirt out of the trench and putting back what is to go back, on unpaved streets, and includes the supervision of a foreman. The total cost of digging a trench on an unpaved street is about 30 cents per lineal foot. This is figuring part of the trenches to be dug through frozen ground.

Redirect examination by Mr. Strode:

The 35¢ per lineal foot of trench on unpaved streets is the average unit cost of what we have been able to make up from our actual cost, and is intended for our guidance in determining the price our company will have to pay ultimately for the work. The figures that I have given are not only based upon my own experience, but upon the experience of the company as shown by its records in this kind of work. Our company has built about 200 miles of trench from which this cost data is secured. The items making up the 19¢ of this 35¢ cost are as follows: For excavating on an unimproved street .1123, back filling and tamping .084. The last figures are the gross cost per thousand feet of trenches. Loading and hauling surplus dirt $54.00, night watchman $6.00, water boy $3.00, teaming, moving tools and materials $30.00, bills by other companies for moving obstructions, $15.00; miscellaneous labor, cleaning streets, paving guards and bridges, caring for tools and material and moving store house, $15.00; traveling street car, etc., $10.00. The last item includes expenses necessity incident to the supervision of the work:

Recross-examination by Mr. Morning:

This estimate was made by me for use in the Lincoln consolidation, for the purpose of getting the actual cost of that work. It is as follows:

590 Sheet 3.

South Platte Consolidation.

*Detail of Cost Estimate for Installing Underground Conduit. (Exclusive of Manholes, Latterals and Material Cost of Conduit.)*

| | |
|---|---|
| Material brought forward from sheet 2 | $217.07 |
| 270 T. R. F. T. excavation under brick pavement @ $.2753 | $74.33 |
| 170*m* T. R. F. T. excavation in brick (sand base) .1350 | $22.95 |
| 100 T. R. F. T. asphalt pavement .1579 | $15.79 |
| 110 T. R. F. T. excavation in stone pavement .1350 | $14.85 |
| 350 T. R. F. T. excavation in unpaved street .1123 | $39.31 |
| 25.64 cu. yds. concrete mixed and placed in trench @ $3 | $106.92 |
| Back filling and tamping trench 1000 T. R. F. T. .084 | $84.00 |
| Loading and hauling surplus dirt 54 cu. yds. $1 | $54.00 |
| Night watchman 3 nights $2 | $6.00 |
| Water boy 3 days $1 | $3.00 |
| Civil engineer 3 days $6 | $18.00 |
| Teaming, moving tools, material, etc | $30.00 |
| Billed by other companies for moving, obstructing sewer, water, gas, or other pipes for conduits | $15.00 |
| Miscellaneous labor, cleaning street, placing guards, and bridges, caring for tools and material moving store house, etc | $45.00 |
| Travelling, street car fare, etc | $10.00 |
| Total | $539.15 |
| Supervision 10% | 53.92 |
| Total | $593.07 |
| Total carried forward to sheet 4 | $810.14 |

Cross-examination conducted by Mr. Adams:

The figure of 35¢ or 36¢ per lineal foot for the cost of trenches dug and back filled in an unpaved street is secured from the completion reports of estimates, running back as far as 1902. We have to analyze these reports to arrive at this figure. These reports will show
591 the number of duct feet of main and subsidiary each, the number of man holes and hand holes and the total cost of material, and the total cost for labor and from those it is necessary to do some figuring in order to get this figure. This figure does not include the cost of the man holes. These figures are the cost for telephone conduits. I know nothing about what is necessary for gas mains. The conduit is about two feet high and an eight duct four way and two wide conduit is nine inches, and the amount of space occupied by conduit is considerably more than that occupied by two or four inch gas pipe, which would effect materially the amount of material to be hauled away and the cost of the hauling.

592 ROBERT MALONE, being first duly sworn, testified on behalf of the plaintiff as follows, pages 955 to 964, original record:

Direct examination by Mr. Strode:

I live in the city of Lincoln and am engaged in the contracting business, construction and concrete work, and dirt moving of all kinds. Have been in that business in and about Lincoln for sixteen or seventeen years. I have been a member of the city council, was a candidate for mayor, and am now a candidate for commissioner. I had a contract with the Lincoln Gas and Electric Light Co. for excavating for what is known as the East Lincoln holder. I think it was constructed about three years ago. I estimated the work at 90¢ a yard and made a contract for 70¢, and it cost me a dollar. The fair and reasonable cost of doing the back filling incident to that work would run about 35¢. This would vary under the specifications. It might be 50¢ or beyond because in some back filling the specifications require tamping every six inches. One would have to have the specifications to determine what the fair and reasonable price would be, and that would be true also for a part of the excavating. I estimated this job at 90¢ and then I found it was to be a very deep hole and made it 70¢ because I proposed to do that by sloping and taking a lot more dirt out than was necessary for the 70¢, but I wasn't there when the work started and they started in and dug it square and it cost me all of a dollar to do the work, because in digging it down square it caved in and if I had taken this extra quantity of dirt out it would not have caved. The fair and reasonable price for the excavating down where the plant is located would be $1.50 a yard. There is quicksand down there and a man would have to sheet pile and pump in order to get it out. By going down there and looking at it you could not determine what it would cost. You have
593 to know what is below. I have that experience in excavating in that bottom and know the character of the soil and what the difficulties are. The quicksand material is hard to handle and must be handled by hand. The cost of foundations materially increases for every foot as you go down four or five feet. The cheapest cost would be four feet. I saw them dig the excavation for the large holder down at the plant and they had a great deal of difficulty. They had to have pumps and material and they had a vicious time to get it down at all.

Cross-examination by Mr. Foster:

For the East Lincoln holder I figured an extreme depth of about 30-odd feet. By back fill I mean that the ground is taken out wider than the holder for the reason that the holder has to have a footing that is wider than the original holder, and in order to put that footing in you have to dig from the bottom clear up to the top. Sometimes they require a foot for the foundation and sometimes two feet. Once in a while they require three feet. That is all figured out by the engineer according to the weight of the holder, and the back filling covers the shoveling of the dirt back into the extra space. I

was paid $2,900 and some odd dollars for taking the dirt out on the East Lincoln holder. I have found quicksand anywhere on the Lincoln bottom between the Asylum and the other side of Havelock. It varies in depth in different places. We have always struck it within ten feet and near N street there were pockets within a foot and a half of the top of the ground. The holder down at the plant was about 15 feet deep when I saw them at work there and they were in quick-sand then. I was unable to tell when the quick-sand had started. My original estimate of 90¢ would have let me out with a profit on the East Lincoln holder had the excavation not caved in, and the estimate of 70¢ would have also let me out. The yardage was not increased by the size of the excavation caving in.

594 Redirect examination by Mr. Strode:

If I had carried on this work the way I had planned it by cutting down the sides and sloping the hole back I would have taken out practically one-third in yards of dirt than the way it was done, and would have been paid for that much more. But when the sides caved in on account of the perpendicular walls they didn't pay me anything for the dirt that I had to remove on account of the cave-in. They did pay me for the cubic yards of dirt taken from within the perpendicular walls and I had to bear the loss. As of January 1st of this year a fair price for the work of excavating that holder would be $4,000. I would not do it under their specifications for less.

595 ELLERY L. DAVIS, being first duly sworn testified on behalf of the plaintiff as follows, pages 675 to 695, original record:

Direct examination by Mr. Strode:

I am a member of the firm of Berlinghoff & Davis and am an architect. I have been a member of that firm for three or four years. I received my technical education at Columbia University. It is our custom to make guaranteed estimates of the cost of the work for which we prepare plans. We estimate before hand all the buildings we build and our estimates in the main have been verified by the figures for the actual cost. We now have on the boards and under construction in this vicinity buildings costing in the neighborhood of $2,000,000. A large number of the principal buildings constructed in this part of the state have been under the direction of our firm. Among them is the new high school building in Lincoln.

It is customary for us to issue certificates to the contractor allowing him payment for 85% of the value of the work he has completed. We actually visit the buildings under construction outside of Lincoln not less than once every two weeks, and in the city, nearly every day. All buildings for which we draw plans have been constructed under our supervision with the exception of the College of Law at the University, and a few exceptions in small buildings. On works of any importance we prepare a detailed estimate of the quantities of material to be used. We begin by making an estimate of the cubic contents of the building. After the plans are near enough completed

we prepare an itemized statement of the cost, stating the number of cubic feet or number of brick. The amount of terra cotta is estimated, the number of pounds of steel, how many feet of lumber is required, of doors, windows, casings, and so on, and of roughing, and making allowance of course for incidental expenses such as cost of foremen or superintendence, and add all of these together. We also determine the cost of materials that go into the buildings. After all of this we make an allowance to cover incidental expenses and contingencies. On a building costing in the neighborhood of 25,000 to $30,000 we make an allowance of 10% for contingencies. On larger buildings the allowance would be less. On a building costing $10,000 the allowance would be greater. On a building costing several hundred thousand dollars it would be as low as 5%.

596

I am acquainted and know the prices of material and labor required in a building during the past four or five years. There are two methods commonly employed of getting at the brick work in a brick building. One is by counting the actual number of brick and figuring the small openings as solid because the extra amount required to work around an opening is equal to the solid work. And the other way is what is called the wall measure which is an entirely fictitious way of counting and is based on the assumption that there are 22½ brick in each cubic foot of wall. Contractors usually use the wall measure but some more careful and accurate figure the other way. The fair and reasonable price for brick per thousand, wall measure, with lime mortar in the City of Lincoln during the last three or four years is $13 to $13.50 per thousand in the walls. For kiln count it is $16.90 per thousand. Brick in a wall laid in cement mortar, wall measure, would be worth $15 per thousand, and kiln count would be worth $19.50 per thousand. Three or four years ago these prices would have been slightly less but it is a fair and reasonable price for the last year.

597

The fair and reasonable cost of handling the mixed concrete is about seven dollars per cubic yard, 1-3-5. If the proportions are changed it would change the price slightly but not over 25¢ a yard. A fair and reasonable cost of a troweled-surface, 4 inch cement floor is about 12¢ per square foot for good workmanship. If you add to the thickness of it you add about 2¢ for each inch of thickness per square foot.

As to lumber used by the Gas company, the material cost is about $28 per thousand, the labor cost running from $12 to $17 or $18 per thousand, according to whether the members are large or small. The smaller members cost less per foot to handle. Joists usually figure 2-10-12, or 14, making the cost about $40 per thousand. Smaller members cost as high as $18 per thousand to handle, making $46 per thousand. A fair average would be $43. I have found these values to be fair and reasonable in my work here in Lincoln. These values do not include the 10% overhead or contingencies but they do include the contractor's profit.

The minimum price and personal equation matters depend on how badly the man bidding on the work wants to get it. If these prices

were added together with the overhead price of 10% the building could not be built for any less. That would be true at any time during the past year. During the past three or four years these prices would maintain with the exception of cement which has risen considerably in value in the last six months, having increased from $1.30 to $2.20 per barrel and the price of labor has advanced five cents per hour. The difference in the price of cement might make a difference of 50¢ per yard in the cost of the concrete.

598 Cross-examination by Mr. Foster:

One thousand brick will lay 35% more feet of wall by kiln count than by wall measure. My estimates were figured on good average brick, of the dimensions of common brick, 2¼ x 4 x 8¼, at a price of about $8 per thousand. It costs close to $5 to lay 1,000 brick in a wall, figuring on the mortar, lime, sand, labor of mixing, and tending the brick layer. There are not a thousand brick in a wall measure count of a thousand. A good brick layer will lay 1,000 brick in about 83% of the day. They draw 70¢ per hour. In 1906 in Lincoln I think they were getting less. They work 8 hours a day.

I have never examined the Gas company's buildings in Lincoln, I know nothing of the character of work in them. I have never designed or superintended the erection of a building for gas purposes. The figures I have given you are not any larger than is necessary in ordinary work. There is from 10% to 15% profit in these figures to the contractor. The cost of laying brick depends quite as much on the thickness of the joints and the quality of the work and the amount of mortar. These figures are used by our firm in making estimates. We never use the lime mortar figures in our work. We have used the other figures in every estimate that we have made, for instance in the court houses at St. Paul and Greeley, Nebr.

Our estimated cost of the Law building at the university was just a little lower than the sum for which the contract was let. That was let a little over a year ago to W. J. Ossenmacher. Unless the job is very large, hand mixed concrete is as cheap as machine mixed. On a $25,000 to $50,000 building it is cheaper not to invest in a machine for such a building. The regularly quoted price on dimension lumber is $28 which includes the contractor's profit of about 10% on some jobs. This is figured on good, sound yellow pine lum-
599 ber free from loose knots, wind shakes, or dry rot. It can have sound knots or pitch streaks and things of that sort. There has not been much change in the price of lumber in the last two or three years. For the past two years on lumber we have figured from $40 to $46 per thousand. Those are the figures accepted in the course of the trade. A grand-stand down at the university is the only job I know of in the last two years in which the contract was for carpenter work solely. I made an estimate on that and the cost at which it was let was very close to the estimate. George Wilson was the contractor.

It costs more money to put the mortar on than the brick costs. Joints must be about one-half inch to be good common brick work. Sometimes less is allowed in good buildings where common brick is

used for facing and where they took special pains to make a close joint. The prices that I have given include the contractor's profit. The cement raise in price took place during the past winter. In the cement mortar we use one to two Portland or one to four natural. The cheaper requires more cement and about balances the price. Sand is either $1.15 or $1.30 a yard, and the mason's tender costs from 25¢ to 30¢ per hour. We use a good fat lime in the mortar for the brick work about which I have testified, that which is well selected and has a small percentage of clay. There are two ways of getting at the cost of brick in the wall. One is to take the wall in a building and figure the cost of brick, and the total cost of that wall, and divide the total cost by the number of thousand brick. The other way is to figure the cost of the sand, lime, brick, and all the other elements and add them together. You will get the same result by the two methods.

600 Redirect examination:

There would be an additional cost for the brick in the pilasters, columns, and cornices of the building. It is customary with a brick mason when he figures a wall on what is called the wall measure and there is a pilaster projecting out four inches and which is two feet wide, to figure the wall plus the two feet plus the four inches on each end. A pilaster would materially increase the cost of the wall. A column is figured usually four times its thickness. When I speak of a contractor's profit I mean the cost of getting some one else to do the work. I have lived in Lincoln since 1893. I was a student at the university and my father is connected with the mathematical department of the university.

601 ELLERY DAVIS, recalled for further direct examination, testified as follows, pages 974 to 983, original record:

Direct examination by Mr. Strode:

Since being on the stand the other day I have figured out the details going to make up the cost of the different units that were given by me in my testimony entering into the construction of the buildings of the Gas company. I have taken the various quantities of labor and material required for the various units from Kidder's Handbook, which is standard for architects and builders over the country, and these are the figures that will agree with the prices in this locality. As to the kiln count cost per thousand brick of $16.90, the thousand brick cost $8. A yard of sand costs $1.35, a barrel of lime, 220 lbs., $1.25. Broken stone costs 9½¢ per 100 lbs., or $2.56 per yard. A smaller size which re-enforces costs 10¢ per 100 lbs., or $2.70 per yard. The brick mason's union scale is 70¢ an hour. A stone mason's labor is 65¢ an hour. A helper's labor is 30¢ per hour. An ordinary laborer's time is 25¢ an hour. All of these material prices include a rebate to the contractor which constitutes his profit. That probably amounts to 10% or 15%. However, that represents the price which the owner in contracting work would have to pay to get the work done and no one not in the

trade can get prices any lower. The labor prices, of course, are net and it is reasonable to allow a 10% profit on these prices to the contractor.

According to Kidder, to lay a thousand common brick, kiln count, requires 2½ bbls., or 200 lbs. of white lime, and ⅝ of a yard of sand. A brick mason on a city job under a good foreman will lay from 150 to 175 brick per hour, 160 being a fair average. These prices are for straight work without any projections or windows or piers, or anything to interfere with him, with a foreman over the man all the time. For common brick work one helper will be required for every mason to carry the brick and mortar and
602 make the mortar. On this basis one thousand brick at $8; ⅝ of a yard of sand at $1.35, which makes 84¢; .91 of a bbl. of lime at $1.25, which makes $1.14, gives a total of $9.98. Allowing 30¢ for a small per cent of waste as the materials are stored on the ground, and for the brick broken in cutting, makes a total cost of $10.28 for material. A mason in 6¼ hours would lay one thousand brick. On a basis of 6 hours at 70¢ a mason would cost $4.20. 6 hours for the helper at 30¢ would be $1.80. Allowing a profit of 10% on the labor is 60¢, making in all $6.60. Add the labor and material together and we have $16.88 which is remarkably close to $16.90 about which I testified the other day. These are not figures which can be juggled or shifted. The figures used are given as the average by Kidder and the price for material is the standard price quoted in the city, and the labor prices are the union rates in this city with 10% for profit. In these figures of $16.88 I have not taken into account anything for the ratable proportion to be allowed for the foreman's time. This should be added. It is the actual practice to have a brick foreman as the masons will lay more brick.

The tendency in the past four or five years has been to increase the labor cost. I remember when masons were getting 60¢ to 62½¢ per hour, and carpenter labor was 37½¢. The foreman ordinarily gets more than the masons. It is not a fixed sum, however. The above figures were on a lime mortar. On a basis of cement mortar, that is, a combination of lime and cement, Kidder gives the following quantities: for a good lime and cement mortar to each thousand common brick I allow 160 lbs. of lime, 1 bu. of cement, and ⅝ of a yard of sand. The brick quantities would be the same and the labor quantities would be from 10% to 15% higher, it being harder to work with cement mortar. The extra cement has to be mixed
603 into the lime, which requires more common labor as well as more helper labor, and we allow 7 hours to a thousand brick instead of 6. On that basis the cost of the lime is 91¢, of the cement, $2, of the sand, 84¢, of the brick, $8, making the total material cost $11.75. 3% for storage and waste will be 35¢, making the allowance for material $12.10. The labor item for the mason will be 7 hours at 70¢ which is $4.90. For the helper, $2.10. The total is $7 with a 10% profit, making $7.70. Adding the labor and material together we have $19.80.

The figures to which I testified at the previous hearing were $19.50, showing that the figure is a fair average price, kiln count,

per thousand brick laid in cement mortar. It justifies the common quoted price of $15 per thousand, wall measure. As to the concrete, to make a yard requires 9.07 of a yard of stone of 2 inch in size, which costs $2.48; it requires 1.06 bbls. of cement, which costs $2.12; it requires .48 of a yard of sand, which costs 65¢, the total material cost being $5.25. On the cost of these materials we allow 5% waste which is 26¢. As to the labor cost, at $2 per day, it costs from $1.25 to $1.50 to make a yard of cement according to Kidder. Others say it costs $1.80. I have taken $1.40 and have verified that by estimating that a gang of five laborers at $2 and one at $2.40, the total cost $14, should be able to make 10 yards of concrete a day. 10% profit on the labor makes a total of labor, waste, material, and profit of $7.05 a yard.

The other day I said it would cost $7. I have also checked up the unit cost of rubble stone work. $8 a yard is usually considered a fair price including the profit. It is the commonly accepted price like $13 for kiln count mortar. It requires 1 yard of stone at a cost of $2, ¾ bbls. of cement at a cost of $1.33, .46 bbl. of lime at a cost of 58¢, ⅝ of a yard of sand at a cost of 56¢, the total being
604 $4.77. Allowing 5% for waste we have a total of $4.99. As to the labor, it requires 3.9 hours of mason's labor, which in Lincoln costs $2.44. 2.6 hours for a helper costing 78¢; 10% for profit makes the total labor $3.54. Add this to the material and we have a total cost of $8.23. These are the principal units entering into the construction of a building.

Cross-examination by Mr. Foster:

These are safe if the contractor is certain that he can get that much labor out of his men. And these are the units that I use in estimating the cost of the work. Of course there are certain percentages added in the end for omissions and foremanship and things of that kind.

605 C. P. Hahn, being first duly sworn testified on behalf of the plaintiff as follows: Pages 3178 to 3221, original record.

Direct examination by Mr. Strode:

I live in Lincoln and have been a general contractor there since 1881. I had contract for part of the work for the purifying house, generator house and the main electric building. The last one that I built was the generator house which was six or seven years ago. I had the contract for all of the work above the foundation. The foundation the company put up itself. I had nothing to do with the painting or wiring of the building. The contract price for the work that I did, which was just the walls, roof and floor, was $3650.00. The fair cost of reproducing the part of that building which I put up now, or any time within the last year, would be 15% to 18% more. For the brick in the wall on mason measurements, I figured at that time $13.75 per thousand, and for kiln count that would be $18.75. The cost of buying the brick and

putting it there now in the walls, would be from 15% to 18% higher than that. The roof would cost probably 10% more than it did then and the sand and cement would run from 15% to 20% more.

I built the purifying house 22 or 23 years ago. I just had a contract for the brick work alone and had nothing to do with the stone wall foundation under it, or with the roof. The fair cost at the present time for the brick work there, is $13.75 per thousand, mason count and $18.75 per thousand kiln count. For the purifying house there were 224,200 brick, mason measurements, generator house 150,000 mason measurement and 110,000 kiln count, figuring the hollow tile as brick. We figures the wall space and have to figure mason measurements to resolve it into the same units as brick. The generator house did not include the concrete floors, but it did include the galvanized gutter and spouts. I had a contract for all of the brick and concrete work on the East Lincoln holder
606 and put in the masonry tank. That was on an agreed price before I started in. I received $6835.29. At that time that was a reasonable cost. At the present time it would cost about 20% more. I did the work at that time practically at cost. I sublet part of the contract to Rymer & Cauffman and paid them $2190.11 for the portion of the work which they did. Exhibit 354 shows the original bill that I paid them for the original amount. The rest of it is for extras that I bought of them. It does not show what the amount of sand that I used was.

Cross-examination by Mr. Adams:

I think the contract for the generator house was in writing, but I can't be sure. On this work I made a bid for the whole work and got it. I do not think I have now the contract for this building. I was to be paid $3650.00 for the work specified in my bid, which included all the mason and all the material in the construction of the building above the foundation, with the exception of the wiring and painting. The roof of the generator house is steel trusses covered with corrugated iron. I bought it from John Westover and paid $1100.00 for it, I think. I gave him a contract for the whole roof erected in position, for $1100.00. I paid $7.50 per thousand F. O. B. of gas works, for the brick and got them of Yankee-Hill Brick Company. At that time the ordinary price at which brick were selling was $7.00 per thousand and I paid $7.50 because I got an extra good brick. It was better than the average kiln run. When I took the job they specified that there would have to be an extra hard brick for the outside and that represents the extra cost. I returned the specifications when the job was finished. There were actually 186,600 brick in the purifying house. I made these figures up from measurements which I took about two months ago, but part of them I made from my notes which I had left from putting up the building. The brick is $7.50 per thousand the labor is $3.75 per thousand, the sand is $1.00, the cement $3.50. That totals
607 $15.75. I do not think there was any lime used in the mortar of the water gas building. If there was the cost would

be a little less than $15.75. I bought this cement on the basis of $2.00 per barrel. Exhibit 365 is the memo. I made of cost of the items entering into the construction of the water gas generator house, about which I have been testifying.

Exhibit 365 is offered and received in evidence.

John Lanham and I were partners on the purifying house contract. We had a written contract. We were paid so much a thousand for the brick work and my share of it, as I recollect, was $3172.00. We were paid by mason measurement at $13.00 per thousand and I figure 186,600 brick on that building, kiln count, and there were 244,200 mason count. The mortar we used was part lime and part cement. We paid $7.50 per thousand for the brick used. They were a little larger than the ordinary brick. I had a written contract for the masonry work in the East Lincoln holder. I haven't it now. The contract was for $6835.29. For that I was to lay the brick and do the concrete work, and was also to put in the bolts that hold some part of the holder to the top of the brick work, but I did not furnish the bolts. The brick cost me $7.50 per thousand and in addition had to pay the extra switching out there, amounting in all to about $7.75 per thousand. The specifications required vitrified brick. They always cost a little more than the common kiln run brick. The actual count of brick in that holder was 242,353. I sublet the concrete work to Rymer & Cauffman. I do not have the number of yards. I do not remember anything about selling the gas company 8,000 brick on May 1, 1909 for $7.25 per thousand. The transaction might have occurred, I do not remember. If I did it probably was because I was glad to get rid of them as I probably had them left over. The same is true of the sale of 10,000 at $7.25 per thousand on June 10, 1909. I built the purifying house at the East Lincoln holder and was paid by
608 the thousand mason measurement. I do not recall having a written contract. I can not tell you exactly how much I received. I built that at the same time I built the holder.

Redirect examination by Mr. Strode:

I am not in the business of selling brick and if I ever sold the gas company any, it was some that I had left over. I have done the brick work on the Orphanage Home, for the Missouri-Pacific Depot and the Burlington Freight House, and I could name over seventy-five or eighty other jobs that I have had in town, and I have actual knowledge of buying brick, and the labor entering into the construction of a building and have had to pay for it and my knowledge is not theoretical.

Recross-examination by Mr. Adams:

I have also done some small jobs for the Lincoln Gas Company on the basis of the cost of material and labor and percentage.

Redirect examination by Mr. Strode:

The difference between the $18.75 per thousand and $15.75 per

thousand, is made up for the opening for the mortar. The mortar joint alone costs one-fifth in a solid wall.

Recross-examination by Mr. Adams:

The $15.75 according to my testimony, as I gave it first, includes the entire cost of buying and laying a thousand brick, actual number, in the wall, with cement labor and mortar.

Redirect examination by Mr. Strode:

But that does not include the laying of 1000 brick along with other thousands of brick inside of the wall.

609 Recross-examination by Mr. Adams:

I have not been doing any building of any consequence during the last two years, because I have been sick most of the time.

Redirect examination by Mr. Strode:

Mr. Morning consulted me at one time.

Recross-examination by Mr. Morning:

You asked me at that time what I got for the East Lincoln holder and I couldn't tell you exactly. Exhibit 366 is a memo. made by me of the elements entering into the purifying house and from which I testified.

Exhibit- 364 and 366 offered and received in evidence.

610 GEORGE K. ABEL, being first duly sworn testified on behalf of the plaintiff as follows: Pages 3410 to 3436 original record.

Direct examination by Mr. Strode:

I live in Lincoln and am a member of the firm of Abel & Roberts. We are engaged in general contracting, paving sewers and railroad work. I am a graduate of the State University. I have done a great deal of paving in this city and I have had much experience in removing dirt in connection with that work, and we had a contract for constructing concrete reservoirs for the city, and I have become acquainted with the cost of removing dirt under varying conditions in this vicinity. I figured on the excavation work for the East Lincoln holder and am acquainted with the nature of that excavation. I estimated $1.50 a cubic yard on that job. The bottom of that holder was a cone and allowed practically no slope. If it had had a large slope or it had been a dig job so that machinery could have been used, we could have done it for half. If forty cents a cubic yard is a fair price for the excavation of the East Lincoln holder, our firm would not get the contract. The conditions are different on each new job. The price depends upon the season and whether or not you have got a team outfit that is not at work. A contractor

would rather have his teams at work even though he didn't make much of anything, than to have 15 or 20 teams standing around. If the season is right and there is lots of work being done, it would cost probably twice as much as other seasons and one must know the conditions before giving a fair estimate.

This was practically dug straight down and instead of a flat bottom it was a cone, which had to be hand finished, and if you went two or three inches too deep you would have to replace it, as the bottom was concrete. Malone had the job on the East Lincoln holder and when he had pretty nearly reached the bottom there was a big rain and it commenced to cave in. That cone was eight or ten feet high. The cost of an excavation is regulated by the depth.

611 The price for the excavation for the buildings and the holder on the Salt Creek bottom would depend upon the time of the year. There is a time in the year when the floods come up over that whole bottom and the contractor when bidding on the work takes into account the local conditions. We had two jobs down there on the M street sewer which we did for $1.50. They were eleven or twelve feet deep. We did the excavating for the two reservoirs for 30 cents, but that was part of the whole contract and we bid low on the grading and high on the extra work. It was an unbalanced bid. There was a whole lot more of extra work than there was of the grading. The fair price for that work would be around 35 cents per yard as the excavation was not very deep and we had an elevated grader and that was not loaded by hand. We had the free use of the machinery. The prevailing price for the removing of dirt in street paving is from 40 cents to 50 cents per yard; there we can use machinery and haul it away. That is a very different proposition from digging a trench or excavation for a holder. You do not have any caving on streets. During the last year we have put in four or five miles of paving here.

Cross-examination by Mr. Adams:

The grading in connection with the streets which I speak of, is commonly called extra grading above the average grade. We have always got to bid below the city's estimate. The one job done by the city for 18¢ on F street between 6th and 8th in 1909 was an instance where I think the city gave the dirt to some Russians and they took the dirt and sold it down on the bottoms. Dirt can be removed at 7¢ at a profit, if you are just going to lift it out. The grading, in grading district No. 25 on Garfield street, between 27th and 30th was done for 24¢ with an overhaul of 1¢ per yard per hundred feet for all hauling of 1000 feet. The hauling of the first 1000 feet is included in the price of grading. We took the A street

612 reservoir contract for grading and excavating at 30¢ and sublet the machine work for 25¢, but then we had to do our own trimming on the banks and dig our own trenches. At that time we were all out of work and for that reason we made a low rate on our excavations in order to get the job. We hire our steam roller engineer for ten months a year and if we run out of paving

before that time is up and can keep him busy on other work, we get him for nothing. On the grading on that job I think we must have lost something. The entire job was not a job on which we figured to make money but rather to keep our organization going. For the bare concrete we got $8.50 per yard. We have not gone very strong after reservoir jobs since. We did take the job a little later on, out on Van Dorn street, but that was in the fall and winter, just like the other one. We took the contract some time in August and finished some time in November or December, just as we were finishing up our other work. The excavating on Van Dorn street was at 30¢. We sublet it for less, how much I am unable to say. The depth on A street was 18 or 19 feet and on Van Dorn street, 12 or 14 feet.

Redirect examination by Mr. Strode:

In the paving districts, the city engineer makes an estimate of the amount of dirt to be removed for bringing the street to grade, and you are required to bid so much a cubic yard for all extra dirt. The extra dirt is the grading above the top of the curb and it is six to eight inches from the bottom of the pavement to the top of the curb at the gutter and for the portion of dirt that lies above a straight line drawn from curb to curb only, do we get extra compensation for our paving, and that only is considered extra grading, and that which lies below the top of the curb is part of the cost of the cubic yards for paving the street. The city engineer makes an estimate of from 40 to 50 cents for the extra grading and if it happens to be a big job perhaps he would cut it down a little and it is this dirt that contemplates a haul of 1000 feet and for each additional
613 haul of 100 feet you get a cent a cubic yard. Where there is very little extra grading the contractor ordinarily bids low.

614 N. M. BAXTER, being first duly sworn, testified as follows: Page 811 to 833 of Original record.

Direct examination by Mr. Strode:

I am superintendent of the distribution system of the Lincoln Gas and Electric Light Company and have been since September, 1908. I have charge of all the work that is done on the mains and services and also the maintenance of the mains and services. On an average there are employed between fifteen and twenty men who are in direct charge of a foreman. These men are engaged in the work of laying mains and repairing mains. The foreman reports to me and works under my direction. His name is A. G. Erickson. He has been employed by the Company for something over twenty years, and has been engaged in this work to my knowledge for ten years.

Exhibit 19, is a map of the city showing the extent of our mains and the sizes and the streets in which the mains are located. I do not know by whom this map was prepared but I first recall seeing it when I went to work for the company in 1905, and it has been there ever since. As mains were added to our system they were

shown on this map from time to time. We can check the accuracy of the sizes of the mains as shown on the different streets every time we make an addition, or when repairing work is done, or where we have to lower mains on account of grading. The mains are constantly being repaired and extended. We learned the size of the main from the actual work in the street. There are a few mistakes in sizes on that map. On M. Street between sixth and ninth streets the map indicates a twenty inch, while there is but a sixteen inch main. We found that error when we had occasion to open the main at ninth street. There is another on O. street from sixteenth to twentieth street. The map indicates a four inch main, but there it should indicate a six inch main. There is another place on K. or L. Street between nineth and eleventh. The map indicates ten and it should be one and a quarter. There are one or two others, but I cannot recall the exact location. This map is in constant daily use.

We take the measurements of the mains added from the various work orders and locate them on the map. We have written
615 work orders for the extension of mains and services in some instances. They are first signed by me. The foreman puts on the order the location, distance from the lot line and the size of the main. After the work is done, he certifies to it. I assisted Mr. Brodnax in getting the number of feet and different sizes in the city together, and in that work we made use of this map. There are some additions on Exhibit 9 that are not shown on the tracing Exhibit 19. Exhibit 9 was originally prepared from Exhibit 19. Mr. Brodnax made a copy in the first instance on a different scale. We took Exhibit 9 and went over it street by street to be sure that there were no more mains on that map than actually existed and also to be sure that we had them all on. The errors on Exhibit 19 are corrected on Exhibit 9 without regard to whether it would be for or against the Company. Exhibit 9 is correct as to the number of feet of mains and the size. As to extensions shown on Exhibit 9 that are not shown on 19 we depended on memory in making corrections. We had access to and went through our consummers ledger and our service record, and located a consummer or a service on the end of each stub, and in that way we made a practical verification of the correctness of the additions to the map. The service record would be a complete verification since 1905. Prior to 1905 the presence of a consummer would verify the map. No extensions were put on Exhibit 9 without first verifying and checking out the accuracy of the extension. Exhibit 20 is a blue print of the tracing of Exhibit 19.

Cross-examination by Mr. Foster:

There is a map in the Gas Company's office dated 1901 which shows the mains in the different streets of Lincoln. Exhibit 19 is brought down to January 1st., 1913. The earliest date appearing on Exhibit 19 is April 10th., 1910, entered by John Jacob Egan. He is not now with the Company. The next entry was made June 1911 by Roy Brownell. The dates are to show that the map was corrected up to that date. Prior to the first date on that map, I put some of

the work orders on when I was first connected with the Com-
616 pany. Prior to 1908 Mr. Chenney occupied my position.

We tried to put the work orders on about once a month, but frequently they were not put on that often. The orders in their original form are bound in a book in duplicate. When the work is completed and the order returned to the office it is inserted in this book and kept there, and as the mains are entered on the map from the work order there is a mark placed upon the order designating that fact. We had all of the work orders for the mains that were laid with one exception. That was the mains from University Place o Havelock. That was a job of 18,500 feet of 4" pipe, commencing pposite the Dairy Building at the State Farm and ran into Havelock at about 13th. and Howard Streets, I think. The monthly report to ur New York Office contained all of the work orders for that month. he report is made by one of the boys in my department; no check is made of it. The monthly reports are consolidated into an annual eport. I have worked on this report off and on since 1905. They ow the correct number of feet added to all sizes of mains since 1905. ie figures in the column "In Use Close of this Year" in our annual port to the best of my knowledge are wrong. I did not know it til we took this inventory when we made a summary of the mains licated on Exhibit 9. I had no way of verifying the correctness o. the figures in these reports, and do not wish to make any statement as to whether they are correct or not. The figures have been carried down from the dim and distant past, and there is no way of checking the actual amount of mains in a system of this kind without platting them and laying them out on some map and scaling them off. I have never made any comparison between Exhibit 19 and the map in the Company's office dated 1901, and I do not know who made the 1901 map. Outside of the errors shown in my direct examination there are no changes on Exhibit 9 from Exhibit 19.

Redirect examination by Mr. Strode:

We have never made any use of this 1901 map. In start-
617 ing in on this work, we verified the fact that we had a main on a street as shown on Exhibit 19 by the fact that we had customers on that street and from our own knowledge of the main being there acquired from repairing the main and our information of the mains that are shown on Exhibit 9 does not depend upon the fact that they are shown on 19, but the fact that the mains are there and in service. So far as I know this is the first attempt that has been made by the Company to get at the correct amount of mains and the size of the mains that the Company has in Lincoln.

Recross-examination by Mr. Foster:

Exhibit 19 is not correct. There are one or two other errors there than those I mentioned. I am unable to remember all of the mains and their size and location without refreshing my recollection from the map. I discovered the errors on Exhibit 19 by going over Exhibit 9 street by street and block by block, and with the assistance of my foreman I was able to correct that map.

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N. M. BAXTER, recalled for further direct examination: Page 842 to 852 of Original Record.

Direct examination by Mr. Strode:

Since adjournment of court I have prepared a statement showing the extensions and additions to the mains in the city from those shown on the tracing of 1905 and Exhibit 9. The statement shows the sizes of the mains and their location. With the use of the tabulation and the map of 1905 and Exhibit 9 I can locate definitely each one of these extensions and corrections. Exhibit 22 is the tabulation I refer to. It is a correct statement of the extensions, additions and corrections. In the Exhibit the tracing of 1905 is referred to as Exhibit 19 and Exhibit 9 is referred to as a map. Under the heading of each column is given the number of feet and the sizes of the mains. The figures from Exhibit 19 are in actual feet; from Exhibit 9 the figures are in scale feet. If any one wishes to
618 make a comparison of the figures between 9 and Exhibit 19, he must keep in mind this distinction. There was not enough difference to warrant our extending it. I have verified the correctness of the additions and extensions and corrections from my own experience and the experience of my foreman. We know that we have in actual service the mains indicated in Exhibit 22 and not shown on Exhibit 19 by reason of the fact that services have been connected with the various places and we have opened the ground for extending the service or for repairs, and when that was done we were able to get the exact size of the mains in the different parts of the town.

Cross-examination by Mr. Foster:

The information authorizing the additions to Exhibit 19 was secured from my own experience and from the street foreman. I did not check them with the work orders. I know that there was 600 feet of 2 inch main at the place designated on Exhibit 22, Holdrege west of 21st. Street by knowing approximately how far that main extends on Holdrege Street. I do not know where it commenced. We get the length of the extension by measuring from the property line, and the item refer-ed to means that it extended 600 feet west on Holdrege Street west of the property line of 21st. Street. The second item in Exhibit 22 begins at the east property line of 22nd Street, and runs towards 23rd. Street 175 feet. The 7th. item where the main turns a corner commences at the intersection of the main. In some cases the extension may commence at the property line and the others at the intersection. If it was a straight run and no tapping off it would be from the property line.

I have verified the extensions of the mains shown on Exhibit 22 from the experience of the street foreman and myself. I do not know whether any of these mains were put in by private parties. None have been made by private parties since I have been connected with the company. There are no long service pipes included here as mains. Private parties do not pay for service pipes. I remember

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about the extension on W. Street between 22nd. and 23rd. They were laid last Summer. I remember the extension on X
619 Street between 32 and 33. That was laid the latter part of 1910. There was one on U Street between 19 and 21st. I do not know when it was laid. On that item Exhibit 19 shows 1925 in those two blocks. It shows on Exhibit 9 of 970 a difference of 155. I know the main does not run all the way through that block because Antelope Creek runs through there.

Another item is at U Street between 28th. and 31st. The tracing shows 1340 feet of 2 inch mains; the map shows an extension coming in from 28th. and also from 31st. with a total of 970 feet, a difference of 370 feet less. I do not know who put that on the tracing. On O Street between 16th. and 20th. the tracing shows 1700 feet of 4 inch mains. The map shows that it should be 6 inch mains. I do not know when I discovered the tracing incorrect, but that main has been opened twice that I know of and I have seen the 6 inch main in both places. It was opened at the Rock Island tracks on each side. I know that if the main is 6 inch at O Street, at 16th. and against at 20th. it would not be reduced between those two points because O Street is one of the main feeders to East Lincoln. On M Street from 6th. to 9th. the tracing shows 1210 feet of 20 inch Main. The map shows 1250 feet of 16 inch. There is another case where we reduced the size of the main to get it correct and found 40 feet more. I discovered this in the latter part of 1908. The size of the main changes at 6th. Street. I have seen it opened there, but I have never seen it opened at 9th Street. On L. Street west from 8th. Street the tracing shows nothing at all; the map shows 180 feet of 2 inch mains. That main was put there under my supervision 3 or 4 years ago. It runs on the south side of the street just about to where the railroad tracks crosses L. Street and a service is connected on that which runs to the Beatrice Creamery Company.

N. M. BAXTER recalled for further direct examination: Page 1669 to 1676 of Original Record.

Direct examination by Mr. Strode:

We kept a stock on hand of different sizes and had a stock on May 13th., 1913. The 4 inch pipe was purchased in the winter of 1913. Exhibit 100 is a tabulation of the weights of pipe. The pipe
620 that we had on hand is the average run. I weighed four lengths of 4 inch pipe. The scales on which they were weighed were tested as to their accuracy by Dr. Spealman, the City Inspector, and found to be O. K. That was on May 3rd., 1913. I also weighed one length each of 6 inch, 8 inch and 12 inch pipe. I have here a tabulation showing the average weight of this pipe. It is Exhibit 100. It is a correct showing of the weights of the pipe.

Cross-examination by Mr. Morning:

These lengths were picked indiscriminately from the stock. We weighed 4, 6, 8, and 12 inch pipe. They are cast iron. The 4 and

12 inch pipe was purchased in the winter of 1912 and 1913. We have just one length of 12 inch pipe on hand now. We just keep an extra length in case of a broken main. If we were going to lay a new main or make an extension, we would order it for that purpose. We had at that time on hand over 100 lengths of the 4 inch pipes, just a few lengths of the 6 inch pipe and a small quantity of the 8 inch pipe. We still have it on hand. We buy the 2 inch pipe in lots from 10,000 to 15,000 feet. That is used for gas extension, gas service into houses. I did not weigh any of the 2 inch pipe. The 2 inch pipe is wrought iron. I was just getting the weight of the cast iron pipe.

Redirect examination by Mr. Strode:

I understand that there was some controversy about the weight of the 4 inch pipe.

Recross-examination by Mr. Morning:

I do not know whether there is a variance in the weight of the 2 inch pipe or not.

Redirect examination by Mr. Strode:

Exhibit 22 shows correctly the extensions and additions shown on Exhibit 9, and which should appear on Exhibit 19. It points out the specific change in feet and where located.

621 N. M. BAXTER, recalled for further cross-examination: Pages 1741 to pages 1762 Original Record.

Cross-examination by Mr. A. D. Adams:

Exhibit 66 is a drawing showing the buildings and machinery at the works, I think it was up here on- day on the table. Exhibit 100 was prepared by me. It shows the weight of certain pieces of pipe that were weighed under my supervision. It shows that four pieces of 4 inch cast iron pipe were weighed by me. This pipe came from the stock at the plant. They were purchased approximately during the winter of 1912 and 1913. They were all bought about the same time. This 6 inch pipe were taken from the Company's stock. I do not know when it was purchased. It had not been used, and do not know how long we had had it. We only had a few lengths of 6 inch pipe at that time, and I think the last pipe of that size we purchased was in the Spring of 1910. I do not think that this piece was part of that lot. I think it antedates that purchase. The 8 inch pipe I secured at the plant. I do not know when it was purchased. I also secured the 12 inch pipe at the plant. It had not been used, neither had the 8 inch. The 12 inch pipe was purchased last fall. The 4 inch pipe that we have been using the last 25 years ranges in weight from 19 to 20 pounds. I have always figured this pipe at 20 pounds to the foot. I believe the weights on Exhibit 100 show fairly and substantially the weights of cast iron pipe that the

Company has bought during the past five years. I believe the weight of the 4 inch pipe shown on Exhibit 100 is fairly representative of the weight of that kind of pipe purchased by the Company during the last four years. I have a set of records in my office called "Main Work Orders" starting in August 1905 and they are down to date. I am familiar with the statement compiled from those orders showing the length of each size of pipe shown to have been laid. With very few exceptions that Exhibit Checks with our record of reports which we make annually. I do not know that the records are correct prior to 1905 or not. The records kept prior to
622 that time are not complete, and from what I have heard of the way the work was done in the early days, I would not be surprised if those records were incorrect. Prior to 1905 the original records of the main extensions were not complete or accurate. The annual reports prior to 1905 were in the same form as at present. There are several months in those old records starting in 1901 which shows no mains at all, and there are some months missing. We have a set of service cards commencing with August, 1905, which shows the location, length and size of pipe with each service installed. No statement has been compiled from these service cards to my knowledge. Since 1905, I believe the record of the number of services laid, as shown in the reports of the company is correct. We have a set of meter cards in my office. I do not know when they commenced to run. I know of no reason why the meter reports of the company showing the number of meters purchased each year beginning with 1903 should be incorrect. Since I took charge of the department I believe the reports are correct. I have made no investigation of the quantity of wrought iron pipe that has gone into the plant since 1902. The property owner pays 25 cents a foot for service pipe from the curb line to the meter. I do not know how long that has been in practice. I simply report the amount of pipe laid on a consummers property. We had a different method of measuring at one time. The charge used to be 25 cents a foot from the lot line. I believe that charge was made prior to 1908. It is customary for the property owner to pay for the pipe between the end of the service pipe and the meter. In such case the customer pays 16 cents a foot. We are using rigid pipe connections with the meter. Prior to using them the connections were lead. They run from 15 to 18 inches.

Redirect examination by Mr. Strode:

In selecting the 4 inch pipe for weighing we simply picked 4 pipes without any effort to pick out of the pile heavy pipe. We only have a small stock at present. Not over 20 lengths. We will be glad to take the city's expert down there and have him weigh
623 it. Where there is a large extension, it is not built on a work order. The work orders apply more particularly to small extensions and smaller repairs. Exhibit 85 shows the record of the Company as to the size and number of feet of main from 1901 to 1912. There is tabulated the number of feet and different size of

main in each year as shown by the annual reports, and there is also shown the discrepancy.

Recross-examination by Mr. Adams:

The only mains which has been laid since 1905 for which work orders are not used was that from Lincoln to Havelock through University place. The main register is in book form. We began to use it in August 1905. Prior to 1905 we had no register. The heading on Exhibit 85 is not exactly correct, it should be "Register or Orders." The present system began with 1905. Prior to that time we had another system. The oldest I have, I think is 190*a*. I can find no orders for 1904. The reports show that there was some laid in 1905.

Redirect examination by Mr. Strode:

The extensions on N Street from 7th to 17th was built prior to my connection with the Company. I do not know whether there was a work order for that or not.

Recross-examination by Mr. Adams:

That extension was laid in 1905 before I was connected with the Company, while I was going to the University; I think in the Spring.

Redirect examination by Mr. Strode:

If they had been using the work orders at that time, a work order would have been issued for it. We have taken two inventories of our meters. The inventories differed considerably from the meters shown in the New York report. There were more in the inventory, I think, I am not sure.

624 Recross-examination by Mr. Adams:

I know nothing about the invoice for pipe purchased by the company for 1912. There was doubtless pipe purchased at that time. I do not know anything about 2 miles of 6 inch black pipe being laid or where they got it. That would be wrought pipe.

625 E. W. REED, being first duly sworn, testified on behalf of the plaintiff as follows, pages 656 to 674, original record:

Direct examination by Mr. Rose:

For the last three and a half years I have been employed by the State Railway Commission as a right-of-way valuer and statistician. Prior to that time I was engaged in the real estate business for ten or fifteen years at Holdrege, Nebr. I have made an exhaustive study of real estate values in Lincoln, and obtained my information from going over very carefully the existing values of property in all parts of the city, by talking with the County Assessor and City Tax Commissioner, and real estate men, and by observing closely the property which is listed for sale and the prices which are asked and the prices

which are obtained upon real estate sales in the city. I have made returns to the Commission of the valuation of all of the property owned by the Burlington railroad in the city, aggregating some 330 acres. I have made an appraisal for the Railway Commission of the land and lots owned by the Lincoln Telephone and Telegraph Co. including the real estate formerly owned by the Nebraska Telephone Co. From this experience I am acquainted with the fair and reasonable market values of real estate in this city. I am acquainted with blocks 77 and 79 in the city of Lincoln, and have appraised a portion of block 77 which belongs to the Burlington railroad, and I have appraised other properties in the immediate vicinity of these blocks. There is one railroad track which connects block 79 with the Burlington railroad, and I know about the vacation of the streets and alleys contiguous to block 79. With the service track in use connecting the plant with the Burlington railroad the value
626 of that property for railroad purposes would be about the same as for other purposes. In my opinion the fair and reasonable value per acre of the ground in lots 1 and 2, block 77, is $3,500 per acre. Lots 1 to 12 in block 79 are of the fair and reasonable value of $4,000 per acre, in my opinion. The fact that the utility located on this ground required more space would in my opinion increase the value of the adjacent ground to that plant. Trackage facilities place property on a par with railroad property. The values I have given are naked values without reference to any improvements on them.

Cross-examination by Mr. Foster:

I have never dealt in real estate in a commercial way in Lincoln. In 1909 block 77 was assessed at 2½¢ per square foot. I do not think there has been very much change in the value of this property from 1909 to 1912. Block 77, according to my valuation, is worth about 7¾¢ per square foot. In 1909 the assessed valuation of real estate in Lincoln was about 65% of the actual selling value. By reason of the fact that this property is located in the extreme southeast corner of the block I concluded that it was worth more than the average property in the block. I valued the right-of-way in block 77 at $3,200 an acre. At the rate of $3,500 per acre the real estate in block 77 would be worth a little over $500 a lot. A lot on the east side of the block would be worth one-third more than on the west side. It is nearer to the railroad which gives it better trackage facilities. I place a valuation of $4,000 per acre on block 79 because it is a little farther east than block 77. The ground has been raised somewhat, which undoubtedly improves it as a piece of real estate, and the property immediately east of that I valued for railroad purposes at a valuation of $4,000 per acre. The values
627 I have put on these blocks is by a comparison with property valued farther east. I have actually seen the land. I used the purchase of some property near the junction by the Burlington railroad as a partial basis for my estimate on this property. The basis of my estimate here is the valuation I put upon the railroad property adjacent to this property. The railroad adjoins block 79

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on the east and south. The property that I had the purchase price on and used in my estimate was not to exceed four blocks away. The property in the vicinity of block 79 has not changed hands for the last four or five years because it is quite isolated from the rest of the city by the railroad and is only valuable and useful for trackage, and also on account of its being close to Salt Creek and occasionally subject to over-flow. It has over-flowed twice in one year to the extent of two or three feet, I should judge. I understood that the flood of 1908 put the gas and electric plant out of business for some time. That would not have a great effect on the value of this property for the use of the Gas company as they have raised their lots to a sufficient height to avoid a recurrence of that flood. It would have an effect on its market value for general business purposes. The values I have given here are what I call the reproduction value or what it ought to be purchased for. I would be unable to say just how much the overflow would depreciate the property for the use of the Gas company. I do not think the fact that the property is being used by the Gas company increases its value over the surrounding property.

Redirect examination by Mr. Rose:

I believe that one time I read of the manufacturing plant in block 79 being put out of business by high water. At that time the water rose to a depth of one foot in the Burlington passenger station. It rained from five to six inches in this watershed in the night preceding that flood. It was a very unusual rainfall and unprecedented, to my knowledge. There have been industries built near block 79 recently. The ground in this vicinity is valuable for industrial purposes. There are a great many in the valley. The drainage channel of Salt Creek has been straightened and deepened since I have been here to prevent flooding and to give additional drainage. The only valuable sites for industries in this city are near the railroads and they occupy the low valleys around Lincoln. They are all in the Salt Creek valley except the Rock Island, which is in the Antelope valley.

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Recross-examination by Mr. Foster:

I think block 79 is at least two feet lower than the Burlington depot. It is two or three blocks from the gas plant on block 79 to the nearest industry located in the valley. In making my valuations I have used very largely the Sales system where it was practicable. In valuing railroad property we have used what we call a per cent of increase to cover the cost of assembling and incidentally a severance damage added to the market value which I have given you on all of this property of the Burlington railroad. I took the market value, a part of which I have given you, and increased that by an addition of 25%. The railroad property in block 80 I valued at $4,000 as a market value. This property is immediately east of block 79.

Redirect examination:

The property in block 111 immediately south I placed a market value of $3,200 on, and for railroad purposes, $4,000.

629 WILL A. GREEN, being first duly sworn testified on behalf of the plaintiff as follows, pages 1393 to 1402, original record:

Direct examination by Mr. Strode:

I have been in the real estate business in Lincoln for the past twenty-five years and I am acquainted with the fair market prices for real estate throughout the city and have been for the last six or seven years, and am acquainted with real estate values in East Lincoln near the East Lincoln property of the gas company and with real estate values in the neighborhood of their plant located in Block 79. In my opinion Lots 1 to 15 in Block 2, Pecks Grove Addition, being the property adjacent to the East Lincoln holder is of the fair market value of $8.00 per front foot, which includes the lots without any improvements. There are 365 front feet which would be $2,920.00. The fair market value during the past year, of lots 1 to 15 in Block 7, Peck's Grove Addition exclusive of improvements is $12.00 per front foot, which would make the total value of these lots $4,380.00. The two lots in Block 77 have a fair market value of about $700.00 and the twelve lots in Block 79 have a fair market value of about $750.00 a lot.

Cross-examination by Mr. Foster:

My estimates of the value of the lots in Peck's Grove are based upon what I think I could dispose of them for and for what lots in that vicinity have sold for. We were offered $450.00 for a lot 50 by 71 feet in this vicinity. I can get the same price for these lots. I do not know what the Gas Company paid. There is a railroad embankment out near the Peck's Grove lots, probably two or three feet high. In making my valuation I just considered the lay of the land and it is all built up through there; it is built right up to this property and I consider those lots worth every dollar I have testified to and they would sell readily at that price.

630 In getting at the value of the lots in Block 77 I considered the price at which lots in that vicinity are held for, and sales. The man right across the street wants $500.00 for his lot and the man on the corner back of that wants $1000.00. I sold six or seven or nine lots to the Packing House right next to this for $10,000.00. That includes two O street lots. I would put the corner lot in Block 77, in at $400.00. If it was a full lot it would be worth $550.00. It is on one of the travelled streets of the city North and South. Lot 11 is worth from $400.00 to $450.00. As to the corner lot in Block 79, that is a good lot. They have trackage there and it has been filled up so that is good property. The Packing Company paid $10,000.00 for the nine lots and then tore the building down that was on them. It was about ready to fall to pieces. If the gas company

was not on corner lots in Block 79 and the trackage was there I would not be surprised that I could get $1,000.00 for them.

G. J. CULBERTSON, being first duly sworn testified on behalf of the plaintiff as follows: Pages 1402 to 1412 original record.

Direct examination by Mr. Strode:

I am in the real estate business in Lincoln and have been for more than twenty years and am acquainted with market values of real estate throughout the city. I know what the fair market value is of the property in Blocks 2 and 7 in Peck's Grove addition. I figured the fair market value of the lots in Block 2 Peck's Grove Addition at $200.00 each for the 25 foot lots, making a total value of between $2900.00 and $3000.00 for the lots in that Block. As to the lots in Block 7 the fair market value of the 25 foot lots is about 325 and of the 50 foot lots $650.00 per lot. The lots in Block 77 are worth about $800.00 for the two full lots and the lots in Block 79 are worth about $1000.00 each. That is what they were trying to make the Gas Company pay for them at the time they wanted to get in
631 there. Exclusive of the use made of them by the Gas Company and assuming that there is trackage on them, the lots in that Block would be worth about $800.00 a piece, and could be sold for that. They might not be sold at the present time, because we can't sell stuff anywhere. I think the fair market value however is about $800.00, considering that they had trackage and are pretty well filled up and are convenient to the O street viaduct.

Cross-examination by Mr. Morning:

I have seen these lots covered with water and they overflow quite frequently. They are located in what is known as the Russian settlement. If they were vacant they would sell to the Russians for from $300.00 to $500.00 a lot for residence purposes. We had a number of 25 foot lots in there listed at $200.00 a lot. These people are willing to pay more for such lots for a home than investors are willing to pay. $200.00 and $400.00 a lot don't sound big to them and they are willing to go in there in spite of the fact that the lots overflow. It is hard to sell lots anywhere now. The fact that the trackage is there lends a value to the lots. I do not think the city sewer is very far away from these lots. The nearest paving is on O street and the lots are about two blocks away from Salt Creek. There is no sewer nor city water to the Peck's Grove lots which I estimate at about $8.00 per front foot. These lots in Block 2 face on X street. Thirteen of the lots in Block 7 are 25 foot and two are 20 foot lots. There is no sewer there. I consider the fair market price of these lots, at this time, about $12.00 per front foot.

632 Redirect examination by Mr. Strode:

These lots where the plant is located are not enhanced for residence purposes with the railroad track there. They would have to sell on the market for business purposes and that is the value that I placed

upon them when I said they would be worth $800.00. For the purposes of the company they are worth $1000.00. That is what they were asking for them when the company went there.

Recross-examination by Mr. Morning:

If the company traded the lots on the old site for these lots, they would furnish a criterion in a way, as to their value, because the old lots would have some value. I add a good deal of value for the reason that they are used by the company and there is a track there.

J. V. PURBAUGH, being first duly sworn, testified on behalf of the plaintiff as follows: Pages 1413 to 1423 original record.

Direct examination by Mr. Strode:

I am engaged in the real estate business in the city of Lincoln and have been for a little more than four years and I am acquainted with real estate values throughout the city and have been during that time. In my opinion the fair market value of the lots 1 to 15 in Block 2 of Peck's Grove Addition, is about $400.00 for a 50 foot lot and $200.00 for a 25 foot lot; for Lots 1 to 15 in Block 7, their fair market value is about $325.00 for 25 foot lots and $650.00 for the 50 foot lots. The ground in Lots 11 and 12 in Block 77 has a fair market value of about $600.00 and the lots in Block 79 have a fair market value of about $800.00 or $900.00 a lot, for trackage. If the streets were vacated and a portion attached to this property, the added value would be figures from this same price.

Cross-examination by Mr. Foster:

633 I know of sales of real estate located near Block 79 within the last two years. I base my judgment on value of this property, on the location of the ground as trackage. We sold some residence lots three years ago at 1st and C for $500.00. There is no first class residence property in this district. There is not a great deal of difference between what I sold there and this further North. We have sold and have for sale a few lots down in this bottom. We have sold a good deal of stuff West of Salt Creek. Single lots are not worth as much for trackage as a large piece of ground. One lot would not do a man who wished to put up a wholesale house or a factory, much good. The nearest we have sold to the Peck's Grove lots, is on 22nd and Holdredge. I base my value on the ground in Block 2 and Block 7 because it is high and sightly and it has water, gas and electricity. A man could go out there and put in a sewer and cement walks and he would have lots that would sell and I would undertake to sell them if that was done. It does not add much to the selling price. It is only a block to the interurban street car, north.

Cross-examination continued by Mr. Morning:

Our firm has for sale five or six lots just across the viaduct on the road leading West and we are asking $500.00 a lot for them. The

old channel of Salt Creek runs through the middle of them. The lots in Block 79 are worth twice as much as the lots which we have for sale. There is a great demand for trackage. The railroad company will not build it for you, you have to pay them for it. The Gas Company would have to build its own trackage. The trackage excludes the property for use for residential purposes. We have turned down some good concerns the last two or three years because we could not find the trackage. The railroad company that has the trackage makes a difference in the value of the lots. There are not as many people wanting trackage as there are who want residence lots, but it is much harder to get the trackage.

634 When the Packing House people came here, we wanted to locate them on the West and North side of the viaduct, but when they found they would have to build their own track, they came down to where they are and paid $9000.00 or $10,000.00 for the nine lots, including those two against the O street viaduct.

Redirect examination by Mr. Strode:

Lots further away from the viaduct are worth more than lots under it.

O. R. MALLAT, being first duly sworn testified on behalf of the plaintiff as follows: Pages 1646 to 1660, original record.

Direct examination by Mr. Strode:

I am purchasing agent with the Gas Company and have been since March 1912. I purchase everything required by the company and have charge of that department and store room, offices and plant stock. I approve of vouchers for payment and purchase pipe for the distribution system. In the recent past our pipe purchases were usually made from the United States Cast Iron Pipe & Foundry Company. I have never purchased any pipe from R. D. Wood & Company, nor have I ever seen any record of any purchases from those people; and they have never quoted any given prices nor had a representative to see me. It is part of my duty as purchasing agent to ascertain what are the best prices obtainable and in doing that I have correspondence with supply houses. The Western Supply House also sells pipe here, wholesale. Exhibit 89½ is a letter from the Massillon Iron & Steel Company of Chicago, giving the standard weights of water pipe as adopted by the American Waterworks Association in 1908 and stating that the pipe known as Class A is the type being furnished to gas companies. That letter was received by me in answer to an inquiry made as purchasing agent of this company, on or about May 5, 1913.

635 Exhibit 90½ is a similar Exhibit received from the Sheffield Company of Sheffield, Ala. It was received May 7, 1913. That company has supplied pipe in this territory. Exhibit 91 is a letter from Massillon Steel & Iron Company and in answer to an inquiry on the price of cast iron pipe for the years 1906 to 1912. It was received on April 14, 1913. Exhibit 92 is a letter received from

the Western Supply Company concerning the price of steel pipe in sizes three-eighths of an inch to two inch, from 1907 to January 1913. They operate in Lincoln. Exhibit 80½, 90½, 91 and 92 offered and received in evidence.

Exhibits 93, 94, 95, 96, 97, 98 and 99 are part of the files of the Gas Company and are offered and received in evidence. In 1904 and 1905 the period of time covered by those letters, the company was purchasing pipe from the United States Cast Iron Pipe & Foundry Company. I am unable to produce a statement here, showing what the company has paid for some of its pipe purchases during the year mentioned. The records of the company are not kept so that you could find it all. Two or three cars of four inch cast iron pipe have been purchased since I have been purchasing agent for the laying of gas mains in Lincoln and in the suburbs. I can not give you the prices off hand. There is no discount of the quoted prices on purchases of this kind, so far as I know. Some things have a discount but there is none on pipe. I have never made any effort to get quotations from R. D. Wood & Company of Philadelphia. I make the actual purchase directly in buying pipe. Some of our contracts are made by Doherty & Company for us, for such supplies as meters, motors and transformers, which of course are in the electrical department, except meters.

636 Redirect examination by Mr. Strode:

The meters and gas equipment of the plant would come directly through the Doherty people. At the end of each year, on meter purchases, I think the company gets a credit backing from Doherty & Company. The books of the company would show the purchase of a car load of pipe but would not show the weight, feet or size, but back of the books are the vouchers on which would be itemized the size of pipe and the price per foot or ton and these vouchers are available for the use of the city or anybody else. I have some of the vouchers right here. Here is one from the Sheffield Cast Iron Co. showing the weight of four inch cast iron pipe and the price at $30.00 a ton and the number of the car that the shipment was in.

Recross-examination by Mr. Morning:

During these years we have the actual figures. I will furnish a statement of what the vouchers show in the way of pipe purchases.

Redirect examination by Mr. Strode:

The price of gas pipe has gone down since 1904. That is shown by the quotations from these companies.

Exhibit 91 shows the average price of all sizes of pipe was $32.00 in 1906, and in 1910 the same pipe was $23.00.

637 O. R. MALLAT recalled for further cross-examination: Pages 1762 to 1769 original record.

Cross-examination by Mr. Adams:

Exhibit 92 was received in answer to a letter from me. I will endeavor to produce the letter I wrote, or a copy of it. I think the price for black pipe shown in this letter from the Western Supply Company is a fair price, such as the company would likely pay. That is approximately the price which we actually paid in the latter part of 1912. In September the price shown there for two inch pipe was $9.32. I do not remember what the company paid for pipe at that time. The figures shown in Exhibit 92 are approximately the figures the company paid. I find nothing in Exhibits 89½, 90½ and 91 going to the specific weight of pipe for any year prior to 1905. I think the prices in Exhibit 91 are fair; and the price quoted by Massillon of $37.75 net per ton, Lincoln, I think is a fair price. The price quoted by the Massillon people in a letter of April 13, 1906 is #32.35 per ton of 2000 pounds F. O. B. Lincoln. This is $5.40 less a ton than the academic price we got from them.

Redirect examination by Mr. Strode:

The quotations in Exhibit 91 for prices in 1906 refers to a whole year and to all sizes of pipe. It is a summary of what, in the opinion of those people, was the average price of pipe of all sizes, and Exhibit 98 was a quotation in reference to a specific kind of pipe on a certain date and there is a difference between the cost of one size of pipe and another.

Recross-examination by Mr. Adams:

The letter of April 14, 1913 from the Massillon Cast Iron Pipe & Foundry Co. is a general summary on pipe prices from 4 to 20 inch.

Redirect examination by Mr. Strode:

638 Covering an entire year, the price of pipe varies during the year. Mr. Selleck is at the head of the Western Supply Company in Lincoln. They are representative people engaged in the selling of pipe.

639 WILBUR C. SUNDERLAND, being first duly sworn testified on behalf of the plaintiff as follows: Pages 1883 to 1898 original record.

Direct examination by Mr. Strode:

I am a clerk with the Western Supply Company. I have been with them since 1907. Prior to that I was with them from 1897 to 1902. They are engaged in the wholesale plumbing, steel supplies and water works business. We sell pipe used by the gas company. I prepared Exhibit 92 at the request of Mr. Mallat. The price of pipe is based on Pittsburgh and when we get a change from the mills we

put it into effect here and I keep on my desk a price card showing the current prices and I went back of my files and discovered the cards for the years shown in Exhibit 92. I made these prices up from the cards I found, going by the dates on which we used the prices to our regular trade. The prices shown on Exhibit 2 are the fair market prices of pipe on the different dates for less than car loads. In 1900 the prices of wrought iron pipe were almost twice as high as they are now. They are lower today than they were a few years ago. They fluctuate. The price cards I have referred to are marked Exhibits 113 to 133 inclusive. They are tendered to counsel for the city.

Cross-examination by Mr. Adams:

These cards show the net prices on the various sizes of pipe delivered in Lincoln. The printed matter on the card is merely a list of prices, the first column gives the nominal size, the next the price per foot. On each card is the standard list on pipe. That hasn't changed. The cards are all alike so far as the printed matter is concerned without regard to the date, but the matter written in in pencil or pen is the important part on the price. These cards cover the time from 1907 to 1912. The standard list went into effect in 1900 and 1901. The pipe furnished has not been wrought
640 iron pipe for a good many years. These prices are on merchant's pipe. I presume it means steel pipe. All the pipe we sell is termed as Merchants wrought iron pipe. They don't use the wrought iron pipe any more. This is what we send in filling all orders for black or wrought iron pipe and if we sent the wrought iron pipe the price would be higher and the man would kick on the price. Mr. Mallat telephoned me one day and asked me to give him the price on pipe for some time back on the kind we had been selling to the gas company during those years, up to two inch in size. Nothing was said about the price for we had sold pipe to the company. The prices shown on Exhibit 132 are for small quantities, less than car load lots. On September 14, 1912, the price of three-fourths inch black pipe was $2.98 per 100 feet, for 1¼ inch pipe on the same date the price was $5.83 and on 2 inch pipe the price was $9.32 per 100 feet. I do not know whether we sold the gas company a large quantity of pipe at less prices than this or not, at that time.

641 O. R. MALLAT, being recalled for further direct examination by the plaintiff, testified as follows: Pages 1931 to 1939 original record.

Direct examination by Mr. Strode:

I have gone through the original vouchers of the company, from 1907 to January 1913 to determine what the company actually paid to the Western Supply Company for pipe during the period covered by Exhibit 92. In 1908 the company purchased from the Western Supply Company some of the sizes referred to in Exhibit 92 and Exhibit 135 is a voucher for 1¼ inch black pipe, bill dated April 9,

1908 at a price of $7.25 one hundred feet. Then there is another purchase of the same size on April 10th at the same price, and another voucher for April 14th for 1¼ inch black pipe at $7.13 per one hundred feet. Exhibit 92, under date of April 13, 1908, there is a price quoted on 1¼ inch pipe of $7.13 and the same is true on April 14th. The items mentioned last are found in Exhibit 136. On April 15, 1908 Exhibit 137, we have invoice for three-fourths inch black pipe at $3.65 per one hundred and this is the same price that is referred to in Exhibit 92 under date of April 13, 1908 at $3.65 a hundred. Under date of April 16, 1908 Exhibit 138, I find an invoice for 1¼ inch black pipe at $7.13 a hundred and that is the price quoted in Exhibit 92 under that date. On April 21, 1908 in Exhibit 139 I have invoice covering two inch black pipe at a price of $11.41 per hundred, which is the same price as is quoted on that day in Exhibit 92. I have another invoice, Exhibit 140 dated April 21, 1908 covering three-fourths inch black pipe at $3.65 per hundred, and that is the price quoted on that day in Exhibit 92 and under date of April 23, 1908 I have an invoice from the Western Supply Company covering three-eighths black pipe at a price of $2.20 and that is the same price that is quoted on that date in Exhibit 92. Exhibit- 135 to 141 are original invoices and are paid by the company. They are offered and received in evidence. I have also vouchers for 1909 and 1910 prices for purchase of pipe which
642 correspond with the prices quoted in Exhibit 92. Exhibit 142 covers vouchers for the year 1909 and Exhibit 143 covers vouchers for the year 1910. They are for the same identical pipe as quoted in Exhibit 92 and are at the same prices.

Cross-examination by Mr. Foster:

These vouchers cover less than car load lots of pipe.

Cross-examination continued by Mr. Morning:

Some of the purchases run over 1000 feet and some of them run down to a very few feet. We buy pipe from local dealers altogether. We can buy it from them as cheaply as we can at Pittsburgh. The company was not buying in car load lots before 1912, not as a rule. We purchased from the Western Supply Company, Cooper & Cole Bros. and others. I am unable to give the difference in the price of purchases in small lots and in car load lots. I have bought only in car load lots since I have been with the company. I can not tell what prices I have paid without looking it up. It is worth while to buy in car load lots. When I ask for the price in Exhibit 92 I simply requested the prices. I do not think the matter of quantity was discussed. If the plant was to be built today I presume they would buy in car load lots. I do not think the Western Supply people could furnish pipe quotations on car load lots. Whenever we ask a quotation on a large quantity they have to write to the factory. They carry a large stock, but they do not furnish car load lots out of that stock.

643 JOHN LEBSOCK, being first duly sworn, testified on behalf of the defendant as follows: Pages 2696 to 2712 original record.

Direct examination by Mr. Morning:

I live in Lincoln, Nebraska and am engaged in the real estate business and have been here four years last July. I have had experience in selling and trying to sell lots in the Salt Creek bottom in the vicinity of the gas works and am familiar with the selling and market price. These lots are all of somewhat similar character. They are bottom land and are in the vicinity of the railroad. I know where the gas works are located. The corner lots in Block 79, if they were without improvements, would sell for, in the neighborhood of $150.00; the middle lots as high as $75.00 and $80.00. That is a fair value for them. I sold Lot 10 in Block 232 on A street between Third and Fourth streets, for Judge T. C. Munger, for $90.00. I would sooner have that one than two of the lots in Block 79. The railroad runs on the street immediately west of it and it is less than a block from the main line of the Union Pacific. I sold lots 11 and 12 in the same block, one of which is a corner lot, for $350.00 for the two, for Woods Bros. Henry Herzenraider bought the last two. I also know about the sale of Lots one and two in the same block. There were improved. They had a four room house on them, built four or five years ago. It was a pretty good house and they brought $650.00. These sales were all last summer. I also had for sale Lot 4 in the same block and I had a buyer for it for $65.00, but the deal fell through because we couldn't furnish the title. I also have some lots listed for sale between 1st, 2nd and 3rd streets down towards Salt Creek at about the same prices I sold these others. They are a little cheaper. I am now associated with Geo. Hagensick. I was in for a while with Harvey Bell. The people living down there in the bottom talk the German language and are called German-Russians. I am one myself. Along in the nineties when I used to live in Lincoln, I bought lots down
644 in this bottom and paid $500.00 for six. You could probably get them now for a little over $100.00 or so. These lots are between Third and Fourth streets and C and D streets.

Cross-examination by Mr. Strode:

This lot that I sold for Judge Munger is about twelve blocks from the gas works. I consider this lot that I sold for Judge Munger more valuable because Judge Munger owned it than if somebody else did. If you go twelve blocks north from 79 you would be clear out of town and down into Salt Creek. I do not know whether it is platted out there or not. If you went a little west from the gas plant you would be clear out of town and in the cornfields. When you get out there you get into the foot hills and the land is valuable and a lot 50 by 142 feet would be worth more there. I own a lot out near the new round house on a high hill, about a mile and one-fourth or a mile and one-half from the gas works. I do not

know whether you would get outside the corporate limits if you were to go a little south of the gas works or not. The limits are pretty well up south. The limits are further south than A street. I never had much experience out there, all the business I have done was down through where they live. Gooches Mill is on 6th street south of A street. West of Gooches Mill there is farming country. I do not know whether it is platted or not. When you get out south across the bottom of Salt Creek, there it is a different proposition than it is down where this block is, within three blocks of the Burlington station. If you were to go a mile east of the gas works you would be about to 14th or 15th street. The lots there are worth more than $200.00. I don't know what they probably are worth there. It would be hard to tell, they sell them mostly by the running foot. I have no idea of what they ask. Everybody knows that they would be worth more than $200.00 but I couldn't say how much, I never sold any in that locality. They would ask five or six thousand for a corner lot and if you owned one you would
645 probably want $5,000.00 or $6,000.00. It is a location that I can say nothing about. You can't sell any lots there hardly, they are not for sale. That is because of the location. It is different than it is down at Second or Third streets. Lots within a mile east of this site on Second and Third and M streets are worth $10,000.00 and $15,000.00, and you go a mile south in that Salt Creek bottom and it is just as different in value. Judge Munger's lot was within a block of the railroad on both sides. If I had a lot along side the Burlington main tract to Denver that runs out on the Sale Creek bottom, they would tap that main line and run a spur track out to that lot. If I would build a coal yard on that lot I would have trackage right there. They would make a cut off the main line for me. They would do that any time if I wanted to build a lumber yard or anything like that. They would build a spur right away. There is a coal yard there now. The tracks come right out from the main line. Every time the railroad cuts into its main line, it increases the danger and hazard for everyone that rides over that road and it takes a chance of jumping that switch every time a train runs over it. I know that they will cut the main line before they will run two miles from their yards out to the site. They put spurs wherever you want them. I have been a railroad man for eighteen years, running sections and laying tracks. I have been with the Burlington for 22 years and have been running extra gangs and putting in yards and switches. I put in a yard for them just south of Hastings in 1897 or 1898. It was a yard with four or five switches. I had no switch off of the main line at the station.

JOHN LEBSOCK, recalled for further cross examination, testified on behalf of the defendant as follows: Pages 2729 to 2737 original record.

Cross-examination by Mr. Strode:

There is no switch cutting the main line from J street to the Salt Creek bridge on this map. I never sold any lots in Block
646 80 immediately south of block 79. They can probably be bought from $150.00 to $200.00. I do not know who owns them. There are a lot that have buildings on them, and that is for the house and lots. I don't know anything about block 80 nor 81 nor 75. I don't know what those lots sell for nor what their market value is, and the same is true in Blocks 48, 71, 105, 82 and 83. The cold storage plant is in Block 83. If I had a lot there and you wanted to buy it I would ask you $10,000.00 if you wanted it for business purposes. That is in the Salt Creek bottom. I do not know whether the land in Block 83 is any higher than in Block 79 or not. I do not know what the market value of the lots of the Lincoln Packing Company is. I never had any sales through that location. I don't know anything about the lots in Blocks 80, 75, 76, 48, 49, 71, 81, 82, 83, 105, 106, 104, 107, 113, 114 and 115. Mr. Hagensick and I worked together and when we make deals together we are partners that way. I am not a partner in all his business. I did the same way when I was with Harvey Bell. I had nothing to do with his general business. I have a general business of my own. I am writing insurance for the Dwelling House Mutual Insurance Co. That is right on 12th street between N and O. Mr. Mills is the Secretary. I work for him. We have never had any lawyers. We do a straight business. It is a strictly mutual company. I have given a good deal of attention to this Mutual Insurance Co. and I have been in the real estate business all the time. I haven't devoted all of my time to it. I did business whenever I could. I haven't made any other sales in the Salt Creek bottom than those I told. I sold a house for $1,850.00 out on Pine street last summer, to Jacob Hill, then I have sold three others, I can't tell you now where they are.

647 GEORGE HAGENSICK, being first duly sworn, testified on behalf of the defendant as follows: Pages 2712 to 2729 original record.

Direct examination by Mr. Morning:

I live in Lincoln and am in the real estate business and have been for twenty-five years or more. I speak German. I have had listed for sale and have sold lots in the Salt Creek bottom, lying in the West part of town where most of the railroad tracks located in Lincoln are found. I am familiar with the market values and sale prices of lots in the vicinity of the gas works in that bottom. I haven't sold any lots there for some time. I have a lot listed for sale at $200.00. It is located between First and Second on N street

and is north and west from the gas works, which would make it south from the viaduct. I have had it at that price for two or three years. The lots around there would sell at about the same price. I have another lot listed with a five room house on it, located at 136 L street about a block away from the gas works, for $750.00. The house is not in the best condition. The lot would be worth from $200.00 to $250.00 without the house. The lots on which the gas works are located would figure at about the same rate, if they were vacant. I would not want to buy in there if I wanted an investment. I haven't made any sales down there of lots for three or four years. There hasn't been much demand. The flood of 1908 kind of stopped the demand. For residence purposes those lots on A street about which Mr. Lebsock testified would equal those this way on M and N streets. Those this way would sell quicker for manufacturing or storage house purposes than those down on A street would. In either case you could get trackage.

648 Cross-examination by Mr. Strode:

The lot I was talking about on N was lot 3 block 77. The other lot was No. 11 in Block 78. I do not recognize the property in Block 80, and I don't know what those lots are worth there. They would probably be worth more than the lots in 78. I do not know what the lots in Block 81 would be worth. The property in Block 82 and 83 used to be considered the Salt Creek bottom. The cold storage plant is on one of them. When they went in there they had to pay a pretty good price for the lots. They had to pay a good price, I suppose, to get them for the purpose they wanted them for. I don't remember whether they had to pay $1,000.00 a lot for them or not. They might have had to pay that and they might have had to pay more. I wasn't interested in the sale and didn't have any property in there. I heard at the time, but I do not remember. It is within three blocks of the gas company's ground. They probably stand at about the same elevation. When the flood came up in 1908 it submerged the Burlington station and there was water from one foot hill to the other. The Lincoln Packing Company's plant is located just a little over a block from the gas company's works. Their ground is located right on the Salt Creek bottom in the old bed of Salt Creek. They acquired that a couple of years ago. I heard at the time how much they had to pay but I don't remember. I realize that in getting a half of a block of lots together in a favorable location where they can have trackage and within a reasonable distance of the office part of town, you would have to pay more for the lots than if you got only an individual lot. There isn't much vacant space in this bottom near this location that you could get for $200.00 a lot. You might be able to get it farther west in the neighborhood for $250.00 a lot, but it is more undesirable the farther west you go. As you go east the property increases in value, except in the Salt Creek bottom. I wouldn't be in shape to say what the gas company's lots are worth. It is like putting a price on somebody else's property. You get a

block or two away from there and the values change. Upon
649 O street the valuations change each block. Block 79 is conveniently located for the gas property and has good trackage. If the gas company wanted that and tried to buy it in its own name, they would put the price much higher than to another. The railroad company had to pay much more than $200.00 or $250.00 for the lots in Blocks 81 and 82.

Redirect examination by Mr. Morning:

My testimony as to the valuation of these lots at $200.00 and $250.00 is based upon those lots I have to sell and that is what I have been trying to sell them for, for some time.

Recross-examination by Mr. Strode:

One of those lots is in Block 77 and the other is in Block 78. One of them is a 25 foot lot with a three room house on it. I have it for sale at $150.00. That is the valuation I have been talking about and it is not what these other lots or what this block of ground would sell for.

650 GEORGE P. MONAGAN, being first duly sworn, testified on behalf of the defendant as follows: Pages 2674 to 2694 original record.

Direct examination by Mr. Morning:

I am engaged in the real estate business in Lincoln and I have lived in Lincoln for about eighteen years, and during most of that time I have been in that business, buying and selling real estate. I have made a study of the property located in the Salt Creek bottoms and have sold a great many lots there. The lots farther south where there were better improvements, were higher priced. I have not made very many sales of property in that bottom during the last five years and I think the lessening of the sales at that time has been due to the floods of 1908 and 1909. These floods were severe enough to overflow the entire bottom and damage property to some extent and some five or six people were drowned. The flood inundated the ground occupied by the gas works. I am familiar with the value of vacant lots in the vicinity of the gas plant. I am acquainted with Lots 1 to 12 in Block 79 which are used by the gas plant proper. It would be a difficult question to put a value on that property if the lots were vacant, because they are not worth as much as if they are occupied. If they were vacant and in their original condition as compared with other lots in the vicinity, they ought to be worth $250.00 to $300.00, and I do not think they could be sold for more than that at the present time. I have practically given up sales of the property down there since the flood. The prices are not so good as they were before that. My estimate of the value of these lots is based upon my knowledge of the actual sales made when the sales were being consummated. I would put about the same value upon

the lots across the street west in Block 77 if they were vacant. I have also made some inquiry and investigation of the rentals of the property on side streets off from O street. At 934 P street $100.00 a month is asked for a room which is 25 x 100 feet; at 938 P street the rent is $75.00 a month, 1200 P street, which is the
651 Draper building, rents for $90.00 per month. It has a first floor and basement and is 50 x 142. 1204 P street the east room of the Draper building, rents for $80.00; there is a basement and first floor. These two rooms together would make a room with a 50 foot front on the corner. This building is a brick building. The east room is occupied by a restaurant. I do not think the west room is rented now. It was occupied by a garage.

The Brownell Block is located at 135 S. 11th street. It is a four story building, brick, with a stone front, 50 x 142 with basement. The north room rents for $135.00 a month and is occupied by a piano store. The south room rents for $150.00 a month and is occupied by a restaurant. At 143 S. 11th street is located the Stamm building. The room there is 25 x 142. It is occupied by a racket store and rents for $125.00 a month for the first floor and basement. Some of these rooms are as large as the room occupied by the gas company now, but I do not know how much space they occupy in this building. The building first mentioned, is across the street north from the Post Office and all of the cars pass it. The Draper building at 12th and P streets is one block from the regular O street car service and is on the south 12th and S. 18th street service. I would think there would be very little difference as to location between the present location of the property at 14th and O and the Brownell block and the block occupied by the racket store, so far as convenience is concerned, to those who pay the gas bills. They are within a half block of O street car line and are located on the lines running on 11th street, and are about 50 feet from the rear of Rudge &,Gunzel's store, which is one of the big stores of the city, and about 200 feet from the City National Bank, which is one and one-half blocks from the First National Bank. The First National Bank is one of the large modern office buildings in the city. Eleventh and O is the business center of the city, and the South 11th street property would be as near to the business certer as the present location.

652 Cross-examination by Mr. Strode:

The city library is located at 14th and N street-, immediately back of the office of the gas company, and they determined on this location as being the place most convenient to all of the people of the city who had to come up town to get to the library. The gas bills of the company are paid in the main by women folks, and the company's office should be located in the main, most convenient for them, in clean surroundings. I would not want it with a pawn shop on one side and a pool hall on the other, and in a place where they would have to pass two or three saloons on the way. I do not criticize the present location of the company's office and I would expect them to put their office in a clean place where the women and children could pay the bills and would have a safe place to go.

The city has grown east on O street during the last eighteen years and the best corner today is 13th and O and is within a block of the gas company's office. The new high school building has been located ten blocks east of the office with the idea of accommodating the future growth of the town and getting it located as near the center of the population as possible. The office of the gas company ought to be located in a permanent place. All of the buildings that I have spoken of are off of O street, which is the main street. In order to secure a location for the gas office you have to take into account whether or not the buildings I have mentioned could be leased at the time the gas company was looking for a location. The fact that the buildings had been there for a good many years would not indicate that the gas company could rent them when they wanted them.

Also the moving picture theaters are all located east of 13th street and in locating them, they endeavored to place them where they will be most convenient to the people who go down town. Most of the lots which I handled in the Salt Creek bottom were of a different character than the gas company's lots, in that they were residence
653 lots, and the company's property is trackage property, and it is in the vicinity of the wholesale district. The new packing plant is within a block of it and while it is objectionable for residence purposes, it is not to the town. It is right in the vicinity, and the lots were bought for the purpose of a packing house and that would be something similar to the situation of the gas plant. The fact that the trackage is there would help the value of the lots so far as a business proposition is concerned, but not a residence. The flood hurt the value of some of the land for residence purposes, because it drove the people out of the bottoms, but when they came to suing the railroad company for damages, the value went up higher than it was ever known to have been before. I have had no experience in selling property in that vicinity for business purposes and what I have referred to is my experience in the sale of lots for residence purposes. I do not know whether the value per lot would be increased by reason of the property being altogether or not.

Redirect examination by Mr. Morning:

Seven or eight years ago I sold a lot in Block 140 for $150.00. It was located between second and third and H and J streets, two or three blocks east of Salt Creek and south of the J street grade of the railroad company. I sold, seven or eight years ago, Lot 11 in Block 140 and Lot 5 in Block 168 which adjoins 140 and 12 in Block 139. Those in 168 and 169 I sold for $200.00 a piece. They are all east of second street and South of J. They were all 142 x 50 feet. The main line of the Burlington to Denver is on the west side of the block. I sold lot 12 in Block 135 for $150.00 and Lot 7 in Block 140 for $275.00; probably seven or eight years ago. These lots were much better than the gas company's lots for residence purposes. They might not be as convenient for trackage. I sold Lot 8 in Block 140 for $250.00 and Lot 4 for $80.00. There was a little depression in the ground that made this lot undesirable. I sold lot 7 in Block 283

for $85.00. Those lots are going up the creek on D and E streets.

654 I also sold lot 9 in Block 234 on 4th and F streets for $310.00, lot 12 in block 193 for $300.00, lot 9 in 139 for $200.00; lot 10 in block 139 for $175.00; lot 8 in block 170 for $200.0; lot 5 in block 228 for $190.00; lot 3 in block 204 for $275.00. These lots are all in the Salt Creek bottom near the railroad track and to some of them trackage would be available if desired. They are higher elevations than the gas company's lots. Those sales were all made eight or ten years ago and they would not sell for the same money now. Herpolsheimer's department store is a block east of the south 11th street property. That is patronized by women and children and the public generally. The ten cent stores are located between 11th and 12th streets on the south side of O. They are probably the most largely patronized stores in the city. The upper floors of the Brownell block are offices.

Recross-examination by Mr. Strode:

At one time some of the principal lawyers in town had their offices there and they have now moved out and among them was Mr. Morning. He moved up to 13th street.

655 HENRY J. AMEN, being first duly sworn, testified on behalf of the defendant as follows: Pages 2737 to 2754 original record.

Direct examination by Mr. Morning:

I live in Lincoln and am engaged in the grocery and meat business and am located at 201 F street in the Salt Creek bottom in what is known as the German Russian settlement. I own six or seven other properties. Some are vacant and some have houses on. Now and then I buy and sell real estate and I have been doing that in recent years in that locality. The people living down there consult with me about their real estate transactions and business, and I have some knowledge of the transactions that actually take place. I speak the same language as these people and act as a sort of general advisor. I sold lot 5 in Block 197 about 30 days ago for $200.00. That was a vacant lot, full size. The ground is a little higher there, and for residence purposes I would prefer it to the property of the gas company. That lot was on E street and the gas works are on M. It is still in the railroad district. I have lot 4 in Block 198 that I am asking $200.00 for. Lot 3 sold a month ago for $200.00. Lot 5 in Block 197 is about 200 feet from the side tracks. In Block 198 the lot is about a block from the trackage. These are all the sales that I have made, but other people have sold in that locality at about that same price. As to the general market value of the lots in Block 79 where the gas works are located, that is a hard question. Those lots are laid out nicely and would sell probably for $300.00 if the gas works had never been there. That was settled up before ours was, but it would sell for that, I guess. It is something no man could say,

I wouldn't want to pay that price nor say it would be worth that. My best judgment under the conditions, I would think that would sell for from $300.00 to $350.00. It depends upon how they were built up. Sometimes a man will pay $100.00 more to get next to a certain neighbor. If the gas buildings were removed these lots wouldn't be worth any more than the property right north.
656 The nearest sale that I know of recently was in Block 109. There was a lot sold there two years ago for $250.00. That had a small barn on it. I would consider that a better location than the gas works, because it is clear and nothing in sight. It lies higher. The lots at 1st and M street with two houses on it sold for $1,100.00. Each was a three room cottage. That was just a block northwest from the gas works. Mr. Foster the city attorney sold that to the Wertz boys.

Cross-examination by Mr. Strode:

I am in the meat and grocery business. The real estate is a side line. Block 79 is a well located piece of ground for the gas plant. We wouldn't want the gas plant out around Blocks 197 and 198. The location of the plant in Block 79 practically spoils Block 78 for residences, because of odors and noise. It also spoils the well water. It would not be a very good place to raise a family. Block 80 immediately east of the gas works is occupied by railroad tracks. I don't suppose you could ever buy it. It has only one track on it but the B and M railroad has paid an enormous amount of money to people who lived in there. They had to pay more than $250.00 a lot to get the people out. I don't know what the fair market value would be of the lots in Block 80. I know the lots in Block 75 facing on O street. I don't know what they are worth. I wouldn't float a loan of $1,000.00 on the place. The valuation is based on a business property. If a man was going to establish a business he would pay more than I would pay. It is a pretty difficult thing to get a block of ground at the present time. It was at any time since 1907. The lots in Blocks 106, 75, 105, 82 and 83 are not valuable for residence purposes. They were never laid our for anything except wholesale purposes and switching. Lot 83 is the cold storage block. You couldn't buy 81, and the railroad owns 80. Block 83 is a similar property to Block 79. The lots in Block 83 without improvements would sell for $85.00 or $100.00 a lot. They may have paid $1,000.00 but I do not believe they did. It was simply wreckage and was
657 a tough part of the city. It is not a wholesale district. There are three blocks between the cold storage plant in Block 83 and the gas plant. There is practically nothing on Blocks 107, 106 and 105. They are all tracks and Block 82 is all tracks. Curtis, Towle and Paine are on Block 82. What makes valuation is when people come in to buy. Cleaning the ground off don't make valuation. If you sell to one man for $200.00 and the next man you sell for $250.00, by the time you sell the 12th block it may be $500.00. That is the way it goes up. Block 78 is all settled up. In Block 77 they are all anxious to sell, but I wouldn't want to place a definite

estimate on it. I wouldn't say that I would obligate myself to get that block for any definite figure. I would expect to make something out of it. For buying Block 77, dwelling and all, I suppose I could buy the block and house, the whole lot and sell the houses and clean them off for $10,000.00. There is a slough through there. I could buy it cheaper than you could. I couldn't say what I would agree to get it for.

Redirect examination by Mr. Morning:

For residence purposes if there weren't any houses on Block 77 every lot could be bought from $200.00 to $250.00. That is based on my knowledge of the way lots have sold, but if a man found out I was going to buy it for a business establishment he would put the price up. If I owned the whole block 79 and it was vacant, I would not be able to find a ready sale for the whole block. It would be more valuable after I had divided it up into lots and sold some.

658 M. W. FOLSOM, being first duly sworn testified on behalf of the plaintiff as follows, pages 762 to 789, original record:

Direct examination by Mr. Strode:

I have lived in Lincoln nearly 25 years and have been engaged in financial matters and banking all my life. I have been Secretary of the Nebraska Central Building and Loan Association for the past 20 years and at the present time I am President of the Nebraska State Bank. For a short time I was the owner of a majority of the stock in the Capital Beach and Milford railway and had the direct responsibility of its management and operation. That was a street railway operating between the city and Capital Beach. I have become acquainted with what is regarded as a fair rate of return upon investments of this kind in this community, including industrials, manufacturing, and public service properties. I have also investments that do not involve in any way any hazards. In order to attract capital to invest in a property like the Gas company where there were no questions concerning its franchise there would have to be offered a rate of return of at least 8%. Where the question of the right of the company to be on the streets and the right to use the property is involved in a law-suit brought by the city and where the people have voted to refuse to quiet the right of the company in the streets, and where the legislature has authorized the city to engage in the manufacture and selling of gas—under those conditions you could not attract capital at all. Anyone looking for an investment would look elsewhere. You might be able to find those who like to speculate and they might pay something, but an investor looking for an investment would not be attracted.

659 Cross-examination by Mr. Morning:

The fact that the franchise is disputed and questioned would make it impossible to get capital. That fact would not increase the cost of

making the gas or distributing it if the company has plenty of money to run its business. I am aware that in Massachusetts public service corporations have an indeterminate franchise but they have no trouble floating their securities simply because by common consent or public policy they have assurance that they are going to be undisturbed. I did not assume that if the existing franchise question is decided against the company the public would drive the company out of business and wreck its property. It is such a hazard that no one can figure what the net earnings will be, which is the basis of the value of any security. It is absolutely impossible, with that question in the air and unsettled, to tell what they are going to be able to earn, and until you can tell what the net earnings will be you have no means of getting at its value. The fact that the legislature has authorized the city to own and operate public service utilities would justify the company in charging a higher rate unless there was some restriction or some fair proposition made if the city wished to purchase the Gas company so that the value could be determined. That the city had the power to go into the business might affect the sale of securities or endanger the business. The rate of return required to attract capital would be somewhat affected by the location. You get into New England and the rate is about 1% less. The rate here would be the same for any town of the same size in the Mississippi valley. My testimony is not based upon the assumption that Lincoln is any more hazardous for a public utility than any other city of its size and character. Business and population has been expanding and increasing constantly in Lincoln in the past ten years. There will be a substantial growth, in my judgment, in the future.

660 There is no reason that I know of why a public service corporation should not prosper here in the future. I am not now interested in any public service corporation.

Redirect examination by Mr. Strode:

Prior to the passage of the law authorizing the city to operate public utilities it was my understanding that the city of Lincoln was barred from going into business of commercial lighting. There would be a difference in the rate of return required to attract capital to a concern in which the money invested could not be taken out and to a concern in which the money could not be reclaimed. If the city or the state would enable a man to earn a fair rate permanently without further hazard or annoyance then I think they would be entitled to put it in at a lower rate than if they had to contend with a perpetual difficulty or a possibility of a future hazard constantly arising. If they have to carry the risk of their right to existence and their title, they are entitled to a much better return than those who do not carry that. The return of all manufacturing industries and industrial enterprizes is above the return upon investments in farm mortgages or upon security that is regarded good. There is a much greater hazard in these businesses that does not exist in farm mortgages and ample securities. You can buy farm mortgages and the owners can change weekly and the security re-

mains the same. It is not so in manufacturing or commercial lines, or other lines of business. In a public service corporation you not only carry the hazard of a manufacturing concern but you also have in addition to contend with the right of the public to regulate and control not only the business but the price. 15% is a fair rate of return for any manufacturing enterprize in Lincoln. The risk is not so great in wholesale establishments. 10% is a good
661 return on bank capital. 12% to 15% would be very moderate in the banking business after they have paid overhead charges such as salaries and rent.

Recross-examination by Mr. Morning:

A monopoly is a decided advantage. There has never been but one gas company in Lincoln. It was my understanding that the rate-making body in this city had the power to reduce but not the power to increase. An investment in a public service corporation where the rate-making body has power to increase as well as to decrease the rate is a good investment if they have any assurance that they will recognize their duty and increase the rate if necessary. We have competition in the banking business and in the building and loan business and in practically all other lines of business. It would be a pretty good investment if the utility has the absolute right to a fair return on its investment. I understand that Henry L. Doherty & Company have the controlling interest in this gas company. I have heard that in their literature they say that the gas business is one of the most secure and least hazardous investments and they undertake to demonstrate that it is a safer business, more stable in its income, and more gradual in its increase than the street railway business or the steam railway business or any industrial business. I have never seen any statements where they set forth any of those arguments for Lincoln. I have heard that in Cedar Rapids, Ia., they are getting 90¢ for gas and the same in Des Moines. There seems to be a sentiment abroad in Lincoln that anything that is a public service corporation or anyone that invests a dollar in them borders on being a criminal and consequently he is to be held up and robbed and not allowed a fair return on it. I base my opinion on my street railway experience.

662 FRANK H. WOODS, being first duly sworn, testified on behalf of plaintiff as follows. Pages 751 to 756, original record.

Direct examination by Mr. Rose:

I am President of the Lincoln Telephone & Telegraph Company. I have lived in Lincoln thirty years. The assets of this company are about $6,000,000.00. I am one of the owners of the Nebraska Silo Company, and am a stockholder in a good many industrial corporations in a small way. The paid up capital of the Silo Company is about $1,000,000.00. I have been a director in the First National Bank of Lincoln since about the 1st of the year. I have been in the

telephone business in Lincoln since March, 1903. I am familiar with the rates of interest demanded by investments, and loans in this community. Eight per cent to ten per cent would be a fair return on money invested in gas utilities in Lincoln for the past eight or ten years, and that return would be necessary to attract capital under normal conditions where the franchise right is determined. The fact that the franchise right is controverted and an action has been brought to eject the company from the streets, and the voters had voted against extending it and the Legislature had authorized the city to build and operate a municipal plant, would effect the rate of returns, and would probably prevent getting funds for investments at all. It would increase the hazard so that it would be necessary to raise the rate in order to get investors to take the risk. I think the hazard would be prohibitive. I do not think you could get any money for investments under those circumstances, except from people who were already in and who would have to put in more to save their investments.

663 Cross-examination by Mr. Foster:

The fact that the franchise is questioned would possibly effect the sale of the company's securities. I do not think it would effect the operation of the plant. It might affect the treatment afforded to the company by the public and might create ill feeling and embar-ass it in some ways in dealing with its patrons, but the principal effect would be in the sale of its securities, particularly if it had to sell securities to make extensions to keep up with the growth of the community. I have been connected with a great many telephone companies and was one of the organizers of the Citizens Street Railway Company in Lincoln. I am not connected with, and own no stock in the Lincoln Traction Company. The consolidation of the Lincoln Telephone and Telegraph Company and the Nebraska Telephone Company was accomplished while I was President of the first concern, and was largely through my efforts. We have now before the Railway Commission an application for an increase of rate.

664 C. B. TOWLE, being first duly sworn, testified on behalf of the plaintiff as follows, pages 790 to 793, original record:

Direct examination by Mr. Rose:

I have lived in Lincoln ten years. I am engaged in the manufacture of sash and doors. Our annual business is between $500,000 and $1,000,000. Our company in incorporated under the name of Curtis, Towle & Paine Co. I am vice-president of the company and have been for ten years. I am a member of the Commercial Club and keep in touch with the business organizations in the city and am acquainted with the rates of interest and with the rates that are demanded for return on capital invested in business which involves business risks, and have been for the past six or seven years. 15% is a fair return on capital invested in the city of Lincoln involving the risk of business and industrial operation, and would be a general

criterion for any industrial or manufacturing business. In order to attract capital to a business like our own, involving the risks that we are unavoidably subjected to here we would have to show a return of at least 10% to 12%.

Cross-examination by Mr. Foster:

This rate of return applies to other cities as well as to Lincoln. Any place where there is a risk. A business of this kind would have to show a rate of return from 10% to 12% in order to attract any capital anywhere in this country. I have never gone into a new enterprize that did not promise at least 20% to 25%. There is no monopoly in our business. And our rates and charges are fixed by competition and the prices fluctuate greatly. The demand for our goods ceases almost entirely during hard times.

665 E. B. SAWYER, being first duly sworn, testified on behalf of plaintiff, as follows, pages 794 to 800, original record:

Direct examination by Mr. Rose:

I am President of the Cushman's Motor Works, located at 20th and N streets, Lincoln, and have lived in Lincoln about 25 years. Our sales are confined to no especial territory. They extend from Canada to Texas, and from Australia to Russia. We used to have a branch in New York and we have shipped as far West as Portland, Oregon. Our trade does not depend upon local conditions. I have been in this business for nine years. Prior to that I was six years in the real estate business. I was also a member of the City Council during the pendency of the present gas controversy. I am acquainted with interest rates and rates of return on investments in this city, and know what rate is required on investments in Lincoln, which involve the risk of business and industrial operations.

On account of advertising expenses and building up of business, a return of from fifteen to twenty per cent is required in order to attract capital, in matters which involve the risk incident to carrying on of a manufacturing business. New devices constantly coming on to the market demand practically double the normal return in a manufacturing business. In 1906-7 and 8, while I was a member of the City Council Committee having under consideration the gas rate in this city there was a tendency with the committee to accept some compromise sliding scale. But our legal department at that time advised that the opportunity was open for fighting the case. That was the advice which influenced the committee in not adopting the sliding scale agreement.

666 Cross-examination by Mr. Morning:

We compete with the International Harvester Company, John Deere and in general with some one hundred and eighty-two gasoline companies. In selling the individuality of the product and the method of handling is more important than the price competition. We fix the prices on a basis that will make *is* a profit. The sliding

scale which we had under consideration provided that a rate of $1.15 should go into immediate effect and that rate should be reduced five cents each year down to one dollar, which would bring the price down to a dollar January 1st, 1911. The compromise was suggested by both parties, though I believe it was principally the Gas company's offer.

667 J. D. LAU, being first duly sworn, testified on behalf of the plaintiff as follows, pages 800 to 804 original record:

Direct examination by Mr. Strode:

I am Secretary, Treasurer and Manager of the J. D. Lau Company, which is engaged in the wholesale grocery business. I have lived in Lincoln thirty-two years, and have been engaged in this business probably half of that time. The business was established by my father, and has been followed up by myself and brothers. I have been general manager ten years. I am acquainted with business, manufacturing and with industrial enterprises here and I know what rate of return is required to attract capital to the wholesale grocery business, and what is regarded as a fair return in that business. Ten per cent to twelve per cent is a fair return for money invested in the wholesale grocery business. There is a difference in the rate of return required where the investment is secured than where there is no security except the continued success of the business.

Cross-examination by Mr. Morning:

Our business is subjected to strong, direct competition. Our success depends upon the amount of enterprise, advertising and push that we put into it. We have no monopoly. The rate of return which I mentioned is not confined to the city of Lincoln.

668 P. L. HALL, being first duly sworn, testified on behalf of plaintiff as follows, page- 852 to 862 of the Original Record:

Direct examination by Mr. Rose:

I have lived in Lincoln 15 years. I have been in the banking business in Nebraska about 29 years. I am and have been President of the Central National Bank of Lincoln since its incorporation five years ago. I was cashier for 6 years of the Columbia National Bank. I have been for the past 10 or more years acquainted with the prevailing rates of interest in the state of Nebraska. In order to attract capital to invest in the city of Lincoln subject to the ordinary business and commercial risks, during the period from 1907 to the present time, a return of from 6 to 8% should be offered. The prevailing rate of interest in Lincoln on commercial paper is 6% and 7%. Bank stock ought to yield a return of 8%. General manufacturing and commercial enterprise should be 8% to attract capital. Farm loans are based on a 40% valuation of real estate. An investment which eliminates business risks, a return necessary to attract capital is lower. As the hazard is eliminated the rates are reduced. The

hazard of the investment would be increased by the fact that the franchise of a gas company is questioned, that a suit has been brought to eject the company from the streets and an election has been held at which the voters refuse to extend the franchise and the Legislature has authorized the city to operate a municipal gas plant. These conditions would make necessary an increased rate of return in order to attract capital. It would be speculative to say how much the return would have to be increased.

Cross-examination by Mr. Morning:

There is not very much difference between the rate of interest in cities of the same size in the Mississippi Valley. The rates on bank stock are a little higher in Lincoln. That has been true until very recently. It is still a question to some extent as to whether
669 or not the same condition of resources exist. The amount of capital available fixes the rate of return. We have note as much available here as in Ohio and Indiana and our rates are higher. The rates on Commercial paper are about the same all over the United States. A man investing in manufacturing and commercial enterprises would generally expect a higher rate here than in Ohio. There would not be much difference between Eastern Nebraska and Iowa. The rates on farm mortgages in Nebraska are about the same in Illinois and Iowa. That is governed largely by insurance companies. The fact that the public has the right to regulate the rate of return on a gas plant I think justifies a higher rate of interest. That is set off somewhat by the fact that the company has a monopoly. A monopoly has something to do with eliminating the hazard. I understand that the public has no right to reduce the rate of return below the point of reasonable compensation. The rates of return I speak of are based upon the kind of business and the supply of money. There is nothing except the supply of capital that requires a higher return in Lincoln than in other cities of the same size in Iowa, Dakota, Kansas or Missouri in order to attract capital to a gas company.

Mr. P. L. HALL, recalled for further direct examination, page- 873 to 880 of Original Record:

Direct examination by Mr. Rose:

Prior to becoming an officer in the Columbia National Bank, I was for several years Secretary of the State Banking Board in Lincoln. There has been no time since 1893 when the supply of money in banks in Lincoln was adequate to the financing of the jobbing and commercial interests of the town. I do not think that the public utilities of the city have been financed locally. I understand that the Gas Company and the Traction Company, and the Electric Light Company have all secured money from outside the city. As a rule the Wholesale Grocers had to go outside for their money. That is true at the present time and the indications are that it will continue.

670 Cross-examination by Mr. Morning:

That is practically true of all cities of substantially the same size of Lincoln in this western country. Money is borrowed by the wholesale grocers in the eastern cities because the rates of interest are lower and the local banks do not have the money. That is not peculiar of Lincoln alone. A great deal of the stock *of the stock* of the Automatic Telephone Company was sold outside of Lincoln; most of the bonds were sold outside. Within the last two years there was a large amount of packing paper sold to banks of eastern Nebraska. The banks in this locality keep large deposits in eastern banks. It is required by law and exchanges. There is nothing locally that would justify or cause the panic of 1907. The local banks issued clearing house certificates and refused to pay out cash because they got scared.

Redirect examination by Mr. Rose:

Packing house paper is considered a second reserve in banking. Banks invest in that class of paper to keep their assets flexible. It has nothing to do with local interest rates. The concerns floating that class of paper are supposed to have the highest character of commercial rating. It makes the best collateral we have.

Recross-examination by Mr. Morning:

The municipal bon-s of the city of Lincoln bear 4%, and the law requires that they be sold at par. The automatic Telephone bonds draw 6% I think.

Redirect examination by Mr. Rose:

The bonds of that company represented the portion of that investment that was practically free from the hazard of the business and they sold at a discount. Some of the municipal bonds are sold locally. They are known as conversible paper. They take their prices from the New York market. The price of these securities do not effect local rates of interest.

671 C. H. BEAUMONT, being first duly sworn, testified on behalf of the plaintiff as follows, pages 863 to 872, original record:

Direct examination by Mr. Strode:

I am engaged in the banking business and am cashier of the Nebraska State Bank, and am president of a bank which we hold in the western part of the state, and vice-president of another one. I have been connected with banks in this city since 1888. I was state bank examiner for six years. I am acquainted with, and have been for the past six years back to 1906, with the current rates of interest on money. There is a differnece in the rates of return on loans secured both in principal and interest, and investments in property that carry with them the hazards of business. The rate

on secured loans in this community since 1906 to the present time, where there is a personal guarantee and the money is secured, varies from six to eight per cent, the more uncertain the security the higher the rate of interest. A return of from ten to fifteen per cent would have to be made in order to attract capital to a manufacturing or other business enterprize in this community. The amount of return would depend upon the character and hazard of the business. Where the business is firmly established the rate of return would be less then required on a younger establishment. 10% or better would be nevessary to attract capital to a concern like the Gas company here in Lincoln. Under normal conditions of franchise this would be true. The fact that the business is subject to regulation by the public and has to go up against a lot of politicians would make it considered rather hazardous. In fact a greater hazard would be present than that of the competition in other lines of business. The fact that the city is prosecuting a suit to put the Gas company out of the streets and there is a question as to its franchise, and that the legislature has authorized the city to establish and operate a gas plant without any provision
672 for taking over the property of the company, I think would make it hard to interest capital at all in this enterprize. It would make it practically prohibitive. The attack upon the company, both through its franchise and the regulation of rates, jeopardizes the investment and would affect the ability of the company to get money for extensions and betterments. The fact that there is a municipal league in this city with candidates in the field for municipal ownership also makes the investment hazardous. I would also consider the law passed by the legislature authorizing the city to engage in the gas business without any provision for the taking over of the property of the company an additional hazard.

Cross-examination by Mr. Foster:

Six to eight per cent is a fair return on commercial loans. To houses of good standing the rate is six to seven per cent. They have been getting a little lower return in Minneapolis which is a much larger city. There is very little difference in the rate on farm mortgages on property in eastern Nebraska and in Iowa and Illinois. The money loaned on farm loans is largely insurance money and the rate does not vary very much. The savings banks in Lincoln are paying 4% on a daily balance and have been for a good many years. It is higher than they are paying in Conn. I don't think the fact that the legislature was trying to reduce a high rate to a reasonable rate should, or would, affect the rate of return. Neither would the litigation referred to if it was growing out of the legislative order reducing the rate entitle the Gas company to a higher rate of return. I do not own any gas stock or telephone stock.

Redirect examination:

I do own some bank stock. If the returns are guaranteed and insured they should be lower than if they are not.

673 JOHN E. MILLER, being first duly sworn, testified on behalf of plaintiff, as follows: Pages 731 to 751 original record.

Direct examination by Mr. Rose:

I have been engaged in the General Merchandise business for thirteen years, and have lived in Lincoln 34 years. I am a director in the First National Bank of Lincoln. Our store has been at 13th and O streets for a great many years, and is known as Miller & Paine Company. Our business amounts to a million and a quarter a year. I am acquainted in a general way with the character of the public utilities in Lincoln, and was a director in the Traction Company and interested in a small way in the Telephone Company. I am interested in real estate investments in the city. I am, and have been for the past six or sight years, acquainted with the money market in this community, and my business requires me to keep track of the interest and credit rates. In order to attract capital to invest in a gas utility in this city a return of 8 percent would be necessary in my judgment under normal conditions of the franchise.

If the life of the franchise was disputed and a suit was brought by the city to eject the company from the streets, and the people had voted against extending the franchise, and the Legislature had authorized the city to build and operate a municipal gas plant, the investment would then be simply a gambler's proposition. It would require very specific knowledge and a great deal of money before I would invest under thos- conditions. A large amount of capital would not be invested under those conditions, under any terms. People having money to invest would not invest. Small amounts might be secured on a speculative proposition. Gamblers might be interested, but investors would not put any money into
674 it at all.

Cross-examination by Mr. Morning:

First class bond mortgages draw five percent to five and a half percent in this vicinity. First real estate city mortgages draw five and a half percent on the very best to seven percent in this city. We took a mortgage back on the Lindell hotel for $280,000.00 for five percent, exclusive of commissions and taxes. This mortgage runs almost indefinitely, payable $10,000.00 a year. I am unable to recall of any loan on city property outside of Savings and Loan Companies as high as seven percent, although I have heard it discussed. The seven percent rate would be on the small loans of a more hazardeous nature. Our company would have to pay six percent to six and one-fourth percent depending upon whether we secured it direct from a bank or through a broker. In the Mississippi Valley states, the rate on real estate loans is lower. In New York State and city the rate of interest is lower than here. The interest rate on commercial loans made by banks direct to business, runs from six percent to eight percent in this city. In New York City the rate does not go above six percent. The lowest rate we

ever paid here was four and one-half percent. That was for a very brief time. For the past year, with the exception of a short time in January, we have been paying around six percent. For cities of the same size as Lincoln, the rate of return on public utilities, would be affected somewhat by the locality. The farther east, the better the investment. The rate for the city of Lincoln would be about the same for any city of the same size in the Mississippi Valley. The investments are a trifler safer the farther east you go, even in the Mississippi valley. Of cities of the same size as Lincoln I would take the eastern investmenets. The hazard of the business enteres into my estimate of a fair return. As compared with first mortgages the hazard of public utilities investments is certainly greater. This is subject to regulation as to how it shall do
675 its work and its rates, and there are a great many other things which enter into a manufacturing or business proposition, and which are to be considered. The hazard in Lincoln, I do not consider any greater than in any other town under the same general conditions. Exhibit 17, undertakes to demonstrate that there is less hazard and more stability in a gas enterprise than in industrials and electric railways and street railways. The attitude of the people of Lincoln is hostile to the company, and that makes a difference. I was one of the promoters of the original Citizens Street Railway Company. When that company was consolidated with the Traction Company I received $18,000.00 in common stock, and in association with Dr. Paine, received $70,000.00 additional common stock. This we have disposed of. Up to the time of disposing of my common stock, I was a director in the Traction Company. I now own only preferred stock. Our company took about four or five thousand dollars of common stock in the telephone company, when that was organized. While I was interested in the telephone company, and a director of the Traction Company, both of these companies made application for increasing of rates to the State Railway Commission.

Redirect examination by Mr. Rose:

Farm loans demanding a rate of five percent to five and one half percent, the loan does not exceed 40% of the value of the property, which eliminates the hazard of the investment as near as anything can. The same is true of city loans. The rate of interest in the Lindell hotel mortgage was one of the considerations of the sale. It was compulsory in a large measure. It does not reflect the normal rate of interest on a security of that character. Trust funds from Savings banks and insurance companies are largely competitors for farm loans and municipal securities at low rate; they in effect make the rate and that class of money does not seek investment in
676 gas companies. There is a great difference in the rate of return required for an investment which take- the risk of industrial operation and an investment in which that risk is eliminated. The rate of one kind is not properly comparable with the rate on the other.

Recross-examination:

The preferred stock of the Traction company pays a dividend of six percent. They have out about $1,200,000.00 of preferred stock. I leave my money there because I have such a small amount and there is some sentiment connected with it. Our telephone stock was originally taken in the New Automatic Company. The common pays seven or eight percent. The Savings Bank rate of interest in this community is four percent at the present time.

Direct examination by Mr. Rose:

The preferred stock of the Traction company, is both preferred both as to dividends and distribution of assets, and the speculative feature is in the common and not in the preferred stock.

677 SILAS H. BURNHAM, being first duly sworn, testified on behalf of the plaintiff as follows, pages 965 to 973, original record.

Direct examination by Mr. Strode:

I am President of the First National Bank of Lincoln, and have been in the banking business in Lincoln since 1888. I was first cashier of the American Exchange National Bank and then President and since then have been President of the First National. The First National Bank is the largest bank here and has deposits of about four millions. I am acquainted with what would be regarded in this community as a fair and reasonable return on an investment of capital either in securities or in business enterprizes. There is a difference, in my opinion, as to the rate of return considered fair and reasonable upon an investment in security where the return of the principal as well as the interest is guaranteed, either by securities or by persons, and where the investment is in a business enterprize which depends upon its success. I would say that 10% is a fair and reasonable return in this community upon capital invested in business enterprizes, manufacturing plants, and wholesale institutions, and has been since 1906 and 1907. A rate of return would increase as the probability of risk would increase. If the business was well-established the rate would be higher. In order to invest money in a property like the Lincoln Gas Company since 1906 down to the present time under normal conditions where there is no question about the franchise I would want a return of from 10% to 15%, or the property would not appeal to me at all. I would not take that sort of an investment if I could get a 6% or 7% investment or a first mortgage on city or farm real estate. Because then I have a security that is coming due in a short time so that I could get my money and, on the other hand, I have nothing but a stock that is
678 never coming due. That much of a return is necessary to induce investors to invest in that kind of a property. The fact that the city has instituted a suit questioning the right of the company to be in the streets and to maintain and operate a gas company, and that the legislature has authorized the city to go into the

gas business without any obligation on the part of the city to take over the gas company's property at a fair valuation would affect the rate of return, in my judgment, and I do not know of any rate that would be sufficient to induce capital to invest under those conditions.

Cross-examination by Mr. Morning:

The rates I have given would, I think, apply in any locality. It depends upon the character of the business regardless of the locality. I have been interested in one or two gas propositions. I am not interested in this company now. I am naturally disposed to a conservative form of investment rather than a speculative one. There is no element of speculation in good farm loans. I have no disposition to go into the gas business and that enters into my estimate of a fair rate. The best paper here draws 6%. The savings banks' rates where they loan money is six to seven per cent on city real estate and farm property. The loans here are a trifle higher than those made by loan companies in the east. An improved farm loan has always commanded a little lower rate than a city loan. A farm loan is ordinarily conservative as to relative value and a city loan usually more nearly approaches the real value of the property and therefore the rate is a little higher. There is there an increased hazard that does not enter into the farm loan. The rates on commercial paper are substantially the same as they are in Ohio, Indiana, Missouri, and Iowa. The savings banks' rates are a trifle higher here. They pay three to three and a half per cent in the territory named. They pay four per cent for deposits here.

679 Redirect examination:

Where there is a difference between the rates here and in the east the rates are higher here.

680 Mr. Ben C. Adams, being duly sworn on behalf of the plaintiff testified in chief as follows:

Examined by Mr. Strode:

Am general manager and vice president of the Lincoln Gas & Electric Light Company; have been connected with the company since July 1st, 1906; was employed first as general ssuperintendent until February, 1909, then became general manager; have had charge, in a general way, of the operation of the plant. We have a general superintendent and then superintendents under him for different departments; our business is divided into four departments: the commercial department, sometimes called the business department; the executive office department; the plant department, and the distribution department. Mr. Baxter is in charge of the distribution department.

I have gone over the records, books and vouchers of the company, not in detail in every instance, but in a general way showing the cost of certain property, buildings and appliances the company has

on such items as were questioned on the cross examination of Mr. Lea. There is not always a construction account kept by the company complete in itself showing the cost of any particular appliance or property; it isn't the plan of the company to keep a construction account in such a manner as to tell the cost of any particular apparatus, that is, any individual apparatus; we have a general construction account showing what our constructions costs — for any year or month, showing the total for any fixed period, but not resolved down to separate items; the books are not kept for the purpose of showing what these items cost as individual items. In a way, we keep books, account and records which would show particularly the cost of the East Lincoln holder, thus, when we do a piece of construction work of that character it is customary to open up what we call a special construction account into which everything is charged that goes into the construction at that point.

681 In dealing with the East Lincoln holder by turning to that particular construction account we would be able to find all the items that entered into what we call the East Lincoln Holder construction account, items would not be separated and classified but simply entered there as they came in and were paid.

Taking the generator house, referred to in Mr. Lea's report I have compiled a tabulation under a heading on our books that appears as generator house and Otis elevator; into that account were charged all items that went into the construction during the time the generator house and Otis elevator were built, erected or constructed in connection with those two items. That generator house was constructed in 1908; this account will be found in the Accounts Payable Journal. Exhibits "31" and "32" is the compilation I refer to showing the cost of the Generator House and Otis elevator. The total cost of the Generator House and Otis elevator as shown by the records of the company and by exhibits "31" and "32" is $5,472.83, for both Generator House and Elevator. Mr. Lea gave the net construction cost of the Generator House alone at $3,737.00, and the net construction cost of the Otis Elevator at $1,060.00 making a total net construction cost shown by Mr. Lea's report for Generator House and Otis elevator of $4,799.00, and as shown by the records of the company $5,472.83, for that particular building and elevator and included no other buildings. I might say that after arriving at the grand net total I show on exhibit "32" of $5,472.83 I later deducted from that account $46.95 charged into that account in error, taking that into consideration Mr. Lea was $626.88 under our construction account. The different items entering into the total of $5,472.83 for the Generator House and Otis elevator are shown in exhibits "31" and "32."

682 And are also shown on the records of the company in the Accounts Payable Journal.

Exhibit "33" is a compilation made from exhibits "31" and "32" showing what we paid out, according to our records and vouchers to different people who furnished the apparatus or work. In a way a summary of what is shown in the other preceding pages in detail. Shows the net construction cost as shown by Mr. Lea's report and the difference between that and the actual cost.

Have examined the records of the company to ascertain the construction cost of the 7′ 6″ water gas machine, the last one installed, that is one year old. Exhibit "34" is a compilation, really a copy of our records of the construction cost of the 7′ 6″ water gas machine erected a year ago; items entered there were taken from our Accounts Payable Ledger; the first item shows contract price on generator, carburettor, superheater, seal, pyrometer and steel floor erected on our foundation being $8,000.00 which was made to us by the Western Gas Construction Company. There were other items entering into the construction of that water gas machine, item number 2 as I have it here, shows not only what was paid to the Western Gas Construction Company for the machine but also other items that entered into the construction of that machine according to our books and records.

Exhibit "35" shows the payment made to the Western Gas Construction Company, according to the records of the company, including freight, and in the amount of $7,575.00 in total; it shows an allowance was made for an old machine of $400.00; and an allowance for repairs on the old water gas machine of $25.00; adding those two items to the first total gives the total of $8,000.00, the contract price. In addition shows the items that entered into the construction, according to the company's records, of $322.94,
683 making a grand total of $8,322.94; Mr. Lea in his report allowed for the bare machine without including anything for the floor a construction cost of $8,477.00; taking the erection of the floor for the water gas set into consideration that would have to be added to Mr. Lea's figures. The different items entering into the cost of this water gas set are shown in exhibit "34," as disclosed by the records of the company. The $8,000.00 included the floor that went with that machine as per contract price. Mr. Lea's figures are higher than the figures shown by the books of the company of this particular item.

I have compiled the cost of the 7′ 6″ three year old water gas machine, from the records of the company, and is shown in the tabulation here. Regarding the second water gas machine I have made a notation on this exhibit to the effect that there is no contract for that in the company's office, but that the price made for the generator, carburetor, superheater, seal, scrubber, condenser, ten inch by twelve inch Atlas engine, number "7" blower and countershaft, also 15 feet by 28 feet of steel floor erected on the company's foundation was $10,900.00, that price was made by the Western Gas Construction Company indicated by the correspondence and letters with the company showing that was what was to be paid; those items have not been identified yet, but are now marked exhibits "36," "37" and "38." I have made a compilation of the cost of this particular water set as shown by the records of the company.

Exhibits "36" and "37" show the total net cost to the company covering the erection of the 7′ 6″ water gas machine amounting to $13,365.72; Exhibit "38" shows the amount paid to the Wester- Gas Construction Company, partly in the form of notes, partly in the

form of vouchers amounting to $10,225.00; also shows freight
684 paid amounting to $841.50, and drayage $70.00. The total of those items amount to $10,936.50 with a credit of $8.40, leaving a net amount of $10,928.10; the next line shows the total amount in the construction account; the following line shows the amount in the construction account represented by incidentals; the following line shows Mr. Lea's allowance for the erection of the set, and his allowance for the condenser and scrubber, and for the floor,—taking one half of his total amount and his allowance for blower equipment, making the total amount allowed by Mr. Lea for the items covered in exhibits "36" and "37," in part, of $12,157.00. For the same items shown in exhibits "36," "37" and "38" the company's records show $13,365.72, an actual cost shown by the company's record over Mr. Lea's estimate of $1,208.00.

I have compiled from the records of the company the construction cost of the 12 year old 6′ 6″ water gas set, which shows the contract price made by the Western Gas & Construction Company, shown by exhibit "39" and also the items entered on our ledgers that went to make up the construction account; the contract price of the Western Gas & Construction Company covering the generator, carburetor, superheater, seal, scrubber, condenser, engine and blower was $7,827.00; our construction account shows the amount of $8,763.20 as the price paid for this water set plus the additional items entering into the construction account.

Exhibit "40" shows, from the records of the company, the amount paid to the Western Gas & Construction Company an amount of $7,830.56; shows also the total construction cost from the records of the company, and what Mr. Lea allowed for the machine and foundation exclusive of engine, blower and floor, then what I estimated
Mr. Lea allowed for the blower and engine, using my estimate
685 as to what he used for the engine and blower, making his total $8,391.00; the engine and blower is included among other items in his report. It is impossible to segregate it, I took one half because Mr. Lea allowed certain amounts for the engine and blower, but the engine and blower is used for two machines. I only charged part to this machine, dividing the cost between the two machines. With this explanation that would give Mr. Lea's net construction cost as shown in his report for this water gas set $8,391.00; the records of the company show the actual cost of that machine to be $8,763.20, costing the company $372.00 more than Mr. Lea's net construction cost.

I have compiled the items of cost for what is known as the Springer water gas set; exhibit "41" shows the contract price made by the Stacey Manufacturing Company, although not marked "Stacey," on the machine erected; also shows the amount charged to the construction account during the erection of that machine by the company; at that time the company did not keep its books as we keep them now; the Journal kept at that time showed that a contract was made for a Springer set amounting to $9,100.00, then showed the amount paid out, making a total of $9,100.00; there was one other item of $4.22 in that account, but the complete charge of the Stacey Manu-

facturing Company for erecting the machine was $9,100.00; there was one additional item of expense paid by the company for erecting that machine as shown by the company's records of $84.22, since making this compilation I have forgotten what that covered: they did all the work, hired their men and constructed it at a cost to us of $9,100.00. We paid out no items that entered in there, under our present scheme of construction we do a large part of that work ourselves. Mr. Lea's net construction cost for that particular item was $4,991.00; Mr. Lea allowed for the 6'6" set and operating
686 floor $1,871.00; I have taken half of that and charged it to this machine, making Mr. Lea's total for the machine and floor $5,926.00 as against the total shown by the company's records of $9,184.22 actual cost, or $3,258.22 more than the net construction cost allowed by Mr. Lea.

I have gone through the records of the company and ascertained what they show with reference to the cost of the 500,000 foot holder; I don't know whether there was a contract for that holder, there is none in the office, but the price made for the holder and tank on our foundation was $37,500.00 as shown by the records of the company, and verified by my asking the Western Gas & Construction Company what they charged us for the holder, the company did part of the foundation work but paid for the foundation in addition to this price. I have compiled from the records of the company the items entering into the cost of that holder as shown by the company's records; exhibits "43" and "44" show the total cost of the erection of that holder as per the records of the company; exhibit "44" shows an item that does not appear in the Accounts Payable Journal entering into the construction cost shown here as "painting" that amounted later to $952.10; it is customary for manufacturers of holders to ship them with a coat of paint on in part, and if not altogether painted to give it one coat after erection, it is then customary for the company to paint it properly; we did not put on our coat of paint at the time the holder was erected, but did later, it was then done under contract costing us $952.10 which is properly a part of the construction cost of that holder. Taking the price paid of $37,500.00 and addi*d*- the additional items of construction cost as shown by our records, including the cost of foundation and
687 painting the total is $43,897.62; I can give the foundation item but that will come later on in exhibit "45."

Exhibit "45" is a compilation showing the amount paid to the Western Gas & Construction Company as per the records and vouchers of the company, including freight, and payments on foundation and excavation; we actually paid either by note or voucher $34,476.92; the item of freight amounted to $2,931.38 making the total amount paid the Western Gas & Construction Company and the Railroads for the holder $37,408.30 and in addition payments made on the foundation of $4,302.37; Rymers & Kauffman of Lincoln had the contract for the foundation. There was an additional item of $191.90 paid for excavation; I have already mentioned the item of painting of $952.10 giving a total for the foundation, excavation and painting of $5,446.37; and there were other items as shown by the

records of the company, entering into that construction and paid out by the company amounting to $1,042.95 making the total cost of that holder to the company complete of $43,897.62; Mr. Lea gave the net construction cost of that holder at $43,985.00, being $87.38 higher in his net construction cost of that holder than the records of the company show it cost, without reference to the records for verification.

I have compiled a statement as shown by the records of the company showing the cost of the 50,000 foot holder; I presume there was a contract for that holder but was not able to find that in our archives; that holder was purchased from the Stacey Manufacturing Company; our records show how much was paid for that holder erected complete on our pit, that is, just for the steel work erected,
to which we had the added expense of the excavation, founda-
688 tion work and tank; the cost of this 50,000 foot holder is
shown in exhibit "46," at the time that holder was purchased the company kept a different system of books from the present system; those items are shown on the old Journal; as shown by the books of the company the total cost of that holder for the iron work and its erection was $4,307.61; Mr. Lea in his report allowed for the iron work erected $3,494.04, costing the company $813.57 more than the amount allowed by Mr. Lea. Mr. Lea's allowance as the net construction cost of this holder erected was $10,409.00, including the tank and foundation; the items of cost of the tank and foundation are not on exhibit "46," we had no records of that part of the construction.

I have compiled a statement showing the cost of the construction of the East Lincoln holder taken from the records of the company; exhibits "47," "48," "49" and "50" cover the amount that entered into the construction account that we call the East Lincoln District holder; that amount also included the booster house, the floor and motor and all the elements that went into the work done at the East Lincoln District holder station at that time, and shows the different items and amounts paid in the way of construction cost on account of that holder. The total amount as shown by the books of the company paid for the construction of the holder including booster house, exhauster and motor $20,904.28 for the whole business. There was a separate contract for the steel or iron in the holder with the Western Gas & Construction Company amounting to $7,000.00 for the steel work erected; also a contract for excavation at 70 cents per cubic yard with Robert Malone amounting to
$2,927.96; we also had a contract with Perry Hahn for a
689 masonery tank amounting to $6,375.00, we paid him $6,-
683.27 because of some extras outside of the contract; there were no deductions made from the total cost of $20,904.28; the deductions of $1,696.96 you speak of were made to get a comparison with the items allowed by Mr. Lea. The total cost of the holder complete, including the booster house, exhauster and motor and items entering into the construction of the East Lincoln Holder was $20,904.28, that however does not include anything for land or property we purchased. Above the three items mentioned $7,000.00

to the Western Gas & Construction Company for iron and steel; $2,927.96 to Mr. Malone for excavation and $6,683.27 to Mr. Hahn for brick work, making a total of $16,611.23 the difference between those items and the $20,904.28 is made up by other items entering in there partly covered by the booster house, exhauster, motor, man holes, heaters, labor connected with putting those in and other incidental items, shown in exhibits "47," "48" and "49." Mr. Lea allowed as the net construction cost of this holder $18,685.00; the records of the company show, taking out of the $20,904.28 the cost of the booster house, exhauster, motor, man holes, heaters, and labor as shown from the records, I get a net amount covering the cost of the construction of the holder with items incident to its construction, of $19,207.32, that can be compared with Mr. Lea's figure of $18,685.00, showing by our records that the holder actually cost the company $522.32 more than Mr. Lea was willing to allow the company credit for in net construction cost. This is the same holder the City assumed early in the cross examination to cost $13,000.00 assuming to have all our contracts when they only had a portion of them; they were unfortunate in thinking that the amounts we paid the brick mason covered excavation. Perry Hahn was the brick mason, and as far as I know is still alive; I think he quit after doing that work. I think he is in the mining business now, and that he lost money on the work the same as Mr. Malone.

690

Exhibit "50" is a compilation made from tabulations from the records of the company showing the cost to the company for erecting their water gas machines, also gas holders; one column shows those items, another column shows amounts allowed by Mr. Lea, the third column shows the difference whether plus or minus. In all instances when I refer to the amount allowed by Henry I. Lea I refer to what he gives here as the net construction cost. Taking the water gas sets and holders I have shown what the result is of all those items, and allowed the values allowed by Mr. Lea as the net construction cost; taking the records of the company showing the actual cost and grouping them together. Mr. Lea is short in those groups in the amount of $2,977.99 or practically $3,000.00; my pencil notation of the additions is blurred. I think it is $2,977.99; I will check that up later.

Mr. B. C. ADAMS resumed the stand for further examination in chief, and was examined by Mr. Rose, testifying as follows:

I have checked up the reports and accounts of the company for the purpose of ascertaining the cost of the 200,000 cubic foot holder owned by the company at its station and have ascertained the items of cost covering steel work of that holder as carried in the account books of the company, which I have compiled and tabulated which has now been marked plaintiff's exhibit "71"; respecting that item I was not able to find in the archives of the company the contract for the cost data nor the contract for the excavation, I thought

you already had the total cost of the construction of the
691 tank; I did not find the cost of the masonry nor excavation. Only the tank. I found on the books the cost of the steel work, verified that by the records and also by communication with the Stacey Manufacturing Company, from that I found the contract price for the steel work erected on the company's foundation was $12,630.00; I found from the books as actually paid for the various items charged against this contract $12,639.00 which corresponds exactly with the indicated contractor's price shown by the correspondence; the items contained in exhibit "71" are corrrect as shown by the books of the company as far as I know, the entries were not made in my day, I presume they are correct; they are correctly compiled from the books, the compilation is correct. Mr. Lea includes in his estimate of the construction or replacement cost excavation 5,649.7 cubic yards; brick work 191,840 brick; concrete 174 cubic yards; dressed stone 8.9 cubic yards, plastering, back filling and removing dirt, the pit for the tank required considerable excavation, I can't give the size of the excavation from memory, I think the tank is something like 90 or 95 feet in diameter, and perhaps 25 feet deep, I might be off several feet; the tank is a masonry tank of brick with cement plastering; I have not personally undertaken to estimate the quantities, I think there has been a question here whether the tank was cemented, I can testify to that; the tank was emptied at the time we erected the 500,000 cubic foot holder shortly after it was in service for the purpose of repairing the steel work and that tank was cemented all over, I inspected it at the time and my judgment at the time was that it had been a part of the original construction; it was cemented before we erected the new holder, visual inspection at that time showed it to be lined with cement.

692 In the items of expenditure for steel construction I have not included anything for the excavation or the construction of the tank, nor have I included anything the company might have spent at that time on that work because as the records were kept at the time that construction work was done it was their custom to keep an account of that station covering every part of the work. Exhibit "71" includes only the items charged against the contract price of the Stacey Manufacturing Company, and not any extras, the cost of which was borne by the company, painting didn't enter into this account as I remember that item. I would not say that the naked contract price was the entire cost to the company for constructing the steel work; we never have been able to erect a piece of apparatus on the figure submitted by the contractor and get out on that figure, there has always been incidentals. I would not be able to trace the incidentals that belong to this particular contract. Comparing this table with the estimate of Mr. Lea on the naked item of steel construction as I took it from the court reporter was $14,559.60 which exceeds the contractor's price by $1,129.60; from the records I have I would regard that discrepancy as reasonable and explainable, the price made the company at that time might not have been an average price; there might have been some concessions we wouldn't ordi-

narily get; Mr. Lea also may have included some items we didn't include in this account, such as painting which the company would actually experience over and above the contract price; it is usual for the construction company to give a holder of that description one coat of paint, the company does not consider that sufficient to protect the holder and ordinarily paints it at once over the paint the construction company puts on, that was probably an element of the construction cost at the time. At the time this construction
693 was made I wasn't satisfied and couldn't tell that the account books were sufficiently accurate to give assurance that all of the costs actually encountered by the company were actually entered in the account books. I asked the last time if I might correct one or two sheets, I have done that and now want to submit them, I found a clerical error in additions in exhibit "50", and have prepared a new exhibit in all respects like the original substituting the corrected footings. Leave given by Referee to withdraw exhibit "50" and substitute corrected exhibit for exhibit "50".

The difference appears in the column headed difference in the first total shown as $3,659.08 which should be $3,658.88 then correcting that in the line called Mr. Lea's shortage the figures should be changed from $2,977.99 to read $2,977.79.

I have made examination of the books of the company to ascertain the costs incurred by the company in the erection and construction of the Sturdevant Turbo Blower, and have made a tabulation from the Accounts Payable Journal; the items in that tabulation are correct. The contract price of the #8 Sturdevant Blower, purchased 4 years ago was $1,056 f. o. b. factory. The actual construction cost which the company entered with freight and necessary incidentals added totaled $1,336.87, but that price did not include excavation, back filling or foundation. The company actually paid that sum as shown by its books, that being in addition to the excavation, back filling and foundation. I don't know how much the company paid for excavating, back filling and foundation, that was not included in the contract. Mr. Lea's estimate covering that piece of apparatus installed as compared with the cost given by me at $1,336.87, was $1,435.06, Mr. Lea's estimate being $100. in round numbers over the actual cost. Examining Mr. Lea's estimate his item of
694 $1,435.06 includes back filling, removing surplus material and foundation. I can't tell without figuring it out, but on that small foundation work I would think that would use up a considerable portion of that $100.00, it would account for a part of it at least.

Exhibit "72" is a tabulation on the Sturdevant Blower.

I have made an examination of the company's books of account to ascertain the actual expenditures of the company for the blower, for the old water gas machine erected between April and July 1909; under the heading entered for that construction work I found the company's charges for that appliance; I presume the items were correct as shown by the books, that construction was during my management or at least connection with the company. I compiled a tabulation showing the items of cost for that appliance, the company

actually paid the sum embraced within my tabulation; the price paid by the company was reasonable, fair and paid in the open market for the work, as I remember and as shown here.

Exhibit "73" is a tabulation of the cost of the Sturdevant #7 Blower.

The sum expended for the appliance itself including the installation was $225.00, on the next page I show the additional items of cost of the blower, plus freight, fittings, and building material that entered into the construction, also miscellaneous items the total amounting to $463.54. The total exhibit footings of cost is the same as on the first sheet, except a sub-total which shows the cost of the blower delivered at the plant. The second shows the total for the pipe and fittings; the third item shows the building material; the fourth item shows the miscellaneous items; all the elements are shown on the previous sheet. Mr. Lea allows in his estimate for that appliance $272.00 covering installation and the foundation; my figures give the cost of the foundation too. Regarding the
695 discrepancy between the actual cost and Mr. Lea's estimate I have made a comparison here on the basis of deducting our cost of the #7 blower delivered at the plant from Mr. Lea's allowance for the apparatus installed and discovered from the subtraction that Mr. Lea's figures would allow us $32.35 for our foundation and labor in connection with it; as a matter of fact the building material used in connection with the erection of that blower amounted to $105.86; I would not testify, however, that that item covered the items that went into the foundation only, it simply shows that Mr. Lea undoubtedly allowed a fair price for the foundation work. By a fair price I mean it is low enough. From my knowledge of the appliance and the necessary foundation for it I would question whether $32.35 was adequate enough to meet our cost. That would be the only discrepancy.

I have examined the accounts of the company to ascertain what sums the company expended for the new water gas exhauster. That was erected, the account was opened in December 1908 and closed in May 1909. The apparatus was probably erected in the first months of that period but the account kept open to take into it such items as might be added later; it often happens that we open an account of this description, close it out and later items of construction are added to it; if they are added they don't show as a construction item in the special account opened, but in the general construction account. I have made a correct tabulation of the items of cost of that appliance. The company actually paid the prices indicated and carried them as an actual expense on the books of the company. The transaction occurred during my experience with the company. The total cost to the company of that appliance as shown by the special construction account opened at another time was
696 $977.89, and there was a credit for material returned $2.76 leaving the final total $975.13; the appliance was purchased of B. F. Sturdevant & Company and covered a #6 Exhauster and engine which cost $535.00, that price did not include freight; the freight and drayage in addition to the $535.00 was $28.48; as shown

by the company's records the net cost of pipe and fittings was $119.54; the cost of the foundation and the labor connected with setting appliance and miscellaneous items was $291.11, making the total cost of the appliance $975.13. The cost of the engine, blower and labor was $855.59 the appliance was installed during the period of my service; these sums were actually expended by the company for the purchase and installation of that appliance and I think it was the fair and reasonable value; whether that appliance could have been properly procurred and installed for a smaller sum than the company actually paid at the time it was erected is always a possibility, of course; in my judgment I think the price was fair and reasonable and possibly records the cost of what we might expect. The cost of the engine, blower and labor as compared with the sum allowed by Mr. Lea for the same item, Mr. Lea allowed $616.00 for the engine and blower erected, which is considerably lower than our cost for the engine, blower, and labor, and labor of erecting it, but $52.52 more than the actual cost of the blower and engine plus freight charges and drayage. It might be a possibility to install that and pay for the pipe fittings for $52.52, in that neighborhood, I think that would make us scratch to do it. We paid approximately $119.54 alone for the pipe fittings but I imagine Mr. Lea has included some of these fittings in his estimate somewhere else but not as a part of the blower equipment, that is why I made this segregation; Mr. Lea's estimate falls materially below the cost actually experienced by the company.

697 Exhibit "74" the #6 Sturdevant exhauster and blower just testified about offered and received in evidence.

The new blower at the district holder in East Lincoln was purchased and installed during the time I have been manager but not under my direct supervision, under my general supervision in November 1912. I have a record of the actual costs incurred by the company for that appliance, which however, don't include the price paid by the company for the blower, we have had some little discussion about that in addition to the cost of the blower itself; we had costs outside the blower itself as shown here in connection with the installing and fittings; I have a tabulation of these additional advancements and expense actually paid out by the company for that; the tabulation is correct and the items embraced therein were actually paid out on account of the installation and in connection with this holder. The net total the company paid for installation and connection for this appliance was $306.86 which items were reasonably necessary for the proper installation and connection of the appliance, in my opinion the items of cost were the fair and reasonable cost and actually represent sums paid out by the company for that purpose.

On a separate sheet following this tabulation I show the amount charged to the company by Sturdevant & Company for the #5 blower and 25 horse power three phased motor at their factory, the amount of freight paid, from the company's records, also fittings and miscellaneous items showing the net total; then a line showing the cost of the blower, motor and miscellaneous items as above listed, and

what Mr. Lea allowed for the net construction cost of the apparatus erected; the net total construction cost as shown from our
698 account books was $1,121.86; the cost of the blower, motor and miscellaneous items was $979.27 I arrived at that by adding the blower and motor and then miscellaneous items as shown on the third sub-total. Mr. Lea's estimate as compared with the costs actually experienced by the company allows $633.00 as a net construction cost, which is some $223.00 less than the blower and motor plus the freight cost to us; I haven't made a further comparison between our total costs but I think the difference would be something like $488.86 I think from my experience that the total costs paid by the company of $1,121.86 a fair and reasonable amount for this appliance installed with the incidental expenses necessary to be incurred. I think Mr. Lea was under a misapprehension as to the character of that blower and motor, I think he figured on another type.

Exhibit "75" is a tabulation of the New District Holder blower.

I have examined the account books of the company to ascertain the actual cost to the company as shown by the books of the coal washer and scrubber; have made a tabulation of those items. That appliance was purchased June 3rd, 1887. The books of the company show that the company paid for the appliance itself $2,352.15 and two freight items of $165.60 and $13.45 respectively, making the total cost outside of erection $2,531.20, the tabulation correctly reflects the book entries in that respect. Mr. Lea's figures on the washer and scrubber were $2,121.00 making his estimate less than the amount for freight and the apparatus itself by $410.20; in order to compare his estimate with the company's actual cost should be added to the actual expense the — cost of erection of the foundation. That would be a reasonable item for that piece of apparatus.
699 Exhibit "76" is the tabulation of the coal gas washer and scrubber.

I have made an examination of the records of the company to ascertain the cost to the company of the purifying boxes, carriages and station meters, and find they bought three purifying boxes and carriages and a station meter October 1st, 1892, and paid $13,125.00 for that equipment; paid freight on the boxes of $163.56, freight on the meter $27.87 making a total of $13,316.43, and just to see how that would figure out with Mr. Lea's compilation I assumed his figure for the meter in the amount of $3,901.00 and deducted that to find what the net cost of the boxes would be and found that figure to be $9,415.43 giving a cost per box of $3,138.48, four boxes would then cost $12,553.92, which would be an indication of what we would have paid at that time for the four boxes such as we have in use down there now; I can't say that these items cover the boxes we have, but that is the presumption. I found from Mr. Lea's testimony that he allowed for the four boxes, meter seal and carriage $11,800.00 as for that accounting for the entire expenditure of the company in those appliances, I don't know just how he figured that out, I don't know what that covered; I guess that was his net construction cost on those boxes without any foundation, later he made an allowance for the

foundation of $1,288.00 making his net construction cost for those boxes erected with the foundation $13,088.00; I think that figure of Mr. Lea's would be considerably under what our actual figures were on the erection of those boxes; I couldn't discover from the records of the company what it cost as they are now installed, but as far as was given by Mr. Lea that was a little less than the cost of the appliance without the cost of installation.

Exhibit "76½" is a tabulation of the purifying boxes and station meter.

700 I have examined what records the company have to ascertain the cost of the exhauster and connections erected in 1892, and found the company contracted for an exhauster and connections in November, 1892, agreeing to pay the amount of $1,745.44 for those items, and the records show they actually paid out that amount to the Western Gas & Construction Company and for freight, as compared with what Mr. Lea allowed for the net construction cost for that appliance I have assumed that item as it appears on our books covering a #6 Roots exhauster with the engine we have at the plant; Mr. Lea allowed for that #6 Exhauster $791.00, I intended to ask him if he included the engine that went with it; I don't know whether he did or not; I think I asked Mr. Brodnax and he told me that he did include the engine with the exhauster, I didn't verify that. As far as indicated by the records whether the net construction cost estimated by Mr. Lea was greater or less than the costs actually experience- by the company, his price on the 6 foot Root exhauster is considerably under the amount shown on our records as having been paid out for that apparatus and freight only; our records don't show the cost of erection.

I have examined the records of the company to ascertain whether or not there are any records of the purchase of brick to erect the brick buildings assumed to have been erected on block 79 in 1890; I found that the company purchased from J. E. Stockwell, August 9th, 1890, 263,200 brick for $1,947.68 making the cost per thousand $7.40, I think that shows on the old voucher as the unit cost; it indicates the actual price paid for the brick at that time, that is all the significance I give to it.

As to the actual cost incurred by the company in 1890 for 16 inch pipe I found in November 1890 the company purchased 3 cars of 4 inch pipe, 2 cars of 16 inch pipe for which they paid

701 $1,742.87, as I remember I didn't find any data on the vouchers to show the weights of the pipe, I found only the price per ton.

I have examined the books of the company regarding the governor and connections for the 500,000 cubic foot holder constructed four years ago; that erection was under my jurisdiction and general supervision; I am personally acquainted with the reasonable value of the items, I made a tabulation of them and the items therein are correct and correctly reflects the entries on the company's books, in my opinion the prices given to the items are the fair and reasonable value.

Exhibit "77" is a tabulation of the governor and connections.

The construction account headed "Governor and connections for

500,000 cubic foot holder" was a sort of a catch all construction account at the time we erected the big holder, and many items we didn't know where to charge were charged in this account; the items of expense were necessarily incident to the installation of the 500,000 cubic foot holder and governor, including the cost of the governor. I showed in the first part that we had a holder construction account, when I said we didn't know where to charge the items I meant that there were items of pipe and material that were used outside of the holder itself that were contingent upon the erection of the holder that might have been charged there but rather than do that we put them into this catch all account so we would cover the construction account without these incidental items.

This account includes a 12" governor which cost $360.00. A No. 8 Sturdevant Exhauster $450.00 both F. O. B. factory. Various items entered here are the amounts paid to the construction company for apparatus, freight drayage, pipes, valves, fittings and building material and other items totaling $5,519.15.

There was credited on the total amount $251.88 giving the total net amount in that construction account $5,267.27.

These items are absolutely necessarily incident to the installation of the holder itself.

I show what we paid the Reynolds Gas Regulator Company for the governor; the Sturdevant Company for one #8 exhauster; and the 7 by 6 engine and pulley; the total of those items is $1,127.50;

I also show the amount paid the Western Gas & Construction
702 Company for pipe valves and fittings; also show the sub-total there covering the items paid the Western Gas & Construction Company in the amount of $1,532.32; also shows payments made to C. P. Holm account of building work in the amount of $294.38 for one item and another item for $79.71; in addition to that other building items from the records of the company a sub-total amount of $741.88; also listed there freight and drayage from the Company's records, those are part of the items that enter into the total given in the previous tabulation, to indicate the general nature of the expenditures, but the sub-totals don't make the same total to the total amount; this is a mere classification of some of the items to indicate the character of the expenditures and not all of them.

I have made an examination of the accounts of the company to ascertain what costs have actually been incurred by the company for office furniture and fixtures, taking the amount shown on the books since 1901, as of November 30, 1901, and adding each year up to January 1st, 1913, that were charged on our books as an investment covering office furniture and fixtures. I have shown the original charge to construction of $240.00 and items added since that time to the amount of $12,391.21, November 30, 1901, the total charge was $240.00, I was not here then; I regard that as a mere nominal sum for a corporation like this for that item. The additional investments after that in addition to what were charged into that account previously were as follows: For 1902 and 1903 $1,468.57; For 1904, $269.57; For 1905, $305.39; For 1906, $321.50; 1907, $1,064.28; 1908, $526.21; 1909, $249.77; 1910, $408.77; 1911,

$406.49; 1912, $7,133.05. Mr. Lea's estimate based upon a detailed inventory of that class of property of the company was $13,038.69. I have personal knowledge of the occasion for acquiring equipment charged to investment in 1912, or rather January 1, 1913, of $7,-135.05, we moved our office from the old location between 13th and 14th and O street and went into much larger quarters which
703 necessitated additional furniture and fixtures. The office is located at the corner of 14th and O, 1401 I think is the number where we have a public display room, fixtures, lighting fixtures and the lights; as to the size of the office the length of the building is 142 feet, 50 feet wide; on the ground floor of that space we occupy 25 by 142 feet plus about 22 by 77 feet; there is a little store building taken out of that total area about 25 by 65 feet that we don't occupy. All the rest of the ground floor is right on the street. The office opens upon the street but one space we don't use, the space taken out by the elevator and the little space I mentioned before. As to what the fixtures mainly consist of $7,000.00 represents the purchase of electric fixtures for illuminating the main office, for tables, settees, desks and chairs that were necessary for our use in view of the fact that we took a much larger space and re-arranged our entire scheme of office equipment and arrangement. We have a display room for the sale of our appliances and use that room as a sales room for electrical and gas appliances. Describing the office equipment, the sort of fixtures to accommodate numerous clerks and arrangements for cages and stations, we put in the high desks that are necessary in the office for taking care of the customers as they come in to pay their bills, get their bills, or tell us what is wrong with their equipment; we also had to put in all the partitions to divide the office; the heads of the departments have separate offices in that space, appropriately furnished; we have a partition arrangement or counter to separate the clerks who deal with the public from the public that comprises practically the equipment on that floor; we have several other offices on the second floor that we are using, the back part of the second floor with such fixtures as are necessary; also the basement, we put in several partitions in the basement and some desks in the second floor, no chairs or other furniture or lighting fix-
704 tures, the lighting fixtures are supplied by the landlord, but we supply the basement; the sum actually invested was the reasonable and fair value for the equipment; in my opinion that sum was prudently expended in view of both the interest of the company and the public. I think it necessary to carry a sum of approximately $15,000.00 in that item perpetually, I don't see how they can avoid it.

As to my qualifications in business and how long I have followed the vocation of a gas engineer and manager, I entered the employ of the Gas & Electric Company in June 1903; graduated from the University of Wisconsin from the electrical engineering department; in my services in this line I have practiced the vocation of an electrical engineer in a way; my first experience on the electrical business was prior to my graduation in the electrical shops at Madison, where I did a lot of roustabout work scrubbing off the armatures and wiring

the cast iron castings; as another sample I worked for the Colorado Telephone Company in Denver, I think I crawled through all of the dirty holes in the Union Station, connecting up telephones and taking them out, putting in condensers, changing from the common battery to the series system of common battery. After I was graduated I was first employed by the Madison Gas & Electric Company; for the first year and a half my duties were to test electric meters, the meters were brought in for repair from the consumer, it was my duty to put them in shape to be used again; I also tested the meters that came in from the manufacturers to see that they were accurately adjusted and ready for use, while doing that work I also posed as an expert trouble man for the company; if any days trouble came in that the men couldn't take care of they sent me out to help them out on the job from a technical standpoint, I usually found that this meant for me to do the work as well. That was not the only position I held in
705 that company, I left the electric meter department and went to the Gas department, after going into the gas department my first duties were to help Mr. Wilson of the Westinghouse Machine Company test out some gas engines, and as a representative of the company I had to see that the tests were accurately made so that the company wouldn't get the worst of it; there was some dispute between the Company and the Westinghouse Company as to the value of the engines and as to whether or not they had met the guarantees of the manufacturers; after I got through with that work I was detailed to look after some coal gas operations at the gas works to discover why the company wasn't getting better results from the coal carbonizing; also helped the old man around the works pump tar, and various kinds of work that a graduate usually has to do to get into touch with the practical line; then I left the department and went into the office as superintendent of distribution and was there for some time, over a year, and had charge of both gas and electric departments in the distribution system; in July 1906 I came to Lincoln as general superintendent; was superintendent of both gas and electric plants at the time I came here; served in that capacity from July 1906 to some time after July 1st, 1909, and have been continuously in the employ of the company since; I have been general manager here since 1909 but have done some other work besides that for this company; have examined several properties for Henry L. Doherty & Company where I was directed to make an investigation to discover whether they wanted to make a purchase; have also done some independent work for various people in an engineering way; am familiar with all the departments of the Lincoln Company; since graduation have taken part in conferences of engineers, read engineering journals. We do not have regular meetings hardly but occasional meetings of the managers that operate in consultation with Henry L. Doherty & Company; I attend those meetings, in which
706 all the engineering problems in these utilities are gone over to a large extent; the purpose of these meetings is to discover improvements and modern methods of operation to make improvements in our operation; have endeavored to keep up with the improvements and modern methods and keep myself advised of

any new schemes that seem practicable; consult universally with Henry L. Doherty & Company in matters of engineering problems that arise in this company, and regard that as good practice; I don't think anyone operating a property of this size, or any size, should take it upon themselves to give the last word in all the undertakings necessary to develope the property, it wouldn't be fair; it is customary when troubles are developed and schemes for meeting them to submit it to Mr. Doherty and the Doherty Company; Mr. Doherty acts as a consulting engineer for this company, and their own properties; at all times I have the advice and benefit of that engineering company and avail myself of it absolutely; no independent fees are paid for engineering services to the Doherty Company; comparatively recently for example in financing this company regarding the $500,000 issue of the company's three year notes the Henry L. Doherty Company was absolutely responsible for the sale of those notes, the only connection we had with it here locally, was to show the auditor of the A. B. Leach & Company through our works and give him access to our books so he could get the data; no separate fee was paid Mr. Doherty or his company for disposing of the $500,000 of notes; I regard those services of considerable value; it would have been impossible for us to finance, under our condition, without the aid of Doherty & Company or someone that had the same interest they had; under ordinary conditions it is customary to pay a considerable per cent for the services of a banking house to float and sell securities of a company like this; I think Mr. Doherty is the only one who has gotten away from the old idea of going to the bankers and saying we have this issue to sell and we will give you so much to sell them.

707 When we have a situation requiring the raising of any amount of funds we do it through the New York Executive Offices instead of locally, anything out of the ordinary such as bank loans, the Executive Office-s get no fee for that service; Mr. Doherty and Mr. Freauff are paid for this service through the nominal salary they receive; Mr. Doherty get- $3,000.00 a year and Mr. F. W. Freauff gets $2,400.00 a year. From my experience in this utility I have always thought and still think these compensations are reasonable, and are prudently and necessarily paid. These are really nominal amounts from my understanding of what is ordinarily paid officers in that capacity for their services as executive officers of the company as compared with the advantages the company receives. Those salaries really cover the services rendered by Doherty & Company in a general way, including their services as consulting engineers and financiers, as I understand it it is a partnership and the salaries go right into the company, and we derive the advantage of the services of that company; in addition the firm of Doherty and Company maintains a school for the education of young men suitable to promote business for such company-'s as this; they study the most efficient and advanced systems for the development and promotion of business; in consideration of the payment of these salaries we are permitted to call upon Doherty & Company in the promotion

of business for assistance, and have done it; those advantages are very useful.

I am acquainted with the pay-rolls of the various departments of the company in a general way; as heads of departments we have a secretary and Treasurer, Mr. R. E. Phillips; Mr. George A. Montgomery, general superintendent; Mr. J. E. Shuff, new business manager; I have covered the superintendents, those are the three general heads and the sub-heads under them; this company itself has been somewhat of a school, our secretary has grown up in our business,
Mr. Montgomery has not, he is a McGill graduate and had
708 *and had* other experience before coming here. Mr. Shuff was
a creation of this company as new business man; we pay Mr. Phillips $150. a month, I guess I am responsible for that myself; we pay Mr. Montgomery $200. a month and Mr. J. S. Shuff $175. a month; our superintendent of distribution is Mr. Baxter, he is under Mr. Montgomery as superintendent; he pays Mr. Baxter $90. a month I think; we also have a purchasing department or purchasing agent, a new department we put in last year; it hardly justifies the name of a department, we pay the purchasing agent $100. a month, I think he has more than saved his own salary in making economical purchases and in seeing that we get our discounts and in checking over our stock; I am acquainted with the efficiency of each of these gentlemen; from my knowledge of the responsibilities and fitness for the places they fill I would say in my judgment the compensation paid them was reasonable and prudent and what we would expect to pay anyone for that work. I think their employment adds to the efficiency and to an economic administration of the business; I am familiar with the pay-rolls of other laborers including bookkeepers and men at the stations and in all departments of labor; I supervise these pay-rolls in a general way; as to the rule adopted in fixing the wages of such employes, common labor is determined by the demand for labor and the amount paid for men who have charge of the work is determined by their experience and men available for that sort of work, we pay the ruling prices in this market for labor, at time- we have paid more than that, we have discovered in a good many instances the men would rather work for someone else, perhaps the city, than for us, because they are handled a little more
leniently and our work is a little more disagreeable, for street
709 work it is difficult to get the labor. We sometimes, but not
always, are required to pay them slightly higher, such as money or transportation to and from work, perhaps cutting down the number of *house* or making some concessions. I regard our pay-roll as reasonable, and act upon my best judgment and that of the heads of the departments; those matters are under my entire control locally, we get those things through conferences among the department heads and adopt the course which we think tends for economical operation of the plant. As totals these wages are all reflected in the monthly and annual reports of the company identified here, they were identified by Mr. Phillips. The office of purchasing agent was established just a year ago; in a way the secretary the general superintendent and sometimes myself had charge of the purchases we sort

of spread it around in the different departments, but all done under my supervision and is yet even with the purchasing agent.

In my experience with the company the prices paid for materials and supplies of all kinds necessary in the gas making business have been the best we can obtain in a fair market, and have been uniformly so since I have been connected with the company. By the employment of a purchasing agent the object was to increase our economics in the matter of purchasing supplies and materials and to relieve those who had been handling that work, we were crowding our secretary too hard with the details; we could turn the purchase of coal over to a man on the ground constantly, and could get better prices in our electric department; that would be reflected in our gas department because steam is one of the essentials in the manufacture of commercial gas; the market has changed in the last year very materially from the market we used to buy in; there was a time when it was easy to buy coal at a very low price, and pick up gas
710 oil either in the open market or through contract, it has been almost impossible to buy coal or oil in the last year readily without considerable difficulty in getting it shipped at the proper time. I regard it necessary to have a man who devotes his whole time to that which reflects in the economic saving. I became familiar with the distribution system from the time I was superintendent. Before we reach the distribution system I supervised the purchase of materials and in a general way am familiar with the cost of materials and supplies. Coke and oil are the two principal ingredients that enter into the manufacture of gas, we also use steam, the office of steam is to pass through a bed of hot coke which is decomposed into hydrogen and oxygen, the oxygen united with the carbon in the coke and makes a blue gas, or coke gas that has no element of power and a relatively low heating value, that gas is passed on into the carburetter where it is enriched with oil, so that steam is just as essential as oil or coke but does not enter into the expense in such large proportions as the other two.

In connection with the manufacture of gas for 1912 I would explain the increase in the cost of manufacture has been very largely due to the increase in the prices we have had to pay for gas oil, the extensive use of gasoline for automobiles and other purposes has increased the cost; the refineries have been making all the gasoline possible taking out of the market some of the gas oil; for a considerable time we have not been able to buy oil on a flat rate, our contract now provides for a sliding scale, if the market price for crude oil goes up our price goes up, if it goes down our price goes down, some plants over the state have asked us if they could get gas oil from us if the oil companies should shut them off. We don't have a price for gas oil under the sliding scale for the entire year;
711 I can't remember the details and prices for those contracts; I think one contract was based on 68 cents a barrel for crude oil, and 1/40 of a cent to be added or deducted for each rise or fall of one cent per barrel in the market price of crude oil, to be familiar with them I would have to look at those contracts. I couldn't tell what the per cent of increase of gas oil was in 1912 over 1911, I

don't know what the average price was for the year, in 1911 we bought for 2 cents a gallon, in 1912 it run up as high as 4.2 cents, it never got as low as 2.7 cents; there never has been a reduction on account of the sliding scale arrangement in the contract, it has always been an increase.

I remember upon the original hearing that Mr. Beemis the statistician and *certique* of the city suggested there might be some economics of operation derived from going exclusively to the water gas system; after that hearing we went to the water gas system, that was about the cheapest advice we ever had. To a certain extent we have always felt that our coal gas plant enabled us to accomplish the consummation of an oil contract to much better advantage than if we didn't have the coal gas plant. The manager of one of the gas plants in Nebraska abandoned his coal gas plant some years ago, tore it down and threw it away and put in water gas, he is the man who called me up and asked if I could help him out with gas oil if the oil companies shut him off. Where we could not absolutely make water gas and would have to fall back upon the coal gas operation it is not at all improbable that the price of gas oil may advance under the conditions to a point that would commercially prohibit its use in the manufacture of gas. We cannot consider that the cost of manufacturing water gas is stable at the present time so that we could figure what would be the cost of material, and I think it the reason-
712 able and logical thing in view of those facts to keep equipment in the plant of a coal gas apparatus; our consulting engineers advise us to keep our coal gas equipment in shape to make coal gas if occasion should require. In my opinion I would not say that when the prevailing price of coal oil ranges above 4 cents a gallon that I would regard it economical under those prices to operate the coal gas plant, I am not prepared to say that; there is a point where it would be more economical to substitute coal gas for water gas, I haven't figured out precisely the point where you would want to switch to coal gas. I regard the conditions absolutely prudent if not necessary to maintain a coal gas equipment in the plant. We buy our coke now in the market, if we had coal gas machines of course we could provide our own coke.

Coming to the distribution system for some time including July 1908 I have been familiar with the conditions of the pressure in East Lincoln which gave the management trouble, we couldn't get the pressure that would satisfy the consumers in East Lincoln for some years, and the district holder was located at 32nd and X for the purpose of giving our consumers in that territory service and to aid us in giving the consumers in South Lincoln and other parts of the city better service; I made a particular study of the gas distributing plant early in 1908 because of the conditions we experienced there; we made an effort to doscover just what we could do at that time to enable us to give consumers getting a low pressure a better pressure; made a detailed study of the entire system at the time to find the most economical thing to do as a temporary make-shift. We had no direct trunk leading to Northeast Lincoln but I would say that

all the pipes in our system may be North of L street carried
713 the gas out. We had some mains, distributing trunks that run out O street to 18th, on 18th to R, on R to 27th and down 27th carried the principal part of the gas out there; the main at the plant was a 20 inch main that we still have in service, then came the 16 inch, 12, 8, 6 and 4 inch; on M street at 18th I think we had a 6 inch main; I think the main out R street was 6 inch extending to 27th; I think there are some 6 inch mains beyond 27th and R extending down 27th, either 6 or 4 inch, probably down to Vine street, I don't remember just how far. The most remote point in that direction from the station holder might have been Holdrege street, I don't remember, some 6 inch main ran East of 27th street out R I don't know how far. We did not find the source of supply adequate to give pressure in the service mains that were connected with the 6 inch mains.

The mains that led from the station holder to Southeast Lincoln were taken off from M street; at 9th I think was a 10 inch main that run South. Giving the comparative sizes of the mains that run into Northeast Lincoln with those running into Southeast Lincoln and how the comparative pressures in those services were reflected would say there is a 12 inch main going off from M street feeder at 9th street, that runs out to G then over to 10th out 10th to C, then a 10 inch main runs across C to 18th, a 10 inch main runs baco to O street at 18th that is also continued through to R street, a 6 inch main runs out R to 27th connecting into the 4 inch main that runs to Holdrege, and a 4 inch main runs up R street a block; we also had some 4 inch main on T street and a little on U street I guess that is; this system was originally designed for the purpose of taking care of the large growth in the South and Southeast portion, and be-
cause the Rock Island Railroad ran through the town and
714 kept cars at the depot on O street we thought there never would be any material growth out in Northeast Lincoln, consequently no plans were adopted to take care of the growth we have had since 1904 and 1905 out there. At the time we made a study of the pressures in the different portions of the city to discover what to do to relieve the people in Northeast Lincoln, we had short interval readings taken of pressures in different parts of the city for the purpose of getting the comparative pressures between the Northeast and Southeast districts; in one instance we took the plant pressure; at 7th and M the pressure; 9th and M, 11th and M; 18th and R every five minutes from 5:45 to 6:15 in the afternoon, which was the time of the heaviest demand on the system; those pressures were measured in inches of water and are tabulated here, that tabulation shows when we were getting the least pressure at 18th and R during the time the readings were being taken. We got 8.5 inches at the plant, 7.6 at 7th and M; 7.4 at 9th and M; 5.9 at 11th and M; that was for Tuesday November 12, 1907, 18th and R 3.4; Tuesday November 19th, a week later we took a similar series of readings and with 10 inches at the plant we got 3.8 inches at 18th and R at 6 o'clock; 6 inches at 18th and M; 6.5 at 14th and M; 7.5 at 11th and M; 8.8 at 9th and M; these charts were really for the purpose of studying the drop in

pressure along the feeder as it went out into that Northeast district, then we took individual tests taken in the territory, there were two more charts I am not reading them all; I will explain the charts showing how the pressure fell at the points tested in the Northeast District; November 12, 1907, at 2141 "A" street we found the lowest pressure we got there it was about 1.8 inches, the plant pressure that same day as shown on the following chart was 13. November 14th, 1907, at 3031 "R" street shows the lowest pressure of that date to have been at 6 o'clock .8 of an inch, that is in Northeast Lin-
715 coln; with an .8 inch pressure it is absolutely impossible to give an adequate and sufferable or permissible service at the jet or anywhere in the house; engineers have usually looked upon 1.5 pressure at the meter as a sufficient pressure, but my experience is that isn't enough and the gas is ordinarily burned at an inefficient pressure where that pressure is received at the meter; an .8 inch pressure as at 30th and R is a very expensive pressure for a consumer and causes complaint, dissatisfaction and high bills, and dangerous to heaters, when the pressure gets to .8 inch it is getting so low the gas might go out entirely and when the pressure comes up again the gas escapes unknown to the inhabitants and death may result.

Now going into particular detail these charts show when we are getting a reasonable and satisfactory pressure in South Lincoln you are getting a very unsatisfactory pressure in Northeast Lincoln; the valves we had in our system at that time we were able to shut down those valves taking the overflow of gas to South Lincoln and divert it to Northeast Lincoln, we made an effort to do that and even then we were not able to give the people in Northeast Lincoln the service they should have; that device was resorted to at the risk of good service in Southeast Lincoln, we cut them down to just the minimum pressure in Southeast Lincoln in order to give the Northeast Lincoln people minimum pressure at that time. We adopted the notion of putting in a temporary booster at 9th and M to take the gas from the main at a pressure of about 6.4 inches and boosting it to a pressure of 14.1 inches forcing that at 9th and M to 18th and R through the main feeder to that Northeast District, shutting the valves going South so it wouldn't get into the South part of town under
716 high pressure; that was our recommendation to New York as a temporary make-shift to avoid the expenditure of $10,000 to $12,000 in improvements at that time which would only give temporary relief and some other scheme would have to be provided later. We were unfortunate in buying our blower for which we dug a pit at 9th and M and got the blower in there only to find that the manufacturer had sent a seive instead of a blower and we were unable to use it, we had a hard time that winter doing anything for the people in that part of town. The next year we took up with Doherty & Company the matter of what we ought to do to take care of that district, then we finally adopted the district holder scheme; I talked with Mr. Scott the general manager of the Doherty Operating Company who suggested they had used a district holder in Denver, and when Mr. Bradford and I got to working out the situation in Northeast Lincoln we finally recommended a district holder to Mr. Scott

and he heartily approved it; it was really Mr. Scott's ini-atory suggestion or idea and our solution of that came from the consulting engineer. Whether there was any other purpose in suggesting the district holder except to relieve the conditions out there, you might get at that in this way: Before Mr. Bradford and I made our recommendations we went carefully over other schemes for getting at the situation; we went at two other schemes, one was to run a high pressure main out to the Northeast district; the other to segg*r*egate and connect up a district governor and put in a bigger feeder from the plant, or some other part of the system, we abandoned both of these schemes as not practical under the Lincoln conditions because the City Council was constantly agitating the company in regard to their high pressure and the delivery to the mains and threatening us with law suits, and the Water Commissioner reported every
717 month that the pressure exceeded the limit required by ordinance; Mr. Bradford and myself thought it absolutely impracticable if not impossible under our situation to talk about any other scheme than a district holder for relieving that situation. We still face that situation, the Water Commissioner's reports, and the State Journal has taken upon itself to advertise that fact freely, and as we thought, even maliciously. Even though the engineering features of transmitting gas out there some other way might be feasible and deserve consideration, we didn't think we ought to consider it.

The problem encountered in selecting a particular location resolved itself into this; What pressure could we deliver from our plant and how far could we carry it into Northeast Lincoln with what I would call a low pressure system; I regard as a low pressure system any that delivers gas with a centrifical blower; when you get a positive blower you get into high pressure; we wanted to stay with a low pressure system, one that you could throw gas into Northeast Lincoln and give the service at the furtherest point, then we thought the safest and best thing to do was to get a district holder as far out as we could to bring the gas back. We considered that Lincoln would eventually grow East of 33rd and South, and that the district would grow up around from 27th to 33rd and Holdrege and further North and West and if we could get our holder around 33rd and the Missouri Pacific, or somewhere along there we would have the holder properly located; we figured that the ordinary pressure of the holder and through it would bring the gas back into Lincoln and overlap with the gas that was coming from the plant holder; that the pressure from the plant holder and the district holder would meet at a point where we could realize the pressure midway between them, and also in a good
718 holder so far out we could get gas into it during the hours of light load, we might put the holder out so far that the gas would feed into it during the hours of light load on account of the drop in pressure and in our actual experience we have absolutely found that that particular location has met the problems that faced us; I regard the location of that holder unavoidable in view of the conditions existing in Lincoln at that time; it was put there to meet those conditions; without doing something else we could not give the

service in Northeast Lincoln at the present time without the holder; I made the expenditures for the company for that holder; I negotiated the purchase of the land for a site; negotiated with the City for the right to erect and maintain the holder at that point; I regard the purchase of Lots 1 to 15 in Block 2, and lots 1 to 15 in Block 7 a necessary purchase in order to carry out that engineering plan; difficulties were encountered in carrying out the plan from the municipality and property owners eventually necessitating all of that property in Blocks 2 and 7; after our estimates were all made for the erection of that holder we discovered that the City Council was going to offer objections to its erection without a permit, we appeared before the Council and asked a permit even though we were advised it might not be necessary; the Council appointed a committee to take it up with the company; we had our price on a holder with a steel tank and the Council Committee insisted on our digging a pit at a very considerable more expense than the steel tank; it was also intimated to me personally by the Committee that unless we were able to satisfy Mr. Hill, who owned a house and some lots adjacent to the holder, that perhaps we might have some difficulty in getting a permit; at that time Mr. Hill was the Janitor at the High School and rather than have any difficulty over the matter we paid Mr. Hill his
719 price for the property and the permit was later granted. I regard that expenditure as reasonably necessary, we had to do it under the conditions to maintain our right to locate there, it was perhaps a matter of expediency rather than duress, but we did not get the permit until after we had agreed to do that; we got the permit after we had purchased the property. I don't connect the two transactions together exactly but I would not pay Mr. Hill for his property until after we completed the erection of the holder, because I figured something might turn up to prevent its final completion, that either the City or some property owner would enjoin us. Mr. Armstrong at that time was president of the company and he and I agreed to take that property up near the holder when the holder was finally put into service and it was not until after that agreement was signed that we were able to start work, and we in that way avoided an action for damages which otherwise we would have anticipated from Mr. Hill; in my opinion, as I regarded his position and claim that his property would be damaged would be sufficiently influential with the City Council so they would withhold the permit until he was satisfied. It was not the suggestion of the Council that we buy his property to satisfy him, they didn't act on it in that way; the committee had two or three conferences in the office, well before we finally concluded it they appointed two committees, adjourned one and appointed another, the first committee wouldn't act at all, that committee as a committee I don't believe ever said we must buy that property, but individual members of the committee intimated to me personally there would be considerable trouble about erecting the holder unless Mr. Hill was satisfied and would say to them he
720 wasn't going to cause any difficulty; I was finally able to agree with Mr. Hill and got him to go to that committee and say I am satisfied. Was not able to satisfy him except by purchasing the

whole property; I tried to get around that in some way but have forgotten how now. Other suggestions as to improvements of the property were made by the Council Committee, the Council Committee went to Mr. Dobson the City Engineer and asked him to look over our plans, Mr. Dobson then indicated the size of the mains we were to run from our holder; under the agitation caused by that Council Committee, the Committee was afraid we were going to raise our plant pressure to fill that holder and work a hardship on the consumers; I argued that we were putting governors on all consumers premises, no matter what we did with the pressure at the plant it wouldn't affect the consumers, we insisted that something must be done and he insisted on our putting in large mains around that holder leading back to the outlying district, and set out what we were to do, and Mayor Love said before we could get his approval it would be much more satisfactory if we would park that place and plant trees and shrubbery and fix it up; we had Fred Yule figure a scheme for us and we presented it and he approved the permit. There isn't anything out there in the hot summer, still we were under a moral obligation to plant it and we did it. We still have our promise out to carry out the parking scheme and beautify the holder and we are going to do that, we have plowed up block 7 and have planted grass seed and are going to tell all the kids in the neighborhood to play ball on it. We erected a 6 inch main from the holder to meet the 6 inch main from the plant as required. Regarding the additional cost experience because of the requirements of the City Council, before there was any publicity given to it we were able to buy
721 lots 7 to 15 inclusive for $1,000.00 that was done in a way that we didn't indicate to anyone that we were interested, as soon as it was discovered that we were interested the proces went up around there; we paid Hill for his house and six lots $3,500.00, the house had no basement to speak of, a little hole in the back part, no water, gas or electric fixtures, it wasn't a modern house and we didn't want it. When we finally got the holder up Mr. Sinclair said he noticed a horrible odor of gas, that his property was being damaged and either we were going to buy it or he was going to sue, I bought the property in recognition of his claim for liability; Mr. Kimball owned the next property, lots 1 to 6 adjacent to that, he had learned that Sinclair had sold his property and he felt that he also smelled some gas and I bought that property, for $1,750.00 making a total for the 15 lots I believe of $3,350.00; of course we didn't live there and the trees hadn't been killed, I went out there and I couldn't smell the offensive odor of gas, but there would have been a bona fide controversy with both of those parties for damages, and we might have to pay the whole price of the damages as a part of the cost of the holder anyhow; I figured these purchases as a settlement of these damages claimed for this property.

These points on these charts indicate the points on that day which they were taken.

We produce the pressure charts for inspection of counsel for the City, they cane be introduced in evidence if necessary but if not necessary we will not introduce them.

In connection with the preparation of the engineering scheme to relieve the condition in Northeast Lincoln, a report was compiled under my direction by S. W. Cheney, who was superintendent
722 of distribution at the time, who made a report and sent it to the Doherty Operating Company, which explains the conditions I encountered at that time; it embodies the conditions of the booster proposition; it was compiled as an operating condition, a part of the Res Gesta of the transaction as it were.

Exhibit "78" shows the time we erected the East Lincoln Holder.

Exhibits "31" to "51" inclusive, and "71" to "77" inclusive offered and received in evidence without objection.

In my judgment as an engineer the district holder was the most satisfactory and economical solution of the variable pressures at the services which we encountered and desired to correct.

As a general proposition the placing of the district holder would not be attended with as much difficulty and inconvenience to the public to afford a remedy for those troubles as to tear up the mains. In the plan we adopted and finally executed in view of the advice from our consulting engineers and our own investigation we employed our own best judgment to serve the people and increase the efficiency and economies of operation of the plant.

The use of service governors in this city is almost universal, the practice is never to put in a new service no matter where it is locate without putting in a governor, my recollection is we have somewhere from 7,000 to 7,500 in use. We are practically operating now on a system of service governors, in my judgment I think it is one of the best things we ever did, it satisfies us, and the customer is more satisfied whether he thinks so or not; it reduces our complaints; in some instances a consumer wouldn't have a governor installed owing to some prejudice that wasn't justified, as a general proposition I
723 think the community is well pleased. By putting on the governors and through the increased pressure through the district holder we have practically eliminated the trouble due to variable service.

Cross-examination by Mr. Morning:

The item of office furniture is carried on our books and inventoried at $12,391.21; in 1901 it wouldn't be the same item, the same heading is carried at $240.00; in other words November 30, 1901, our office furniture was entered on our books at a valuation of $240.00 whereas now it is $12,391.21; as to what there is in connection with the operation of a gas plant in this city since 1901 requiring such an increase, in the first place you would have to assume that was all the investment they have, which I wouldn't think was proper for furniture and fixtures, the occasion for the increase has been the rapid developement of the business during the years that have elapsed, and the better policy for handling consumers and give them conveniences as we look upon that. I don't know where our office was in 1901, I wasn't here in those early years but have been told their office was

in the basement of the Burr Block and also in the basement of the Farmers & Merchants building, at one time J. K. Honeywell and Jake Oppenheimer did all the work for the company, that was before our company took this over. I think in 1900 this company engaged in the manufacture and sale of electricity, that commodity has competition in Lincoln, and quite a considerable portion of the activities of the company in pushing business, displaying fixtures and such articles as are displayed in our present sales-room are in connection with the electric business. I would not say whether the electric business dated back to 1892, I am not very familiar with
724 those dates. The Traction Company I don't know when the Traction Company engaged in the sale of electricity for commercial purposes. I don't assume that we have not competition in the manufacture of gas, or that we have an elaborate office, we pay $450 for rent of our offices a month, but we look upon the handling of the public as one of the most important items of our business, a very, very important element is to be able to take care of them systematically and quickly, we took that element into consideration when picking out a location and arranging our offices as now, we feel that the community is glad to see us adopt the most progressive and advanced ideas in equipping an office and arranging to take care of the public; in arriving at the cost to fix that office up we made every effort to keep the cost down and still maintain the proper equipment, location and arrangement and our experience has been that our policy there was correct because we have reduced absolutely the number of so-called complaints and kicks from the consuming public. If we had been able to get offices for $75 a month that we felt would satisfy the public we would be awful *gald* to do it. I don't know anything about a suitable location on a side street, 11th street for instance, adequate to accommodate the public, I made some investigation as to what we could rent a building down on South 11th street for, my conclusion was the rent was too high for the location and the building we could get. I don't know what the N. S. Cafe in the Brownell Block pays at the present time, but I imagine they pay less than the same space was offered to us for. I don't know that they pay $100 a month; that location is a little over half a block South of O street on the West side of 11th not far from the business center in this city; as to location assuming that we could get all modern conveniences that we have in our present location:
725 if we got the same space and same conveniences we still considered that location was not in the direction of the growth of the city and that we ought to follow that general direction of growth, we felt that the growth was in a Southeast direction. I can't seg*g*regate into floor space what portion of our office room is occupied by the gas business; the entire space is used for the transaction of our gas and electric business the space used for display purposes is about 25 by 65 or 70 feet; I don't remember what the total floor space for the whole office is; I would not say that 50% of the floor space was occupied by our display room; we have 25 feet on O street by about 70 feet in depth which is absolutely the most desirable portion; the principal portion of our offices are to the rear

of the building, and the balance of the floor not occupied by the office is occupied by such gas and electrical appliances as we offer for sale; in the basement we have a little store room, an electric motor and gas shop, a various miscellaneous character of supplies, stoves, fittings, and small fittings; we don't handle fixtures any more for gas fixtures; we have burners, but no electric fixtures; we have electric appliances such as flat irons, curling irons, percolators and all electrical appliances made for commercial use, all kept in the basement of the building. I think the general public is interested in our selling gas stoves and electrical appliances; practically all hardware stores sell gas stoves and ranges such as we sell and we are glad to have them do it, we are in direct competition with them and the community can buy them in the market from any of the dealers and the same is true of electrical fixtures; all those things we display in this room are articles offered for sale by dealers but not at our prices;

726 we use not an expensive office but our office is for the purpose of displaying articles that come in direct competition with similar articles offered by other dealers in the city; whether we make a profit on electrical appliances depends on how you consider it, what you consider a profit and what you figure from; I think taking account of the appliances themselves, their bare cost plus freight and storage and sales prices we always try to get a figure that will let us out on the — sometimes we make some profit; we don't try to make much on the profit, that is true of gas appliances. We would like to sell them at a profit and we do make some profit, and if we could make enough sales we probably would get out clean, but with our effort to sell the appliances, if we were to put the prices on them that would let us out on the total expenses we can't make the sales; and as we have been vitally interested in building up the business we feel that we can handle and sell at a lower figure than any dealer could; no dealer would make the same investment in fixtures and at the same time make the same effort to sell as we would, he couldn't sell as low as we could. We carry a fairly large stock of stoves and comparatively small stock of other items. I don't remember what our books show during the last year whether handling these appliances for gas and electricity have netted us a profit or not; as we figure I think those items show a loss, justifying that it is a necessary incident to the main business on the ground that it is necessary to develope a market and make a larger business. That is not especially true in the electri- business where we have competition. Where the price is not made by legislation but by competition it requires this outlay and to devote our energies in displaying goods and encouraging consumption for a market, but no more so than the gas department, in fact a large part of our store room and display space

727 is taken up and used for the sale of gas appliances. Our monthly and annual reports for the year ending December 31, 1912, show the loss, if any, sustained in handling and selling gas appliances; I don't remember, but could tell by looking at the report ending December 31, 1912, whether there was a total loss on gas appliances alone of $7,301.93 or thereabouts. I recognize from this copy of the report handed me totals for "Advertising and newspaper

space, exhibition, salaries, wages and miscellaneous expenses," and then adding the cost of appliances sold to the appliance expense, from that getting the total cost of the appliances, then deducting the amount received for the appliances, I find for the year represented on this sheet $7,301.93, a loss reflected in the operating expenses of the company for that year. I don't think a large portion of this $480 per month rent is made necessary to carry these appliances and display them for sale. If we eliminated the appliance business and electric business I don't think we could take care of the consumers as we do now and give the satisfaction and develope the business as we are doing it. I could not take out the $7,301.93 loss that year nor reduce the price of gas by that amount and increase the sale of gas if we didn't handle those appliances because certain elements enter in there anyway whether we handled the appliances or not: as shown there that loss of $7,301.93 includes several items that are outside of the physical sale of the appliances themselves. I justify the carrying of the appliances and selling at such a loss as sustained last year as a necessary and wise thing to do to promote the sale of gas. I could not take out that entire amount of $7,301.93 and justify it by a reduction in the price of gas to the consumers; I think this item loss on appliances includes office rent in exhibition ex-
728 penses, I can't tell you the proportion, Mr. Phillips has figured that out; I wouldn't be prepared to say how much enters at all at this time, but I think it is in that item. I would not say it would be neccessary to be on a prominent corner, maintain elaborate offices at a rental of $450 per month to economically carry on the manufacture and sale of gas in this city, but I think it is necessary to maintain an office on the best business street in town, as economical location as we can get, considering the growth of the town, the demands made upon us by the public and our obligation to take care of them. I would be glad to explain how we can better take care of the public at 14th and O street than on a side street such as South 11th, 12th, or 13th, and put it on this ground: A large per cent of the bills paid at our office are paid by women, it is our duty to get as near the center of the town as we can, taking into consideration how these people come into the business district, and how they get out of it; our observation has led us to believe that 13th and O is as near the center, that quite a good many more women get off and back on the cars at that point than any other; that is a point where cars can be caught going into South, Northeast and almost every other part of town; many customers have tols us they are gald to be able to get to our office from that corner by only going a block, we always felt if we got out of the central part of town we would be criticized for it; I think 80% to 90% of the bills are paid by individuals coming to the office, the balance are paid by check and through the bank: I don't remember what proportion is paid our collector, that all shows in that report, I can't tell you; here is one instance we received at the office 12.2%, Teller 3½%, collector 6%; the percent paid
729 at the office for December 1912 was 76.7%. I know where the Court House is located, it is nothing like as near the center of the town as our office. I know where the City Hall is between

9th and 10th on the North side of O street, but people go there to pay their taxes and water bills four times a year, to the Court House once a year and to our office every month; I don't think it just as convenient for the majority of these consumers to go to South 11th or 12th, it is not as accessible to street cars from any point as our present location. South 11th street within a block of O street is nowhere as near the center of the shopping district as our office; Were our offices located on N street anywhere from 10th to 14th I don't think it would be as accessible or convenient as our present location, it wouldn't take over a block of walking but otherwise they would have to go out of their way to get there. Everybody has to walk 2 or 3 blocks out of their way for shopping if in the neighborhood of 11th or 12th and O, but a great many people go to the Library and we are in the same block; a great many people go to the Orpheum which is up another block, a great deal of traffic comes into our office that is incident to other things. I don't know that we could save considerable on rent if we had our offices on N or South 11th, or 12th, or 13th between N and O or South 11th between O and M. I know that rents are many times higher on O street than on side streets because property is much more desirable for any business. We have the only gas property here so far. I absolutely think we sell more gas to this community by having an office paying $450 a month for it than if we had our office on South 11th or 12th street and paid $100 for it; sufficient to overcome the difference in our operating expenses, I think it is absolutely justified on that basis, and on the general ground that it is our duty to take care
730 of the public as conveniently as we can take care of them.

The large department stores in Lincoln are Rudge & Guenzel's, Miller & Paine's, Herpolsheimer's, and others,—well hardly department stores in that same sense, there is Hardy's, and Robertson's up there by our office and Benway's down on the street a ways. Miller & Paine's is the largest of the three department stores I mentioned, they are on 13th and O; Herpolsheimer's 2 blocks West and 1 South at 12th and N; then the two largest and prominent clothing stores are Armstrong's and Mayer Brothers; Armstrong's is between 12th and 13th on O a block and a quarter from our office: Mayer Brother's store is near the First National Bank between 10th and 11th on O, nearly four blocks West of our place; The Post Office is West over four blocks away; the Post Office is frequented by citizens, but it has several branch offices, one South, one Northeast; and when you consider the Post Office location we are about in the center of the three locations. I doubt if we had an office on South 11th from O to N or N street from 11th to 14th that it would be as convenient to the public or as adequate or reasonably satisfactory; the town is growing to the South, East, and North, and absolutely no way for it to grow West, it is headed off there by the Burlington tracks, the Viaduct, and the University is on the Northwest, it is all growing in the other direction; our experience has been that the business district is following after the growth of the residence section and we had that in mind in trying to take care of the growth of the town with reference to our present location.

Referring to our salary account, Mr. Montgomery has a salary of $200 a month as general superintendent, Mr. Phillips as secretary and treasurer, $150 a month; Mr. Shuff has the contracts with the customers and new business department, getting new business and taking care of what we have. If a man wanted a new gas
731 business installed that very often would be done by Mr. Shuff. he is responsible for getting the new services. I get $300 a month as vice president and general manager. The office of purchasing agent was created about a year ago, his function is to pass on the requisitions for materials, does the purchasing, to a large extent, and is responsible for the store room and all of our appliances kept in stock. He buys coal and oil for the electric plant, looks after the coke and oil shipments for the gas plant, in fact all the requisitions for material or apparatus goes through Mr. Malette, he purchases gas pipe. Concerning the function of Doherty & Company about which Mr. Freauff testified, Mr. Doherty closed several blanket contracts for appliances, and Mr. Mallette makes his purchases under these contracts, he advises with the rest of us, and on all items of a considerable nature his work comprises the details of the purchasing. I don't think we have a drawing or plan showing the way the 6 inch pipe, and all the other pipes of the district holder in East Lincoln and the blowers in the little booster house are all connected up, together with the line running out to University Place. We might have it, I don't think we have.

This company paid for all the expense of the fixtures in the present office such as counters and glass partitions. We took the bare room, and divided it up into different departments for office purposes, which is included in the item of $12,390.00; just for the partitions I think our contract on that was something like $2,300.00 or $2,500.00 our vouchers all show what payments were made on that; the balance of this item of office furniture was expended for linoleum that went on the floor, reugs, a new desk or two, awnings, railings there in the office, curtains and different items that were required to
732 furnish the office. I think we can furnish an inventory covering the item of office furniture $12,390.00. I don't know as the extensions as to prices would be the same as that, but we can furnish an inventory and verify it as to prices and quantity. The marble wainscoating was put in at the expense of the company as a part of this general figure, I did know what that cost, I think I know what our vouchers show but I wouldn't want to approximate it now; I made that contract myself; it was quite a substantial sum; it is equipment that can be used if we stay there after our 10 year lease is up; it is material that can be moved and used, it is ours, there is no provision in the contract for leaving it in the building.

In my school days and training I paid no attention to gas engineering, they didn't give a course at that time in gas engineering; I would not say there was any similarity between gas and electrical engineering. I have gotten my training, so far as I have gotten it in connection with the gas business, from a practical connection with the business beginning in June 1903; have had practical experience in all branches of the gas business since that time. As general man-

ager I have the oversight and general charge of the gas plant and its operation, including the manufacturing and distribution system. Generally and as a matter of policy to a certain extent, such information as the New York Office gets, and contact they have with this company is largely through me. I make the annual reports to Doherty & Company showing the years operations, but don't outline the policy, however, I have consulted about it usually; I make recommendations, I wouldn't want to say that I determine the policy. Whether or not I am perfectly capable of managing this gas plant, operating, manufacturing and selling gas and conducting the business, I have made Doherty & Company think so, so far.

733 As to the practical need either to this plant or community for having any connection with the New York Office, I hardly think it would be justifiable to make one person carry the responsibility in connection with the operation of this business, it has been usual in other companies to employ competent engineers, or consulting engineers, or firms for the purpose of getting their ideas as to methods of operation and the policy to be established in conducting the business; I hardly think it would be wise for this company to attempt to operate as an isolated property without obtaining consultation from those who are in touch with other properties, other conditions, and various methods of operation. I wouldn't say the custom mentioned is a custom built up by operating companies, such as the Doherty Company, I would think those companies were originated by companies of this character for such services. If I were the owner and operator of this gas plant I would be tickled to death to get the services we have gotten and are getting from Doherty & Company and would make an arrangement with them to pay Mr. Doherty $3,000 a year and Mr. Freaueff $2,500 a year merely for the privilege of having the benefits we now derive from their connection with this company. I feel it would be a proper expenditure of the money and a proper charge to deduct from the operating expenses here and paid by the gas consumers of this community. In addition to the $3,000 annual salary of Mr. Doherty and $2,500 of Mr. Freaueff we also pay $600 per annum to Mr. Freauff's brother as a retainer fee for his services as New York Counsel, and for extra services he gets extra pay: I feel that the services of Mr. Freauff's brother are of sufficient value to this company to justify the expenditure of $600 a year, and have used and felt the need of his services in the operation of this plant. He has transacted business in

734 this community in connection with the dollar gas case, has worked on the record some and outside of that he has rendered services locally in connection with the $500,000 three year notes and he and Mr. Strode consulted occasionally; I don't think Mr. Strode could have handled all that transaction perhaps, but Mr. Freauff with his New York Connections was able to handle a good many details that Mr. Strode could have handled by going down there, not with the financial end in New York, but the local end; those services are peculiar to Doherty and Freauff, for the company, but they are not attorneys.

In addition to the salaries mentioned Carl Gilbert receives $25 a

month for salary in connection with his services as assistant secretary. I don't think of anyone else who get a salary, that is not a regular salary. We pay the auditor sent out each year from New York for his services and expenses, I don't know what that amounts to maybe $200. or $300. say $300. somewhere around there. In addition I think we pay Doherty & Company outside of those salaries something as transfer agents, a fixed compensation, I don't know the amount, I would want to look that up, a nominal amount, I think we were to have our secretary to look that up. They get a fixed compensation for that. In addition we pay Doherty & Company for their services in receiving the interest on our bonded debt and paying it over to the bond holders; I think that amounts to ¼ of 1% of the amount handled; there is an advantage there, I remember when we were paying Parsons, McMillian Company that bond interest each year, unless we had it down there 10 days prior to that time the interest was due they charged a certain rate of interest for not having it there, a sum covering the period during which the money was not there prior to the 10th day requirement because it was not there. I would be glad to furnish an itemized statement of the amounts
735 in the aggregate of all the expenses paid by this company to Henry L. Doherty & Company as fixed expenses. And also anything paid to anybody connected with Doherty & Company. I will do that for the year 1912. I don't know how long Mr. Doherty has been drawing this $3,000. salary, I think it has been during all the time I have been connected with the company. I believe Mr. Freauff has drawn his $2,500. salary since he has been president; the $50. a month has been paid to Mr. Freauff's brother a year and a half or two years perhaps. I think since this case was heard in the United States Supreme Court. I think Mr. Gilbert as assistant secretary has received this $300. a year or $25. a month since the business transacted with Emerson, McMillian Company was transferred to Doherty & Company's Offices. I imagine that was in 1909. We have always paid this expense to the auditor for his annual visits as far as I know. I don't think the salary of Mr. Doherty or Mr. Freaueff has been increased lately, I think that has been the salary. I think there has been some items as office expenses for the New York Office, that they contracted down there on our account that they have paid for, the nature of those items was stationery, printing and stenographer's services; there was probably somet-ing for rental of the New York Office I will include that in my statement. I imagine all these salaries paid the New York office don't go to the individuals but go to Doherty & Company, I don't know. Doherty & Company negotiated the transaction for the $500,000. notes, which were sold I think in the fall of 1911, to take up some of our bonds, they have also taken part by raising funds or financing this company within the past five years by taking up the one year notes issued in 1907 when they became due and carried them themselves for some time; these notes I think were for $100,000. and were held locally to a certain extent by banks and individuals. They were

issued in 1907 for construction purposes; that was the time
736 they put in the large holder as I remember,—not prior to that time; those notes were taken up by Doherty & Company the year after they were issued, they were one year notes and were taken up when they were matured, in taking up the notes the holders drew on Doherty & Co. with the notes attached and Doherty & Co. provi-ed the funds to take care of them, to show that transaction we issued our notes and gave to Doherty & Co., but I don't remember whether we gave them notes for the entire amount or not, I think not; if we didn't give notes for the balance they either held the notes they obtained by the holder drawing on them or it appeared on our books as being owed by us to Doherty & Co. I think we paid interest to Doherty & Co. for such money as they advanced to take up the notes, I think we paid interest on some of it, I wouldn't say all of it.

As to any other transaction since Doherty & Co. have been connected with this Lincoln Co., in addition to the $500,000 note transaction, I think they carried the bond in this dollar gas suit put up by the National Surety Co.; in connection with this case the company by a bond to reimburse the consumers for this extra 20 cents in case the court should hold against the company, in giving that bond the company had to indemnify the surety company; in addition to this $100,000 note transaction and the $500,000 note transaction and this indemnity bond furnished the Doherty & Co., since they have been connected with this property, have at times paid bond interest and we have reimbursed them for it later. It has been our custom to keep a deposit when we had surplus funds, deposited with them as bankers also; I *inagim,* but wouldn't say it as a fact, when they had more than was required, they paid us interest on it, and when we had less deposited than we owed them they charged us interest on the balance we owed them at the same rate of six per cent.

737 The Henry L. Doherty Company hold some of the stock of the local company, I don't recollect how much, the books will show, I don't think our books show that they own very much of the stock; in addition to the stock owned by that firm used as a means of control of this company, there are several hundred purchasers of the stock around the country; there might be some of that stock held in the holding companies which Doherty & Co. are interested in, but I doubt it very much. I don't know how they own it whether mostly as individual owners, but I can't conceive how a holding company would get hold of it, the transaction there would be in the way of an outright purchase.

Returning to the other subject for a moment I am able to name another transaction since Doherty & Co. became connected with the company in which they financed the Lincoln company, when we bought the five hundred cubic foot holder Doherty & Co. was able to get the Western Gas & Construction Company to take notes that they would not have taken had we been standing on our own ground; I think we gave them notes for one of our water gas machines and that was absolutely due to the connection Doherty & Co. had with the property. They have always been able to establish a credit for

this company with concerns that might be caused to bear down a little heavily to make us pay up; I remember when I was first manager we had a big account with the Maryland Motor Company that we couldn't pay, and Doherty & Co. were finally able to get the Maryland Company to take our notes; they were also able to get the Detroit Stove Works to take notes for amounts we owed and couldn't pay them, and they wouldn't have taken them if we had at-empted to negotiate that sort of a transaction ourselves; I think they also got
the Denver Gas & Electric Company to take notes for amounts
738 we owed for coke we got and I am sure they wouldn't have
taken them had we done it ourselves. No it is not the matter of influence as a result of which our credit is bolstered up that I attach so much significance to in connection with Doherty & Co. rather than the actual raising of money for us in the east. I think I have included both those elements. I think the items I have mentioned are worth more than, and are a reasonable compensation for those salaries paid to the New York office.

I can explain the voucher under date of December first 1912 and the reference at the bottom to the additional discount from C. H. Dockery & Co., the figures are scratched out on the original voucher: C. H. Dockery & Co., are the people who sell us meters, I imagine that was an additional discount we received from them that was credited on their New York books, the meter transaction was conducted through the New York office in the first instance, but the New York office did not pay for the meters; this is their connection with that transaction, in their purchase of meters for all of their companies they are able to get a lower price on meters; this $53.07 was an additional discount but the $53.07 is erased which means that that item was already handled on our books by the same transaction, we had taken care of it, that would be my sup-osition that the secretary found it was taken care of or he had taken care of it in another way; we got the discount. We get the benefit of the actual contract as made between Doherty & Co. and these parties who furnish the supplies under the purchasing contracts all of it as far as I know; I am sure that as against this company Doherty & Co. did not get a rebate for their own personal benefit, they don't do their business in that way. This item of additional discount on this voucher to C. H. Dockery & Co. for $53.07 which is erased, implies that there was another discount and this was in addition to that; that is explained in this
739 way, they list their meters in a regular catalog and from that
we received 40% discount, and any discount from that would be an additional discount which would be on account of the quantity; explaining why it was not all included in one item in the first instance I might say that these discounts are not determined until the end of the year's business when it is discovered what quantity was purchased and I think is then adjusted. I think this was the regular discount and this 40% was in addition to that which was discovered after they determined the amount of the year's business, that is one of the benefits derived from the operation of a large number of properties. I would take it without knowing just how that was handled, if I had seen our original invoice with that scratched off, that that

had been handled on an invoice presented prior to this invoice and this was a duplication of that other.

The steam used by the Gas Company for the generation of gas is procured from the electrical department; the price we pay per year to the electrical department varies from possibly $600 to $800 per month; that is just a bookkeeping transaction, but whatever it is it enters into the cost of making the gas in our report and in these figures here. During the year 1912 my recollection is that we paid for steam per month approximately $700. I think our report here will show that; the steam is not sold by measurement, I think we have determined the amo-nt of the boiler capacity necessary for the operation of the gas works and from that figure out each month the amount of steam used, that is taken on the out-put of the gas; from that we determine the amount of steam used, some of those figures have been arbitrary, we have made our best effort to discover what the division should be, what the demand was on the electric plant for the steam used by the gas department and have done that
740 in dif-erent ways at different times; I have asked Mr. Montgomery to look up our detail scheme to derive those units now. We don't have a meter. At times we have estimated the quantity of steam used to produce a given quantity of gas, price by the 1,000 cubic feet, that has been one method. When we know the out-put of gas during a month from that we are able to conclude what we conceive to be the correct amount of steam used; of course, in the winter time we have heating to take care of, that isn't proportioned to the out-put at all. We get our steam from the electric department. Our building has radiators and get our heat that way by making a certain charge to the gas department for heat also a charge for steam used; the price is determined by the gas generated to the pound of steam in the electric plant arriving at the cost by taking the fuel, labor, and water; taking all elements that enter into the cost of producing the steam; no capital charge enters into the cost of the property used. Off hand I am not able to tell what the price of steam was during the year 1912, at this time, it varies from 650 to $800 I believe.

In the early days the electric department was subjected to municipal control in the way of fixing the rates, but after they injected the Traction Company into the situation I don't believe they have them; I wouldn't say that during my time there hasn't been an attempt on the part of the city to regulate our rates in the electric department, but there has been nothing done.

The matter of making these apportionments between the gas and electric departments both as to the items of expense and this item of steam is largely one arbitrarily made by the company and is a bookkeeping matter but based upon some reason as we see it for making some apportionment.

741 The gross income from the electric department during 1912 was $160,000 and some odd thousand dollars; the net income, that is the gross income less the operating expenses assigned to the electrical department is somewhere between $35,000 and $40,000; I could give the exact figures by looking at the reports. (Witness

refers to reports.) The net earnings from operation 1912 was $39,437.48: the gross earnings were $168,614.83; the operating expense itself deducted from the gross earnings is $129,177.35 not including any depreciation or interest; those figures are all in the electrical department; the operating expenses are arrived at in a large degree, by an arbitrary apportionment between the two departments on certain items, there is a division made on certain items, we have to get them by arbitration anyway, as on the items of clerical work, executive salaries, office rent, taxes and insurance; the apportionment made between the two departments is ordinarily 80% to the gas and 20% to the electric; that is based on several things, the income, the number of consumers in the departments, it depends on where the apportionment is made. In some instances the number of consumers determines, the out-put in others; we don't attempt to estimate that so much on the revenue basis. We haven't made any apportionment of property in the electric department such as we have here in the gas rate case so have not attempted to apportion these expenses incurred on account of both departments any more than upon the basis of the *mu*nber of consumers in the different departments, and the expenses attached, and in proportion to the manufacturing expenses.

The gross receipts in the gas department for 1912 were $282,-162.11, and the gross receipts in the electric department were $168,-614.00; that would make, comparing the gross receipts, the electric department about 37.4% and the gas would be the difference
742 by the sliding rule computation which makes it about 62½%. that would be on the basis of gross receipts from the two departments.

I don't remember the amount of general expenses assigned to the electrical department. I think I can get that (witness refers to memorandum) the general total expenses under that heading in 1912 we charged $60,719.87 to the gas I haven't the amount for the electric, assuming it to be $16,731.85, based on the sliding rule that is about 78½% to the gas and 21½% to the electric department, and that is the way we have apportioned it on those two items. If we apportioned these general expenses between these two departments on the basis of gross receipts in each department we charge 62% to the gas, or in round numbers $46,500.00 in round numbers computed on the sliding scale if apportioned on this percentage; as a matter of fact we did apportion $60,719.87. If we had apportioned to the electric department on the basis of gross receipts of each department we would have assigned to the electric department on this item of general expenses about $30,900.00; instead of $16,731.85 which we did assign to that department; this item of executive department general expenses, includes executive salaries, general clerical salaries, office expenses, incidental expenses, rent of executive offices, legal expenses, promoting new business and taxes; this item of rent of executive offices is the office building here in Lincoln.

We ceased making coal gas I think in 1909, I think it was right along in the summer of 1909, it has been nearly four years since we have made coal gas at all, during that time that coal gas plant has

stood idle. We justify that on the assumption that it enables us to make better contracts for oil, and also upon the assumption that some day oil may go up to a point of sale and production that it will be necessary for us to fall back on our coal gas plant. Concerning the price, in round numbers, the coal gas plant is carried in our
743 inventory, I don't remember the totals, I think the benches were $19,000.00; in the inventory in the old record the total was a little over $80,000.00; I think it would approximate that figure now. Whether the company is justified in tieing up that much capital in the coal gas plant because we are better able to contract for oil and because of the possibility that some day we may go back to making coal gas, I would put it this way; I don't know that I would advise it, unless there are some developments we can accomplish, of putting $80,000.00 in a coal gas plant if we didn't have it. in view of the fact that it was in I wouldn't advise doing away with it. If I were installing a plant here personally, I wouldn't construct a coal gas plant at this time; I have heard Mr. Doherty say he was in favor of making coal gas, but I have argued him out of it so far. From a personal standpoint my point is that having it already it would be unwise to wreck it, Mr. Doherty argues that we are going to make coal gas. Whether the public should be charged with it in the sense that they should pay a rate that would return a dividend on that valuation, I think it is useful and necessary for all of that equipment; a part of that has and a part has not, been used for over four years; it is a question in our minds whether it will be used again; Mr. Doherty argued that he had a plan in mind by which it would enable us to make coal gas cheaper than water gas and as quick as we get time to go over it we was going to make that effort. it is problematical whether we will make coal gas or not.

Cross-examination continued by Mr. Alton D. Adams:

I went to the office and made an effort to find the plan showing the apparatus and pipe at the district holder but was unable to find one, I think there is one. I would be glad to have made an off hand sketch explaining what the operation is out there. I have a
744 copy of Mr. Lea's report, in that report on the first written page the total reproduction cost of our property here is $1,306,075.00; Mr. Lea's report relates only to the gas property. I don't know it to be a fact that the total construction charges on the gas plant down to the end of December 1912 is $785,081.28, I don't put my finger on that item now so that I can verify that statement. Presupposing the elimination of the $22,000.00 and odd hundred dollars construction account from that total of $785,081.00, on the theory or fact whichever it may be, that the construction charge in 1900 was charged all over again to the extend of $22,000.00 in 1900, I am not able to recognize and do not recognize the $785,-081.00 as the total of 1912; I don't think any compilation in our reports shows that the gas department made such investment for any series of years. I was connected with the trial of this case before when it was before the court. Homer Honeywell was the manager

of the company at that time. I remember that Homer Honeywell, or somebody else, introduced a summary of construction charges up to 1907. Our books at the office show the construction charges, all of them made in the gas department since then. Mr. Adams asked me if I recognized those figures, I want to say that there is nothing in the reports that shows those figures in a compilation, unless we make a compilation, and then certain estimates must be taken off, certain items of construction, so that I can't recognize that unless I went over it carefully to see where you make the estimates. It is not possible for anyone to go to the records and pick that up without making some estimate, there is nothing of that figure shown here. I would rather not assume that to be correct or that my evidence will bear out that relation. I don't want to make any mistake about it. The figures given me were something over 60% of Mr. Lea's figures, about 66½%. Mr. Lea's figure of $1,306,075.00 is 66½% greater than the figure of $785,081.00 stated to be the construction
745 charge up to the end of 1912, it is something like that. I do not know anything about the removal of this plant in 1889 or 1890 from the old site to the present site. I have heard it was moved and have seen things that would lead me to believe that hearsay evidence was correct. I think Mr. Honeywell so testified in the last proceedings. I have not heard Mr. Honeywell's testimony recently, not for two or three years. I have nothing in mind that he said about the disappearance of that plant at the time of that removal. I haven't read that testimony since shortly after it was given, I think. Assuming that substantially $100,000.00 of construction charges that went into the old plant were completely wiped out and physical things disappeared from the face of the map at the time of the removal, right now I have no means of checking that assumption at all. I have never made any computation of that kind to see what the construction charges were on the property that disappeared at the time of the removal. I do not remember at all what Mr. Honeywell said as to the construction account he presented showing all that was ever charged to the gas plant for construction. I have not now at hand but we are going to compile the total construction charges added to the gas plant during the years 1907 to 1912 inclusive; it is not possible to go back over our books as they appear here now without making a deduction and apportioning some of the elements of charges appearing there for both departments. I do not testify that our books at the office do not show certain figures as the amounts added to the construction of the gas plant during the years 1907 to 1912 inclusive. I don't say whether the books at the office show it or not. Putting it this way these books when it comes to the construction records, the same items are included, first those items as the construction of both departments and no segregation is made in the books; again items are entered as gas works additions or construction accounts appearing individually, necessitating
746 a segregation. I can go to those records and make that segregation and make that compilation. The accounts are there every one of them so that can be made up; to explain the books there are certain construction accounts down there which on their face

perport to be construction accounts of the gas Company, and there are certain other construction accounts that don't carry that tag on their face, and other accounts as a matter of fact include some items on the gas plant that would be partly proportional to the gas department. I could have the construction charges, and all of the construction charges that I understand our books to show as applying to the gas property tomorrow morning and will have it here tomorrow.

Examining exhibit "P" of Mr. Lea's report that exhibit purports to show in the several columns corresponding to the several years from 1907 to 1912 inclusive the value of the property added to the gas plant, there it says total reproduction, real estate, buildings, distribution system, and works equipment. I have not made any computation to determine the amount of added value in that series of years from 1907 to 1912 according to Mr. Lea. Even assuming that those additions of Mr. Lea during the series of years from 1907 to 1912 inclusive foot up to $479,958.00 I have at present no figure to check that with me. I will be ready tomorrow morning to either confirm that figure or else tell what those additions estimated by Mr. Lea do sum up to. I tried to testify to the effect that I don't know the total amount of construction charges for the gas plant, shown by our books for the years 1907 to 1912 inclusive.

Now taking the construction charges to the gas plant that show as such on our books for the years 1907 to 1912 assumed to be $210,529.37 I think that is pretty close to it.

The $479,958.00 of estimated additions to value by Mr. Lea during those same series of years may be more than double the amount stated to be added to construction, that is a matter of arith-
747 metic, that appears about right.

In a way exhibits "31" to "77" being certain extracts from the construction charges in our books, a comparison with Mr. Lea's estimate of value or cost of reproduction. I will have to count how many headings of construction as taken from our books presented in those exhibits,—I will read the headings from our books of construction charges that have occurred during the years from 1907 to 1912 inclusive omitting the headings for construction charges that were in earlier years. That is I can read the construction accounts that I have used in this compilation; I can't read all without having the record before me because these are not all the construction accounts we have. I am glad to read the book headings of construction charges copied into exhibits "31" to "77" inclusive for the construction for the years 1907 to 1912 but I don't want to testify that these are the only headings on our books; first is the Generator House, Otis elevator, 7′ 6″ water gas machine set, 7′ 6″ water gas machine set, 6′ 6″ water gas machine set. The 6′ 6″ machine was installed in 1901, that wasn't from 1907 to 1912; 500,000 cubic foot holder; East Lincoln district holder; #8 Sturdevant Blower; that was a blower for the old water gas machine; #7 blower; new water gas exhauster and ergine; new blower at district holder; governor and connections for the 500,000 cubic foot holder; that makes eleven accounts. I have not valued the number of separate items valued in Mr. Lea's

exhibit for the reproduction cost of the gas buildings and works; whether in Mr. Lea's report there are nine enteries for buildings and seventy-three enteries for works and equipment I would have to go back through this thing and find where they are, I didn't make this report up, any portion of it. In exhibit "E" Mr. Lea has nine items under buildings there which Mr. Lea enters here under the heading "Summary of physical equipment", that is nine for buildings and 73 for works and equipment so that as compared with Mr. Lea there are 82 items at the works and in the buildings,

748 those items having been distributed over or having been acquired by the company through the entire series of years, more or less, that it has been operating, I have brought in here for the period from 1907 to 1912 only eleven items; that is absolutely correct. I don't remember the number whether it is a fact that in our books of construction items during the years from 1907 to 1912 inclusive are all made under eighteen headings for the gas plant or not. I think I would be able to testify that they are made under a very much less number of headings than Mr. Lea has used in his valuation of the buildings and equipment.

I have never added the totals of the items shown on our exhibits "31" to "77," I do not know whether that totals is $99,558.00; it is somewhere in that neighborhood, I think I did make a rough estimate. If the $99,558.00 is the correct addition to those items we have brought in here for the years 1907 to 1912, we are showing on these exhibits "31" to "77" $99,558.00 construction charges then in comparison during the years from 1907 to 1912 with the $479,958.00 of added value assumed to be shown in exhibit "P" of Mr. Lea's report.

I think in the items I have used in these extracts of our construction charges, under these eleven headings they very probably overlap Mr. Lea's report; I have items in there that he has valued somewhere else. If that were true, to the extent it is true, it would tend to make our construction charges appear to support or correspond with his valuation charges, for instance, under the compilation if, under the district holder we have included certain items of construction charges that Mr. Lea does not put into his estimate of the district holder at all it would tend to raise our construction charge as compared with his valuation.

Turning to Mr. Lea's report to exhibit "E" in his report

749 being the summary of physical equipment and is for detailed reproduction cost I would say that the following figures are correct as they appear in his report; district holder, booster house $836.00, 100,000 cubic foot holder $21,675.00; water piping district station $205.00; gas holder mains district station $507.00; man holes district station $1,778.00; twenty-five horse power motor district station $491.00; five horse power motor district station $186.00; Sturdevant blower, district station $209.00; Sturdevant blower, district station, again $244.00; making a total for those items of $26,161.00, that is the correct addition for the items just given. Our books show as per these exhibits "31" to "77" for a charge to construction on that district holder a net amount of $20,904.28 as they appear on

the records; I didn't say that these amounts covered the same items shown by Mr. Lea's figures for the reproduction cost of $26,161.00; his figures there are higher by the difference of between $20,904.00 and whatever that was. Perhaps in our book entries each one of the items just read from Mr. Lea's report are mentioned and the construction charge annexed thereto. I can make it a little more certain, I have the record here before me, you have picked these items out and I haven't any listing of them and I can't go back here off hand and tell you. On the question of whether we have in our construction charge on the East Lincoln dist-ict holder all the items just enumerated from Mr. Lea's report totaling $21,161.00 I would say I don't think so. I would not say that all the items indicated from Mr. Lea's report footing $26,161.00 are not included in our construction account headed "East Lincoln holder." As to the item or items not so included there is one blower, and a five horse power motor and I am not able to testify what Mr. Lea included for piping, or whether he included for mains what I have included. As to what
750 items if any found in this compilation of items in Mr. Lea's report footing up to $26,161.00 that are not included in our book charges under the heading "East Lincoln district holder" which foot up to $20,904.00 I would say I don't think the five horse power motor or one of the blowers were included, and I don't know about other items, I am not able to say just exactly what I mean to say is that it is possible that I can take this report of Mr. Lea's where the items are set out one by one and compare them with our own books and say whether Mr. Lea has covered those items represented in our books by name. Concerning two items in this list from Mr. Lea's report that are not in there I mean to testify that I am not able to say how much pipe Mr. Lea included or did not. Our construction charge on the East Lincoln holder I think includes all the pipe there, whether Mr. Lea included any more pipe out there, I don't know anything about Mr. Lea's compilation further than to know that Mr. Broadnax made the compilation of the inventory and Mr. Lea made the extensions; I had no hand in the compilation of Mr. Lea's part of that report. I didn't say that our book charges, our construction charges brought in here on exhibit "47" purport to cover all of those things that went into that equipment out there; I say that compilation shows what we entered under that construction account as part of the cost in the erection of the holder. Concerning what there is out there which I can name that isn't included in this list exhibit "47," headed "East Lincoln holder" there are a lot of batteries, and we have a telemetric gauge for one thing, I don't know what they cost; I don't think of anything else now except those batteries. Concerning Mr. Lea's report whether that covers or is supposed to cover all the property out there or not I can't testify as to Mr. Lea's extension, or the figures he used, or the items he figured on, Mr. Broadnax made the inventory and submitted it to Mr. Lea, I had no part in
751 it, other than to occasionally confer with Mr. Broadnax concerning the question as to why we brought in our book charges to compare with Mr. Lea's estimate of cost, I brought in our

book records to show what were the construction accounts as they show on our books and what the totals were.

I testify that those items as shown here are items entered into our construction account under that heading and as compared with the items Mr. Lea showed in his items for the East Lincoln holder; I don't testify that they are the same items Mr. Lea had, or that Mr. Lea's items are not the items I had.

Concerning the question of the cost of the land on the side of the street out there to our company on which the holder is located I testified that the lots on which the holder is located included lots 6 to 15 both inclusive and cost $1,000.00 the balance of the property including the house, cost us $3,500.00 making a total of $4,500.00 for all of the property on that street where the holder was, block 2. Our property on the other side of the street my recollection is the total cost of that was $3,350.00. On the land where the holder sets we have a bank of three electric transformers, they were put up there last week, I think their capacity is twenty-five kilowatts; those transformers are used in connection with our electric business here in the city. We rent that house and get $12.00 or $15.00 a month for it, $15.00 I think. I don't think by further examination I could tell at a subsequent hearing how far our book charges under the heading "East Lincoln property" covers the same property that Mr. Lea has made an estimate on. I am not familiar enough with what Mr. Lea has included in some items of his to say whether or not the tabulation I have shown would cover his, or what he has covered would cover ours. In the tabulation of the construction charges on the East Lincoln holder shown by our books in charged a level and rod that
752 is an ordinary engineering instrument, we did not break that up on the work, I think we still have it; it is charged in here as a part of that installation, it was contingent upon that construction, I don't believe we have ever used it since. I don't know whether Mr. Lea put a separate value on that level apart from the holder or not; I don't imagine so; I don't think he valued it in with that holder.

Concerning whether we had a contract with any concern to erect the steel work for that holder, I think we had a contract for that at $7,000.00, for the complete steel work erected in position on our foundation. I haven't been able to find a copy of that contract. I think I had it some time in the early part of this suit; I have mislaid it and haven't it now. It is a fact that the steel part of gas holder- are almost invariably erected by the makers by contract on the foundation; that is the regular practice. I thing it is true that we have charged under our heading "East Lincoln holder" the cost of that booster house out there, the brick building on the holder lot. I don't think Mr. Lea's report has that building charged in as as a part of the cost of the holder. I guess it is true that on the first page of exhibit"E" of Mr. Lea's report he shows district holder booster house entirely separate from the holder; the item isn't the complete cost for erection of that booster house, that is in my compilation, there are items added to that booster house that went into that construction but not into that construction account; my recollec-

tion is as to our book account of construction on that East Lincoln holder the items shown there relating to the booster house don't entirely cover the cost of the booster house. I can't tell the amount of the other items, I doubt if I can find that, there was some work done there, putting in a floor and cementing was done later, we made that building appear in the above form and then when this record was made up the first of January of this year it was in a different shape I might find out what that was, I won't
753 say I could, roughly I have no idea what it was.

As to whether the contract for that holder covered all of the steel work erected and in position, including inlet and outlet pipes, I don't know. As far as the erection of the steel work of the holder it having been let by contract I think we would have a substantial amount of pay roll on that to pay covering the items of the drafting necessary to laying this thing out, that would probably be chargable to the steel work and engineering. Excluding the superintendence and that sort of thing that is all the items I think of now; I mean the engineering superintendence not our own. We did not employ any engineering superintendence apart from the regular office of the Gas Company. Concerning the account "G" our voucher distribution record, the book which runs from June 30th 1910 to July 1911, the footings shown for the cost of that district holder to be $18,865.00 I have no means of checking that figure at this moment. Whether our pay roll as charged up to that East Lincoln holder in account "G-17" of our voucher distribution record amounting to $587.00 I could not confirm or deny that figure now; nor the statement in that same account of freight and drayage footing up to $601.00. I am not able at this moment to confirm or deny the same account, "G-17" on the district holder that the lumber and building materials are charged in the amount of $306.00.

Concerning the statement whether the excavation done out there was at a contract price per yard or at a contract price of $2900.00 for the entire excavation, the price was per yard. The excavation for the holder tank alone was not done at the contract price of $2900.00, the contract was so much per yard, on that yarding the price charged was something like $2927.00. If not a contract there was not a proposition made by the man who did the work to do it for $2900.00; there was a proposition to do it for $3900.00.
754 There was a contract for the building of that masonery tank. We would be called upon to foot part of the pay roll bills on the tank; in a number of instances we have paid in connection with a construction account of that sort for getting the ground ready, provided men to do this and that as things turned up, we had to run and lay the levels there and do a lot of digging ourselves, we always make it a point to aid the contractor all we can and we do it at our own expense. We had a contract price for that tank we absolutely did do work on the tank, our office force, after we had the contract, to the extent as shown by our books; I don't mean to say that this pay roll of $587.00 was consumed in any substantial part by work on the tank that we had a contract to pay a specific price for. It was consumed on work in connection with the holder that

I can't verify only by going back to the time cards when that work was done in connection with that holder and was entered on our books. I wouldn't say that I have any present recollection or idea where this $587.00 pay roll went to. Concerning where this $307.00 for lumber and building material went to, I think that was put into the tank to support the dirt and prevent it from falling in, we had to do that at our expense, the contractor wouldn't do it, the mason wouldn't do it, and we had to do it. Concerning where the item would be in this account for lumber and building materials to erect this building if this lumber all went into the tank, I wouldn't say it did, I couldn't tell you from this record where it all went. I wouldn't say that I think some of this must have gone into the booster house out there, I don't know.

The steel and iron work on this 500,000 cubic foot was erected by contract, with the Western Gas & Construction Co., I think the amount of the contract was $37,500.00. As I remember that included the erection of the steel and iron work in connection with the holder complete on foundation prepared by us. I think that
755 included the inlet and outlet pipes to the holder. Concerning whether the foundation for the 500,000 cubic foot holder was built by men hired by the day or by contract, I don't remember whether that was a contract job or not, I rather think it was. Assuming there was a contract for the foundation and a contract for the steel work complete erected thereon, that still left all the contingent items incident to the drafting and preparing the place and doing one thing and another always demanded by those doing the work of the company. There is no supervision of the work in these items I have entered here. We did supervise the work to see that we got what we contracted for. So whatever those costs were the company actually stood them anyway. Some of those charges incurred in connection with the holder, this holder, don't appear in the construction account. They were entered in the operating expenses. That would not be true pretty generally of our construction here. That applies only to this 500,000 cubic foot holder. I stated a while ago on this East Lincoln holder that we supervised that work, did some engineering work in connection with it, that is the regular employees of the company did. That was charged in the construction account later. There was an element here as a part of the construction which was later charged into operation, it was done later and that item is the item of painting and applies to the 500,000 cubic foot holder. Concerning the supervision, drafting, and engineering, on that East Lincoln holder, that was done by the company's regular employees, the cost of it was charged to construction, most of it appears in this construction account of the East Lincoln holder. It all appeared there until the account was closed out; if it was charged to the construction account of course it wasn't charged to the operating account too.

Exhibit "79" is the tabulation referred to.

756 Cross-examination continued by Mr. Foster:

This litigation has caused us to hold a good many conferences with Mr. Doherty and Mr. Frueauff. I don't remember how many times I have conferred with them about that in 1912. I don't remember how many times I was in New York to see them about this matter in 1912. I don't think it was ten times; I don't believe six times: I don't know whether five times. Concerning how many times they were out here to see about it I can't answer that. Mr. Frueauff is through here frequently, I have been over it with him a good many times from New York to Denver, St. Joe and Joplin sometimes in connection with the Doherty interests in other places. The matters about which I have gone to New York to consult him within the last two or three years have been practically always this matter of litigation. Concerning the greater part of the attention given this local company by Mr. Doherty and Mr. Frueauff being on account of this litigation would say largely by Mr. Frueauff, he has given it considerable attention. Mr. Doherty has given it some attention. It is not a fact that that has been about the only matter I have discussed with them in the last two years in connection with this company.

I was graduated before the school of instruction carried on by Doherty & Co. of Denver was started. I think Mr. Montgomery anti-dates myself on that; we are trying to educate Mr. Baxter now right here in Lincoln, and coming fine. Concerning whether any employees here in Lincoln of the company were ever in that school at Denver we have none now but have had; I guess maybe it was a year or a little over since we had one there; that was Mr. Matt Dungan, Mr. Bradford, Mr. S. W. Cheney and we have had other- that I don't think of at this moment. They received part of their training here, any men that leaves that Denver school will receive
757 considerable training anywhere, we don't consider that a man is through and a finished and complete product when he leaves that school. They are not brought here so they could have the benefit of my instruction but so I could have the benefit of theirs.

Concerning how long we have had our new business department, it has been here ever since I have had any connection with the property, I don't know how long before that. The expenses of this new business department are paid from operating expenses.

Concerning the kind of gas oil we were using in the water gas department in 1907, we were buying from the Standard Oil Co. at that time, from Coffeyville, I expect, or Sugarcreek, I wouldn't be sure where it came from. I don't think from the Kansas oil fields. In 1907 we were paying per gallon for it for a part of the year 4.1 cents and a part 4.2 cents. In 1908 part of the year we paid 4.2 cents and part 2.86 cents. In 1909 and 1910 2.7 cents. In 1911 we went on a new basis of paying for it, I don't know what the price has been; it has been a variable quantity. We are paying about 4.2 cents right now. The oil now comes from the Cudahy Refining Company, although we are not buying it from them. We buy that oil f. o. b. Lincoln. The other prices for the years from 1907 to the year 1911 inclusive were on the basis of f. o. b. Lincoln.

In connection with the sale of the $500,000.00 note we received

our remittance of the proceeds of the sale of those notes delivered to us in New York. Henry L. Doherty & Co. credit- our company with the amount. We were credit- with those notes at 97. A. B. Leach & Co. paid 97 for them.

758 Redirect examination by Mr. Rose:

Exhibit "79" came from exhibit "E" somewhere. Exhibit "E" of Mr. Lea's report purports to be the full reproduction cost including all overhead charges; as I remember his testimony he added 16% to get the reproduction total, there was that much variation from his net construction cost. Those figures are absolutely not comparable with the exhibit I made for any tabulation; the only difference is that my figures include the 16% for overhead charges; Mr. Lea's figures give the net construction cost without the overhead charges that enter into that.

Taking the first item from Mr. Lea's report, with respect to the district holder from his exhibit "I", as compared with the figures given in my tabulation, Mr. Lea gives $18685.00 as the net construction cost for that holder. Mr. Adams, who examined me on that item picked out the items, and for that corresponding item gave $26161.00.

Taking Mr. Lea's net construction cost for the district holder booster house his estimate was $721.00, the tabulation compiled by the Senior Mr. Adams gave $836.00.

The third item, water piping for district station, shown in exhibit "79" is $205.00, Mr. Lea's net construction cost for that item was $177.00.

The item of yard mains listed in exhibit "79" is listed at $537.00, Mr. Lea's estimate of the net construction cost of that item was $463.00.

The item of man holes in exhibit "79" is $1778.00; Mr. Lea's estimate of the net construction cost for that item was $1533.00.

Mr. Lea's net construction cost for the 25 horse power motor for the district station was $423.00; Exhibit "79" shows it $491.00.

759 Taking the item of the 5 horse power motor listed in exhibit "79" at $187.00; Mr. Lea's net construction cost is $160.00.

Take the item of the Sturdevant blower, the first one listed in exhibit "79" at $209.00; Mr. Lea's net construction cost on that item looks like $180.00, it is a little blurred.

Take the additional Sturdevant blower for district station listed in exhibit "79" at $244.00; Mr. Lea's estimate is $210.00.

The footings of the items embodied in exhibit "80", those items foot, as estimated by Mr. Lea $22,552.00.

Exhibits "79" and "80" offered and received in evidence.

In general in my exhibits I did not purport to cover items of buildings or distribution system which were checked over by other engineers. The cost of mains is pretty well established; and the cost of buildings, by other means.

Concerning the main items in attempting to exhibit the cost of these same appliances in the way of equipment, principally the main items were included; in some instances there was no record available, I did where they seemed to have a record that could be used, otherwise there were none that could be used for any purpose that required a foundation particularly. My tabulations covered the principal items of machinery and station equipment, to that character which the company had added, even from the year 1907. It covered no part of the distribution system; and some minor details I didn't purport to cover to make it complete. Concerning the cross examination about my own qualifications, I would say absolutely there are fundamental principles in engineering and mechanical engin*n*ering which are universal in application to all trades. The foundation of engineering is universal, and capable of adaptation to different industrial pursuits.

Concerning whether I took a general engineering course in
760 connection with my specific gas engineering; I took electrical engineering and some special work outside of that in engineering. I know an engineer in the employ of Henry L. Doherty & Company by the name of H. H. Scott. Concerning whether I relied upon persons who visited us infrequently would say that H. H. Scott was at one time superintendent of the electrical department here. Concerning whether under Mr. Van Riper, I think it was under Mr. Van Ness; I think he came here at the time Mr. Van Riper left and served under Mr. Van Ness; I think he was here a considerable time; he has been back here repeatedly since, during my administration several times. He was very familiar with the Lincoln situation.

Concerning the auditing services and my acquaintance with what is now regarded as common usage and common practice of having an inspection and audit of accounts of financial and commercial institutions in this country: I am, it is the only safe way to handle property and to keep the thing going as it should. That is the general custom in a proposition as important as this and should be followed. If they didn't have the Doherty auditing department, I would certainly say for my own protection, as a prudent manager and the protection of the investors whose property we handle, the protection of the public, and for the efficiency of the service I would employ some other independent auditing company at least once a year to check over our entire account. I am acquainted with the skill and efficiency of the auditor who has been coming here annually and making the annual audit of our accounts. I couldn't give anything but favorable criticism of his thoroughness and the painstaking character of the report and check he makes annually after an examination of this plant; I know he has had considerable experience along that line and has laid
a good foundation for it in doing that work. He goes over in
761 detail every scheme of operation to ascertain the condition of our accounts and the ac-uracy of our regular auditing employees. In my judgment that money is very well expended, and I think $200 or $300 per year very reasonable for a company whose accounts were of such a magnitude.

Concerning the manner of obtaining steam for manufacturing gas,

we do actually maintain boilers installed and owned by the company to generate our own steam. It has sufficient boiler capacity, boiler house and furnaces in connection with it, including the ground upon which they stand and the necessary part of the plant employed in the manufacture and distribution of gas. Concerning piping steam from our own electrical department we have no such thing as the purchase and sale of steam, simply a question of bookkeeping, crediting one department and debiting the other; the way we try to keep it the basis of that is the actual rateable cost of generating the part of the steam that is used for making gas, estimated upon our naked pay rolls, the cost of our fuel and the like of that, adding nothing for interest or any overhead charge, nor for capital or for depreciation; in other words counting the investment as capital of the gas department, as far as the investment is concerned. As a matter of economy in investment and operation it is our object of having but a single plant for generating steam although having two manufacturing departments. The system of combining the boilers for bunch of boilers tends to economy both in operation and in invested capital; it permits us to buy larger boilers, larger units to operate on a more economical basis because we get a better load factor where we have a comparitively larger number in operation than if we had but a few.

Notwithstanding the compensation we still regard a rateable share of the capital investment in the ground on which the steam plant is located in the steam plant including the boilers, connection,
762 furnaces, and boiler house as a part of the invested capital of the gas plant; the way we figure it that is a fair assessment, that is a part of the gas works equipment and there is no interest charge made for it. We use a part of that investment for the purpose of generating gas, the use and generation of steam is an unavoidable ingrediant absolutely that must be used in the manufacture of commercial water gas.

In apportioning the common items of expense the pay rolls of the separate plants are each charged to their own department. In so far as the specific cost of manufacturing gas is concerned that is charged, in our account system, directly to the cost of the gas. That is true also of the specific expenses of generating electricity; so in the main these two items of cost of manufacture are kept separate in fact. One cannot be confused with the other. Respecting the items that are apportioned the operations are combined where they can be of common utility to both plants in the interest of economy. In those cases we have to make an apportionment in order to get the final segregation of the total cost of the manufacture and distribution of gas in the one case and of electrical energy in the other. Taking for example the combined cost of generating steam, as to any definite relation in that case in the apportionment and total out-puts of the two plants, the total sales on the revenue basis could hardly be figured that way, if it were as a matter of fact, you would have to assign a much greater part than 62½% of the cost of generating steam for the gas plant under the assessment than you would if you were to adopt the revenue basis, and that would not be fair in any respect. Our system we have

used in that case is to charge the gas department with the proportion of the steam generated which is used in making the gas only, which is a small portion relatively to that used in developing power for the electric plant. On the other hand when we come to the general expense, like legal expenses, as for example like the cost of the recent special election which the city required the
763 company to defray: in the case of the special election the gas department made the expense, practically all of it. Respecting a franchise issue regarding the electrical department pending at that time, we had the occupation matter, I overlooked that, but the occasion for that election and the motive for it was due wholly to the controversy over the gas plant and the gas rate litigation. In my judgment as a matter of fairness and accuracy in accounting I do not think any part of that expense should be chargeable to the electric plant.

Concerning the item of legal expenses for the time, during which I was cross examined, that controversy arose almost entirely in the gas department. There is no justification at all in fairness to apportion that item of the general expenses to the different departments to the ratio of total revenue. In the operating department of this company, of which I am the head, in most cases we can pretty closely determine approximately the ratio of general expenses actually necessitated and incurred by one department or the other. Where we can determine that as to what in our opinion is a fair method of making the apportionment of given items of general expenses we employ in general for both departments that which on the basis will give the apportion which occasions the expense.

In the matter of bookkeeping, there is no relation in the expense of accounting and bookkeeping to the number of accounts that are carried. The relationship is almost proportionate, each account has its entries every month, credits and charges, and its own collection expenses every month. I think that is the only fair way of apportioning those expenses that is to apportion them in relation to the number of accounts carried in each department. Our system, and what we aim to *to* do, is to apportion practically to the number
764 of accounts. We could *we could* not do it in any other way without robbing one department or the other of the net results.

Concerning whether there is any way I can show what I regard as a fair apportionment to the different departments of this company, that is the elec*tirc* and gas departments, of the several items that go to make up the general expenses that should be in some way apportioned to the different departments, our usual percent is 80% and 20%. There are some expenses I can give you right now. I can get the exception and show why it was higher or lower. I can work them out and then justify them by what I regard as the rational and fair process. Concerning whether at the time this case was heard say at the close of 1907, the apportionment of these general items was made on the basis of two to one, I would say one-third and two-thirds, and I think we changed that afterwards. I think the conditions now require a change in that division, that

was the reason for making the changes where they were made because the conditions have changed.

Recross-examination by Mr. Adams:

Referring again to exhibit "79" where is shown the footing of $26,161.00 for certain items shown by Mr. Lea as the reproduction cost of the property at the East Lincoln holder whether I understand that $26,161.00 to represent what Mr. Lea says those items would cost in total, I understand that to be what Mr. Lea says what those items can be reproduced for, that is his heading and the term he uses right straight through, the replacement value to that property, I think would be my answer to that question. It would cost to reproduce it that amount of money. This company at its own cost got that property there. As to charging all of the cost for doing that to construction, there isn't any time charged for super-
765 intendence nor what you might call general engineering, except those items we charged all the costs of getting that property there in the condition and situation it is, to construction. That is shown in my sheet headed "East Lincoln holder", the items that are shown there were in that account at the time it was closed out, I don't say there *was*n't other items that entered in there afterwards. I don't know of any others. It is rediculous to look for them, I wouldn't know them if I found them, although I would just as soon hunt for them. My testimony is that I don't know whether that exhibit here as to the East Lincoln holder shows all it cost except engineering and supervision, and I don't know whether I can find it or not. It is correct that the *the* engineering and supervision of that holder is not charged in the exhibit I brought here; my time for superintendence and time for executive expense was charged into operation. I haven't said that rightly considered our operating expenses are too much by the amount that should have been charge-for that to construction of that holder. That wouldn't be my deduction hardly to imply that. I didn't say that our construction charges on the East Lincoln holder show all I can find except what I say was charged into the operating expenses. Any charge that isn't shown in our construction charges on the holder unless charged to operating expenses, would be charged in our general gas construction account. I can't find that, I don't know where it is, it is charged to construction that is not shown as a part of the construction cost of the East Lincoln holder, I don't know whether anyone else knows where that is or not. I haven't testified that my time and the time of certain other persons, engineers in the employ of the company, was charged to operation, but was devoted to this East Lincoln holder; I will testify that none of the executive salaries were charged into that construction account, but the time for the executive officers to a certain extent, was divided in this manner; their salaries were paid out of the expenses of the company
766 and charged to operating expenses.

Concerning our steam account, I don't know how many pounds we made during 1912. I can and will find out and bring

it here tomorrow, I want to explain part of that question, I can tell the number of pounds of water we paid for, and that is as near as I can come to the steam made. I might be able to make an estimate or deduction from that pounds of water. I can tell the actual number of cubic feet of water we paid the city for, whatever deduction there was would be an estimate of the number of pounds of steam we evaporated. I will give an estimate, or a meter reading reduced to pounds. What I have given here is the number of pounds of steam used in the electric department in 1912, or the number of pounds of water delivered to our boiler plant, and if I can get it I will give the number of pounds which I say was used by our electric plant and if I can get it the number of pounds used by our gas department.

Concerning our bookkeeping charge to the gas department on the estimated number of pounds of steam used by the gas department for all purposes, I would have to look into that to satisfy myself as to our present scheme of handling it, I have asked Mr. Montgomery to look it up. I will bring in in connection with the steam, the total charge made to the gas department for steam during 1912, as shown in our 1912 report in connection with that the total number of pounds of steam I estimate the gas department received for that sum of money which we made as a bookkeeping charge against that department.

Concerning the boiler capacity at our combined gas and electric plant, and the amount of boiler capacity I estimate to be fairly necessary for the exclusive use of the gas department. I can give now the boiler capacity and the amount apportioned to the gas department but will give it all at once and then we will have it all together.

767 Cross-examination continued by Mr. Morning:

Regarding the charge of the expense of the recent special election to the gas department, I don't remember what the expense was in round numbers. We haven't received an accounting from the city yet, we gave the city $1,500.00 for that expense. We intend to charge that into our operating expenses. That was an election called for the purpose of submitting the proposition for compromising this gas suit, but the proposition failed. It is my idea that that was a proper item to run into our operating expenses and should be taken out of the gross receipts of the gas department. We don't expect to hold a special election every year I wouldn't consider that item a constant item with the manufacture and sale of gas, it would depend on how we charge it up whether it would furnish a fair criterion as to what our normal operating expenses were.

Concerning the legal expenses testified to, the bulk of those were incurred in the gas department. To account for that for one reason we have had considerable litigation with reference to this dollar gas matter. Our gas business is a bigger business, we deal with more people and cover more streets. Barring the litigation over the dollar gas ordinance, the litigation regarding our franchise involves

our general franchise which covers both departments, I think our franchise here in the street is a franchise as we contend to operate both businesses. In the litigation over the occupation tax, we have a suit which involves the occupation taxes on both the gas and electric departments. Outside of that whatever litigation the company has is sued against the general corporation. Whether we have more suits of that kind that grow out of the gas department than the electric, in other suits conditions arise, which if not properly
768 handled suits would result. I think the gas department gives more of that than the electric. I do not think the electric department the one that creates the most danger or that there is more likelyhood of personal injuries; true the men have to climb the poles and handle the current and we have some personal injury cases growing out of that but we have had to pay personal injury cases where men have been overcome with gas in laying mains and doing different construction work and I think that is a little more hazardous than the electricity, also with the consumers bath rooms. Fortunately during my experience we have been able to keep out of court with suits in regard to people being killed with the use of gas. I didn't say we didn't have trouble, over it but fortunately we have kept out of court.

Mr. B. C. Adams recalled for further cross-examination.

By Mr. A. D. Adams:

Concerning whether I have any tabulation of six inch mains laid by the company since 1902 showing any different results than shown in our 1912 report, I have one here in the room, well I have several compilations here, I did not say that they tended to show what the correct amount is. This tabulation has not been introduced in evidence, this is my own tabulation. I have a tabulation here headed in red ink "Tables 1, 2, 3, & 4"; tending to show the feet of mains in different sizes from the records of the company. I have not stated that this is a correct transcript from the company's record; I will put it this way that that is a compilation gotten up from the company's records and is as accurate as we were able to get it.

Exhibits "83" and "84" offered and received in evidence.

This tabulation is headed "Street mains, Lincoln, Nebraska April 23, 1913," with my initials on it to show that it is my copy.
769 As to whether I believe them to be correct, the tabulation was made from the records of the company in as accurate a manner as we were able to make it.

Exhibit "85" tabulation headed "Street mains, April 23, 1913, B. C. A.," offered and received in evidence.

I have here and produce a drawing of the connections out at the East Lincoln holder, the drawing on this tracing cloth shows the connections at the district holder in East Lincoln, and shows on the drawing the location of the blower house and the blowers; it is not made to scale, but just gives the general idea of the connections and operations.

Exhibit "86" offered and received in evidence with permission to withdraw original and substitute a blue print therefor.

Explaining briefly the operation of these connections as connected with the East Lincoln holder, that is, the use of the blowers out there and the use of that holder system, will say that first there is in the blower house machinery consisting of a motor driven fan, also a motor driven positive exhauster, or booster, and the connections that go with them for the purpose of conveying gas either to or from the holder. The blowers are installed for the purpose of distributing gas in East Lincoln, and also for the purpose of pumping gas to the State Farm, University Place and Havelock. On the 10" mains there are two blowers shown as connected to those mains, the specific purpose of both of them is to raise the pressure of the gas at that point in order to distribute the gas in East Lincoln and points further east. Blower marked Exhibit "X" takes the gas from the holder at a low pressure and then raises the pressure on the discharge side to a predetermined point and delivers it into the mains leaving the holder station. That is a 6" main, it is taken into the
770 blower through a 10" main and then delivered from the blower through a 10", through a valve, and then into a "T" or cross, and then from there to the reducer into the 6" main. That 6" main connects to the 6" main on "X" Street, and then it goes into a 6" main on "33" Street. The last 6" main runs north and south on "33" Street. It connects to a 4" main on Holdrege Street running back into Lincoln and also east to the State Farm, University Place and Havelock. There is another blower in this house besides the "X" blower. The other blower is not shown on here; it should be shown. The connections as shown are not complete, that is an oversight on my part, but the connection for the other blower is exactly the same as this, and the other blower serves the same function as this one shown here. During the coming week I will indicate the other blower with its proper connections drawn on this Exhibit "86," that should have been shown here, I didn't see this drawing until this morning and didn't examine it carefully until just now.

The function of the blower omitted from this drawing as now executed is exactly the same as the function of the blower marked "X" that I have described, the only difference is that the blower not shown here hasn't the capacity for delivering as high a pressure as the one that is indicated here. There are two reasons for having two blowers there; primarily for the purpose of safety, not always being able to transmit the gas at the proper pressure, and also I might say, that one blower gives us considerably higher pressure than the other, and that was done for the purpose of getting gas out to University Place and Havelock where we were not able to get it out there with the lower pressure blower. I haven't given this tabulation a heading or name, but it is in reference to the steam consumption in the gas works and is compiled in answer to the request of the other day.

771 Exhibit "88," a tabulation of steam generation, offered and received in evidence.

This exhibit headed, "Gas Construction" was compiled in conformity with the request made here in the early part of the week (being exhibit "89") exhibit "89" represents the gas construction from 1873 to 1907 and other years, it has reference to that; and here is a listing of the vouchers covering our transactions with Henry L. Doherty & Co. also requested, being for the year 1912 (marked exhibit "90").

Exhibit "90" refers to the vouchers paid to Henry L. Doherty & Co. during 1912, covering every transaction according to the vouchers listed there, with Henry L. Doherty. As to whether I have compiled any other exhibits in reply to requests made at the last hearing, I think that exhausts my compilation of tables.

Cross-examination by Mr. Morning:

As to what precautions, if any, were required and what we did to maintain a certain pressure in the East Lincoln connection with this gas holder as required by the ordinance, exhibit "87," without figuring the pressure down town, we equipped all the services with service governors; answering whether we did anything to prevent any excessive service in the mains delivered at the consumers' meters, I say we have no excessive service in the mains. Answering as to excessive "pressure" instead of excessive service, yes. Concerning whether we installed service governors to meet that condition I would say not all together that. We did for some time after the installation of that holder, I think, reduce our plant pressure and whatever has been required of pressure has been on account of the demand from the general growth of the town. Concerning whether
772 it was necessary to install and did install anything in the way of valves in our mains between the plant and the East Lincoln holder, I would say not that had not already been installed, with the exception of some valves at the East Lincoln holder which were necessary in the operation of that station. As to installing valves at the East Lincoln holder to prevent back pressure on the mains towards the city when we were boosting the gas on the University Place service, we did put in valves, and could close them and prevent that, and they also installed "33rd" & Holdrege what we call a district governor which operates automatically to deliver pressure to the Lincoln system at, I think, five inches; that possibly has been raised since they first set it. It is true that the way we have equipped our mains in the vicinity of the East Lincoln holder we can increase the pressure on the outlying service, that is, the service to University Place, State Farm and Havelock, without correspondingly increasing the pressure on the city mains, that is by reason of these valves and this governor at "33rd" and Holdrege. These boosters do have an effect on the Lincoln service, by virtue of the operation of the district governor at "33rd" and Holdrege and it was very important to us to raise the pressure at that point because our distributing pipes were not large enough to carry the gas out there and deliver a pressure that made it possible to use the gas economically, and we found it very beneficial to use that pump, or either of

the pumps, to pump gas out to "33rd" and Holdrege and then deliver the gas into that tank at a higher pressure than we could get from the mains normally. The gas leaving the gas holder at East Lincoln destined for University Place passes up "33rd" Street, turns east on Holdrege, and the governor is connected at that turn, between the main running to the State Farm, University Place and Havelock into the distribution system in Lincoln; the main running to University Place and Havelock is a separate main from
773 their distribution system here in Lincoln, and is connected with the system either by valves or this district governor, and they can put any pressure they desire into that main going to those places without affecting the Lincoln pressure beyond a predetermined point. That was done by reason of this governor, so that when the pressure reaches a certain point from the East Lincoln holder automatically these valves and this governor will stop the pressure on the Lincoln service and any excessive pressure is carried on to Havelock and University Place, that is partly, true because the valves do not work automatically but the governor does, and if they were delivering a pressure at "33rd" and Holdrege Street of say five inches that governor located at that point would automatically reduce the pressure going into the Lincoln distribution system to five inches, or some other predetermined pressure or may be ten inches if we found we needed that much at that point. Assuming that we didn't have the University Place service or any of that outlying service at all we would not need the booster for the East Lincoln service, that enables us to build the pressure up to something like five inches, but in my judgment we would need the fan blower or booster, and as time goes on we may need the other one in the Lincoln system. It is our idea as the city grows, that we will probably have to pump gas back south on "33rd" Street. In speaking of one of these blowers as a fan I mean it is a blower. Eliminating these blowers and booster house our district blower would not serve the purpose of pressure as far as the East Lincoln service is concerned adequately and sufficiently for the reason of the holder is comparatively a light holder, it throws, I think, only a maximum of four inches only when it is full and when it is very nearly empty it would throw that much, I think it runs down to something like three and a half inches and a three and a half inch pressure at 33rd and "X" would not be sufficient to give our consumers service
774 in the Holdrege Street district, or on South 33rd and south of South 33rd and perhaps some other portion of that district and it would be necessary for us to raise that pressure in some manner. In my testimony the other day I stated that we already had considerable pressure at East Lincoln from the pressure that was furnished at the main plant, and that this East Lincoln holder was supplement to that, that is true, we are trying to accomplish two things there, and perhaps you did not catch that the other day, namely, we were attempting to not only help East Lincoln but other parts of the city and when we put in the district holder we relieved the mains leading from our plant into the city of carrying the gas that had, prior to the location of the holder been going into East

Lincoln, and in that manner improved the service all over the city, including South Lincoln, and all other portions that were making demand upon the plant at the time that East Lincoln was making demands. That was not done by a system of valves, but by simply putting the gas out into that district holder after midnight and then holding it there until noon of the next day when our demand became strong and then furnishing those people in East Lincoln from that holder, and then the amount of gas that was used from the holder of course, did not have to come through the mains in the business section of the town, so the relief that was obtained was beneficial to every one else. I might say that we were delivering, I will assume, "twenty-five thousand" cubic feet of gas per hour to East Lincoln over our peak load, when we put in that holder we just took that "twenty-five thousand" feet out of the mains down here and improved the pressure in those mains proportionately.

775 Mr. B. C. ADAMS, recalled for further examination:

Cross-examination in chief by Mr. Morning:

Concerning the third contract for the East Lincoln district holder which I was to look up and produce, as I remember that was the contract for the steelwork, but I can't say right oof- hand whether we have dug that up or not. That we — the $7,000.00 contract for the steel work. I believe we submitted here the contracts covering the masonery and excavation work; we submitted the contract under which the work was done and als- a proposal that was made covering the excavation work that we didn't accept. As I recollect we introduced in evidence a contract covering all the masonery work made with Perry Hahn, the contract price was in the neighborhood of $6,500.00, I haven't the exact figures before me. Concerning the basis on which that work was done would say there were no unit figures submitted in that contract for the masonery work, it was a lump sum and there were extras added later; in addition to the contract price we paid for the brick work and tank; unit figures on excavation were submitted; and I think that work was done for 70 cents a yard. That was done by Robert Malone. The Perry Hahn contract was simply for the construction of the masonery and cement work, that was more than $6,000.00, is was nearer $6,500.00. In the excavation work of Robert Malone the 70 cent per cubic yard covered the yardage he excavated. Concerning whether that included the disposal of the surplus dirt or backfilling, Mr. Malone's charge was 70 cents for the earth he figured was excavated there, approximately the cubical contents of the brick work tank, but that was not the entire excavation and I think Mr. Malone's testimony was to the effect that he made an error in figuring the excavation and consequently did not charge us enough for that work.

776 Concerning the actual amount paid Mr. Malone whether that included the removal of the surplus dirt I would say I think I told what the amount did include, it included only the cubical contents of that brick work tank, he did work in addition to that for which he didn't charge us. As to whether I mean that Mr.

Malone did or did not remove the surplus dirt, no, we sold some of the dirt as I remember and gave some away; we tried to sell it but were unsuccessful in selling but a very small part of it, and the balance was hauled away for the carting. The company was put to expense for removal of the dirt outside of what was paid Robert Malone, we spent considerable money leveling the ground and carrying the dirt from one part of the plot of ground to another and grading it. I don't know how much. I imagine I could ascertain that but that would take some little work to discover what those items were, I presume that could be discovered by a considerable amount of work. Whether Mr. Malone rendered an itemized bill, he rendered a bill but just what was on it I don't remember. It would be a bill that involved the necessary facts to determine the amount due him; that would not necessarily disclose the number of cubic yards of dirt removed; it disclosed the number Mr. Malone estimated, and his testimony shows that his estimate amount at that time was not the amount he excavated. It was Mr. Malone's theory when the contract was let there would be so many cubic yards of dirt, that was his opinion about it, he made two propositions to us, one whereby he would agree to excavate for that tank for a lump sum of $3,900.00; on the other hand he agreed to do the work for 70 cents per cubic yard; now Mr. Bradford, who was connected with the company at that time, and myself figured it over carefully to discover how many cubic yards we though- Mr. Malone would have to excavate and we though- possibly by doing it on that basis we could save some money.

777 So the contract was let to him for a fixed sum per cubic yard, and then Mr. Malone figured out the yardage after he did the work. It came to $2,900.00 and Mr. Malone has testified had he figured the yardage as he should it would have been higher. We actually paid him 70 cents a cubic yard and in the total amount of $2,900.00. Concerning the actual amount paid Perry Hahn for his part of the contract, if you will wait until I get the duplicate copies of the exhibits I need I believe I can answer you more efficiently.

Passing that part of the matter for the present, in regard to those missing contracts for the steel work, the Western Gas & Construction Co. furnished that steel work. I haven't made any effort to communicate with them for a copy of the contract to ascertain what it was, but our records will show the amount we paid them for that work. That was paid by a check and voucher. I have those and can produce them; I have a tabulation and we can produce the check and voucher I am sure. We had that contract here at one time but I don't know where the thing went to. I can answer the question about the East Lincoln holder now, as to what we paid Mr. Malone, the exact amount was $2,927.96 and we paid Mr. Hahn for the brick work in the tank the total amount of $6,683.27; we paid for the steel work $7,000.00 to the Western Gas & Construction Co. in seven different items; the items as I have them here are one payment of $3,500.00 another of $150.00; another of $200.00; another of $275.00; another of $275.00; another of $350.00 and another of

$2,250.00. Those amounts were all carried to our Voucher Distribution Record, or Accounts Payable Journal and entered there under a special account called East Lincoln holder, then the items I have read here were charged to our con-truction account with other items under that same account. None of the items entering into the construction of the East Lincoln holder are in any way reflected in our operating expenses for that current year, neither to increase the expense nor reduce the gross receipts.

778 With reference to the lots I have testified about, 7 to 15 block 2 Peck's Grove were the first lots purchased for $1,000.00, and we added some improvements as required by the city in the way of planting trees, etc., the bare lots cost us $1,000.00, where we put the holder; the next purchase covered the acquiring of lots 1 to 6 both inclusive in the same block, and also included the house on those lots; it is a story and a half house without a basement, there is a little hole under the kitchen though for storing vegetables in. At the time we bought it the house was possibly three years old. We paid for the six lots and the house $3,500.00. Then we bought lots 7 to 15 both inclusive in block 7, those were vacant lots, we paid $1,750.00 for that bunch of lots or for 1 to 6 inclusive we paid $3,350.00 both inclusive in that block; $1,750.00 for one bunch and the balance for the rest making $3,350.00 the sum total for the lots in block 7. The lots in block 2 and block 7 do not constitute two solid blocks; block 2 is a half a block, it is 100 feet wide and there is no alley between that and what would have constituted the whole block; they are 25 foot lots and 100 feet wide, and in block 7 we bough- half of the block,—all of the property on one side of the alley, those lots are approximately 25 feet; there is some variation in width and they are not all 25 feet. It is true I testified that when we bought the first batch of lots, that is lots 7 to 15 in block 2 for $1,000.00 the seller didn't know the Gas Company was interested in the purchase, therefore we were able to buy them at a lower price than we were late- able to buy, in other words after they discovered that the Gas Company was buying them we had to pay more for subsequent lots and in a sense were held up after they discovered that; the first batch of lots were the most undesireable

779 of the entire number we bought because it is further back from the principal street and next to the railroad; the lots numbered from 1 to 6 fronted on 33rd Street and were more valuable than lots 7 to 15; the lots across the street in block 7 that we purchased, undoubtedly were worth more than the first lots we bought, the party who sold those lots claimed they had a much greater value than we paid for them, we have always thought that had we improved that part of the country with the holder we wouldn't have had to pay as much for the lots. We partially felt because we had to buy out one or two parties to remove certain objections to the location of our holder there that it really subjected the Gas Company to an excessive valuation, and in order to purchase the house and lots 1 to 6 in block 2 we bought those lots in order to get a permit from the city in order to erect our holder, members of the committee who had that in charge intimated to me

in one way or another that it would be a difficult thing for them to grant the permit unless the party who owned the property was satisfied. Owing to the objections made we were required first to buy more ground to remove the objections than we really needed in order to be able to build the holder at all, and second I always thought that we paid more for lots 1 to 6 than the price at that time should have been, I also thought when we bought the lots in block seven that perhaps we came nearer to a reasonable valuation; we bought those lots sometime after the erection of the holder and the property had probably increased in value. I wouldn't say that the erection increased the value of the property, I have reference to the growth of that part of the town and the improvements that were being made there and the effort on the part of Woods Bros. to develop Peck's Grove, Woods Bros. told us it was an objectionable thing to have the holder there. I think there are no houses in Woods Bros. addition,
they just laid it out and plat-ed it and that was about four
780 years ago. I think laying out the addition raised the asking
price in that part of town and the selling price where property was sold but at that time it was moving more rapidly; the market there then was more than at the present time. I think it is true in all parts of town, even in the best business section there hasn't been any increased market, the market has been duller since that time. Concerning the items included in Mr. Lea's report under the organization and legal expenses contained in Exhibit "A" of his report for instance preliminary investigation $3,000.00, preparing articles of incorporation, surveying, abstracts, etc., $7,500.00, salaries of manager and clerical force during the two years' construction $18,000.00, incidental and traveling expenses $2,500.00, rent and stationery two years $2,000.00, as to what the company actually paid at the time this plant was installed for any or all of those matters I don't know from any personal recollection, I believe information of that character was submitted in the suit before if there was any to be had. In addition I know nothing about it only what I read from the previous record.

Concerning the item of working capital in Mr. Lea's report under the heading "Working capital" he has various items, material and supplies as of January first 1913 $16,334.42. As to whether this company did have on hand at that time material and supplies aggregating that sum I believe so; I believe that was Mr. Lea's method of arriving at that item, I think he took it right from our reports.

Later on he has an item subdivided under the figure "1" in his Exhibit "B" oil for enricher $447.39; that would be $447.39 divided by .03765 gallons of oil or approximately ten thousand gallons. I mean to say that we had ten thousand gallons of oil for enriching purposes at that time. I imagine that is close to the normal
stock of oil we carry probably it would average that, I think
781 it would, we have down there two ten thousand gallon tanks,—
I guess we have three ten thousand gallon tanks,—and one smaller than that besides two on the electric side that we use sometimes.

On the item of coke which is included at $1,636.55 that is $6.75

per ton. I imagine that is a close average to what our coke stock should be. We are continually laying in coke; we are continually using it, and we try to keep a reasonable amount on hand. We don't stock up periodically and carry it, we get the shipments as uniformly as we can. I rather think we have that such on hand now, I haven't looked at the stock but once and I didn't have in mind then making any effort to determine how much there was there, but I noticed the coke shed was pretty well filled up. We got about ten cars a month and they are shipped divided, those cars are divided uniformly over the month, to be correct about every three days. There are about thirty tons to the car, it comes from Milwaukee and the price of coke at this time at Milwaukee is $4.65, with freight per ton of $2.80, that is a short ton of two thousand pounds. The distinction between a short ton and a long ton is the difference in the number of pounds to the ton, I don't remember how much that difference is, some two hundred and some pounds, twenty-two hundred and forty pounds in a long ton.

The next item of gas material and supplies is entered as tar $194.63 that tar is manufactured here as a residual, a by-product. All of the material and expense of making that tar is entered elsewhere in our operating expenses. After we get the tar we run that in also as an item of capital, a part of the working capital; we don't carry the working capital account under such a head, but it is showed here as money tied up in stock.

The purifying material item here I think is a normal sum. With reference to our main stock that is gas and service pipe. We have
782 that much gas pipe on hand the first of this year, whether that was about the normal amount carried I would say that was apt to be under what we ordinarily carried because it was coming to the first of the year when those stocks are low.

Whether the following two items service stock and fitting stock that would be 1¼ inch pipe, I would say we have that much on hand.

The appliance stock $5,627.22 that covers all of the appliance that are held in the gas department as stock such as gas stoves, water heaters and various small appliance, industrial appliances and things of that sort. We have a stock of those on hand at this time. As compared with the valuation set out as of January first I don't know what the present stock is today, I imagine it would be more than that in view of the fact that we got in a car of stoves here recently, I haven't seen the last month's report and don't know what the situation is. Concerning the item of pipe and fixtures stock $1,248.75 we have carried as pipe and fixtures here such stock as would be represented as gas fixtures of various kinds, and small pipe that might be used for connecting. I suppose that could be included in our main stock or service stock enumerated above, but that has been done to give us an idea of how much saleable stock we had, that is, to represent such stock as we thought we would sell. That would really increase our appliance stock by that much.

Concerning this loan account stock $3,312.00 the last item under gas material and supplies, that largely covers the gas arcs that have been loaned to customers on a rental basis, also gas ranges loaned

for one purpose or another most always for temporary purposes. I suppose they are inventoried at their new price, I doubt if there are more than three or four articles of that sort, that is almost entirely gas arcs. Our purpose in having such a stock, the
783 gas arc has been rather expensive and we have found it rather difficult to sell it outright and in order to get out as many as possible we conceived the notion of renting them. A gas arc consists of four or five or perhaps a three mantel unit that we sell for store purposes. When we rent them it is for the purpose of illuminating store, ware houses, pool halls and such kind of buildings, instead of selling them we just rent them.

As to what our current monthly gas bill are ordinary*l*y at the present time I think about $22,000.00. Our revenue was $282,-000.00 and it would be 1/12 of that. Mr. Lea has indicated for the month of December, 1912, the current amount was $18,059.32. Those bills are paid at various times during the month, we have three different discount periods which comprise a period of six days; commencing with the first of the month and carrying it until the sixth, the second starting again on the the 11th and running to the 16th and the next from the 21st to the 26th. The town is divided into three districts, so that we will not have everyone paying their bills at once.

Inasmuch as these bills are being collected during the month as to whether it is or is not a fact we have out during the whole month $18,032.59 I wou*ll* say we have to look at it from this standpoint that at any particular time during the month we have sold so much gas for the previous thirty days, and that has been an investment to us and we are entitled to payment for the amount of gas that is outstanding, we are always more than 30 days behind, about 40 days. That is true on this basis, supposing the discount period comes on the first of the month and you start the first of September using gas and you use it until the first of October and then you get a bill the first of October for that month's co*m*sumptio- and we give you six days in which to pay it, that gives you 36 days and then perhaps yo*i* will run over, a lot of people do, we
784 ordinarily get the penalty but you can see that we cannot collect on the thirty day basis, we are always more than thirty days behind. It is not possible that some people will commence to take gas for less than a thirty day period and will pay up before the thirty days and that average it up. Even if each consumer pays his gas bill 12 times a year at least we get more than thirty days time on any one consumer because of this discount period hanging over after the thirty days and it has to be that way from the first of the month to the first of the second month, we get the second reading and there is thirty days consumption and we don't get the money until several days after that and in the meantime he has used more gas. He gets a leeway on us of the discount period of the extra six days.

Now the gas arrears Mr. Lea has entered here under subdivision "2" of his exhibit "B" as an item of working capital $3,822.68. That would include bills that had run over and hadn't been paid

within the last discount period and previous periods for the year, of course we add a penalty to that and that should be shown at the gross rate, and when we collect the penalty that goes into our receipts.

Concerning the items in oour petty ledger account $13,333.30, 80% to the gas department, that is $16,666.00 which less the 80% is $13,333.30; those cover such items as represent sales outside of gas, gas stoves, and all gas appliances, gas piep where we have sold it; that includes bills for everything outside the sale of gas. It does not include such as are ordinarily called bad debts, they wouldn't show here. These are live accounts and are considered collectable. As to how long we carry them before we charge them off, in some cases we might charge them off immediately but ordinarily we wouldn't make up our bad debt account until the first of the year, it is done every year. I would not say that none of those included in this item are not over a year old or approxi-
mately that, they might be over a year old because there are
785 such accounts that are being paid on right along. As to why we apportion 80% of those as a part of our working capital to the gas department and only 20% of them to the electric department I will say that Mr. Phillips and Mr. Lea went over that journal showing those various accounts and from an examination of the items shown there they concluded that an 80% and 20% division would be about right, as I understand it they handled it that way rather than dig out the various items. It does not represent a comparison of the gross receipts between the two departments, it is based on what the sales covered.

Now coming to the subdivision of exhibit "B" of Mr. Lea's report of cash on hand December 31st, 1912, $31,058.76, two thirds of which is apportioned to the gas department I did not make the apportionment there and cannot tell why 80% of that was taken instead of ⅔rds. Whether it would seem a little bit like discriminating in favor of the gas company when you divide the petty ledger accounts on the basis of 80% to the gas department and when you come to the cash to only assign ⅔rds to the gas department I will say that I explained that as based on what the sales were or would cover. Explaining how much belonged to the gas department for instance on this item 4 the ratio roughly of gross earnings in the gas department is about 62½% of the total earnings in both gas and electric departments, and I presume that was based on the ratio of the earnings in the gas department to the total earnings. As to whether it would give the gas department less cash than we have assigned it, or about 66⅔ I would say at the same time they might have made some investigation as to just what the money in the drawer did represent, it might have been gas or electricity. That was the amount of money in the office at the close of the day's business. We had that much on hand at that time when it was counted. That does not seem an abnormal amount. It would
not always average that amount for each day, the total
786 amount from both departments would average that amount.

Taking the next item, item 5, cash in banks December

31st, 1912, whether that was a rather abnormal amount would say that I don't beli-ve I testified that was an abnormal amount, that was about what we have carried for perhaps two years ordinarily in the bank accounts. Concerning whether the bank accounts were checking accounts I would say the Doherty account is not a checking account, the others are. Our bank books will show our monthly balances. I will make a statement showing the monthly balances in each of the banks including the months for 1912 by months.

Concerning the Henry L. Doherty & Co. item on January 1st which is $27,445.89, I can't say what the account with Henry L. Doherty & Co. on deposit is at the present time, I haven't seen the last account. It can be produced. It is kept there for the purpose of meeting interest charges at times, and taking care of various items that might arise, for instance, we might be called to pay for some construction item through the New York office, but that has been used almost ex-lusively for meeting interest. There is another reason for it besides permitting Doherty & Co. to pay right out of their bank our interest charge without using their money, namely, some years ago this company didn't have a credit here of but $10,000.00 and we had to work out some scheme whereby we could get short time loans easily and we found that we had to do business with more than one bank in order to increase our credit and the only way we could get accounts in other banks satisfactory to the bank was to borrow a given amount of money and keep a certain amount of that money on deposit; well the time came when we didn't have to get credit and were able to borrow not only $10,000.00 but $40,000.00 and we have made an effort to keep half as much money on deposit in those various banks as we were borrowing from them and we sent the balance to New York and charged them 6% for it and in that way we have paid our interest on the money we are borrwoing here to establish our credit; the litigation
787 that had been heaped on this company had made it very difficult, up to the time we established that policy for us to get money for any purposes; we wasn't able to discount our bills, we do that now; we never had money enough to do business with before but by borrowing what seems to you an excessive amount we have established our credit with four different banks and with the interest we got from that we paid Doherty & Co.

Whether with our monthly income of $18,000.00 to $20,000.00 current receipts that would necessitate our having very much credit taking care of the current business but to provide for improvements taking care of the crrent business but to provide for improvements and extensions in our two departments, and we have simply had to conform to the terms of our franchise which requires that we make the reasonable and necessary extensions, and we have done and had to do it out of the earnings and money we borrowed; we have never been able to finance our improvements as companies of this sort ordinarily would by the sale of some sort of security. We borrow from each of these banks where we have these deposits and they have our notes, mostly short time notes. And we deposit the money with them

to a certain extent. I think all of this interest we pay on the money borrowed is at 6%. The deposits do not draw interests.

Whether we have to borrow and use some of this money to pay bond interest I would say we earn our own bond interest, we have however, at times been short of cash and used to borrow money to pay bond interest; I might say it was used for that or for the purpose of taking care of our extensions. No the bond interest is not the one thing that keeps us hard up. The thing that has kept the company hard up is the demand for extensions and improvements. As to whether we are paying interest on substantially $1,500,000.00 bonds and notes, would say our interest bearing bonds in the amount
788 of $796,000.00 and a part of that interest is paid to ourselves.

We are paying interest on $500,000.00 of 3 year notes; I don't recollect that we are paying interest on anything else; the interest charge we carry on our books for first mortgage bonds, is simply a matter of bookkeeping because the interest is charged and again credited, there is no passage of money. Out of both departments we are paying interest on at least $1,200,000.00 including the notes. The total amount of interest paid out in 1912 was $79,240.23 and that interest covers both the gas and electric departments. That is all the interest we paid out during the year for both departments. We did not apportion that as between the departments at all. The amount of interest I have just given I think does not include interest on $333,000.00 bonds which are paid and held as collateral. That total amount I should have said does include an accrual of interest on the $333,000.00 for first mortgage bonds: the total amount of $79,711.69 that was paid out in 1912 was made up as follows: we paid out on the consolidated mortgage 5% bonds, $38,966.65 that was paid out thought the Chemical National Bank,—either through the Chemical National Bank or H. L. Doherty & Co.,—if they paid it they probably sent it through the Chemical National Bank. We paid interest on the first mortgage bonds $8,325.00 to ourselves. We did that in order to offset that credit to ourselves, we charged ourselves with the interest. That was done for the reason that the first mortgage bond- which came due in 1911 were not taken up, they were purchased and extended to use as collateral behind the $500,000.00 three year notes and in order to carry out the transaction as a matter of bookkeeping we accrue the interest and pay it to ourselves.

As to whether that was the means instead of taking up the mortgage bonds, we perserved their life and used them to protect these loaners who took the notes for first mortgage security. I would say yes, we put additional security but had to handle it that way
789 to get them to carry the loan. We also paid on Bills Payable the amount of $32,168.44 and we paid an item of interest in advance in the amount of $251.60 making the total paid out of $79,711.69; that sum includes the amount we paid to ourselves and should be deducted to show the actual net. That is $8,325.00 should be deducted to get the net of $71,386.69. That interest was accrued and paid last year and was all the interest that did accrue last year.

I can't say right off hand how much we paid last year for extensions in the gas department; approximately somewhere around $50,-

000.00. In a general way that covered extensions of mains, purchase of meters, governors, service pipe, meter connections, and repair construction. Whether we had those things in stock, like meters in stock and pipe in stock, called extension until actually put in use, will say the report shows what is in stock, and what is actually put into service. It is put into the construction account when it is put into use not when it is bought. So our meters in stock are not in the construction account. The exact amount for extensions last year as shown by our books,—the total amount expended for construction work in 1912,—was $50,066.77; concerning whether that is in the gas department, I am glad you called my attention to that; that was in both departments, the amount spent in the gas deparment was as follows: for gas works additions $11,485.88; for street main extensions $7,318.22; for new service pipes $271.81; for meters and connections $958.76; then we have an item here under the heading of office furniture and equipment and part of that is chargeable to gas amounting to total amount of $7,133.05; of which I would say off hand 80% was chargeable to the gas department. No part of that fixtures item is charged to current operating expenses, that is what we consider construction; and the total amount of construction as exhibited there is $50,066.77; I have given the items that
790 can be segregated to show what went into the gas department, with the exception of the furniture and fixtures which should be apportioned, and the report will show also the different items that went to make that up by the headings I read off and you can find out how much were for governors, and under governors you can find how much is for wages and how much for material and how much miscellaneous, and how much for the governors themselves. Those items for stock was what was actually put in place.

We carry casualty insurance on our employees and laborers. We pay a rate of $2.00 a $1,000.00, on the pay roll, that is, the amount of the pay roll involved in the insured department whatever it is. If we were to construct a gas plant the casualty insurance would be figured $2.00 per $1,000.00 on the pay roll involved in that construction; that charge used to be higher than now, it used to be $3.75, but Mr. Doherty has entered into a blanket contract for liability insurance and by virtue of that we have been able to reduce the rate $1.75 per $1,000.00; I presume Mr. Lea figured the $2.00 which would be the ordinary rate. The rate of interest we have been paying, and did pay on bills payable was 6%, these bills payable are pretty heavily secured by bonds, it comes of that trouble of extending these mortgage bonds to use them and we used in addition $400,000.00 second mortgages to put behind the $500,000.00, three year notes; we had to put that up because I imagine somebody would get Mr. Fred Foster to try and get the Railway Commission to prevent us from issuing those notes.

When I was on the stand before I was asked regarding the method of determining the amount of steam charged to the gas department and furnished by the electric department, I said we did not use a meter. It being suggested that Mr. Phillips testified somewhere that we did use a meter, that comes from an accountant trying to become

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an engineer, the fact is that we didn't use a meter at all. As to our furnishing the data on that I think I said that Mr. Montgomery would compile that and he did; that has been offered and
791 received in evidence as Exhibit "88" being the compilation with reference to the steam, for the charge for the steam against the gas department that exhibit covers that, showing the subdivision of the charges which are itemized under the headings, steam, electricity and water. Mr. Montgomery prepared that exhibit, he is the general superintendent of the company; whether I would be able to testify as the accuracy of the figures of my own knowledge to varify the figures, methods, conclusions, and calculations involved in that exhibit would say the method is correct as far as the arithmetic I don't know, it looks about right to me. In a general way the method of arriving at the amount charged the gas department for steam furnished by our electric department, the steam is figured on the basis of 20 pounds of coal per 1,000 cubic feet of gas made during the months of October, November, December, January, February and March, and during the other six months of the year on the basis of 15 pounds of coal per 1,000 cubic feet of gas made, the cost of coal includes all of the items which go to make the expense of steam, generation on line 3,009 of our old *cal*ssification, this gives an amount varying from $600.00 to $950.00 per month which is credited to the electric department and charged to the gas department; with this amount the gas department is also charged under the steam account with the water and electricity used in the manufacturing department, and the actual charges made to the gas plant and credits given to the electric plant for the 12 months during the past year are shown in that Exhibit "88." As to what causes the variation between the various months as to the consumption of the amount of coal per thousand cubic feet of gas made, would say the amount varies for the reason that the charges include steam used for gas generation, the booster, the exhauster and steam heat for buildings and holders, and the amount of steam required by these different pieces of apparatus varies according to the amount of gas that is sent out and the temperature of the room at the plant that are heated with steam. The fact that the heating of the build-
792 ings and the heating of the holders vary accounts for the difference would say that I don't think that is the large item, I think the large item is determined by the amount of steam we use for the gas generator, booster and exhauster, it takes more in the winter time depending on how much gas we are sending out, and we send out more gas in winter; that is, the larger the out-put the stronger the charge has to be per 1,000 cubic feet, because we are using steam for more purposes. As to whether it does not cost as much for steam when you have a small out-put relatively as a large out-put per 1,000 cubic feet would say that with the six months commencing with October and ending in March we make a charge based on 20 pounds of coal per 1,000 cubic feet of gas made and during the balance of the year we make a charge based on 15 pounds of coal per 1,000 cubic feet of gas made during those six months and where we use the 15 pound basis our out-put is small as compared to the

other six months and of course, we don't use any steam heating during the other six months, but in winter we have to use a considerable quantity for heating the holders, and tanks, and buildings, and we also have to use the exhauster and booster longer hours during the day in order to supply the added amount of gas we are sending out over that of the summer months, consequently we are charged on a higher basis during the winter months than during the summer months. It doesn't require any more steam per thousand in our water gas generator to make gas, but we make more gas, the gas is required by the city in larger volumes consequently we have to blow more gas up town with our booster which takes an additional amount more than in the summer time; during the summer time we may not use that booster but one hour a day while in the winter months we might use it five hours a day to get the gas up town. As to determining accurately the amount of steam, we can't measure the steam, but we can get at it by determining the size of the engines, the number of hours they are running, the amount of
793 steam it takes per horse power and the way this thing was based as I remember now was by making an actual test, using a boiler in the electric plant and taking from it steam for the gas works which gave a sort of basis upon which to work. We have done that several times since I have been here to arrive at some basis for making a division, and those who made the tests finally determined upon these different tests to get the variation for the different months of the year. In Exhibit "88" for each month we have divided the charge into three elements, steam, electricity and water. The reason we charge for electricity is that comes under our classification as being charged under that account, it is the electricity that the gas department uses, the water is the water the gas department uses for various purposes, one for cooling water in the condensers for instance in Exhibit "88" in January there is an item for water of $137.89, we don't get that water from the electric department we get it from the city. It is entered into this account showing the total cost as charged; the account is enumerated in that tabulation and the steam expense itself was $860.00, and addition items charged to the account and set opposite is $59.00 for electricity and $137.89 for water; electricity is charged against the gas department and in favor of the electric department. The reason this water item of $137.89 enters into this item is that under our classification, Mr. Morning, we provide for handling these accounts in such a manner that such and such things must be charged to such and such accounts; Mr. Montgomery has taken the item of steam and charged it at $860.00 electricity at $59.14 and the item of water at $137.89 and shows that those accounts have been distributed to the accounts set opposite as follows; account #1100 got $350.00 of that total amount, the three items I first read; and account #1110 got $100.00 of it; and account #1116 got $410.00 of it. Those numbers 1100,
1110 and 1116 are gas accounts shown on page 11 of the op-
794 erating account. Account *Account* #1100 shows the heading in the operating report of steam for generating water gas; account #1110 shows the heading just steam; account 1116 is shown

under the heading works, expense and supply. The reason this thing is made out and shown on this record you have shows how the items of steam, water and electricity enter into operating under the heading of steam for generating water steam and works expense and supplies because that is the final analysis which you don't have before you in our operating report. We buy our water from the city that is all entered into our final transactions and entered into operating expenses once and only once. This is only a mere matter of distribution for bookkeeping purposes and hasn't anything to do with the sum total in operating expenses except it shows how it has been charged, it don't effect the total. Concerning whether it effects the total as far as the gas is concerned would state it is the sum total amount of how it should be charged to the gas department, I will have to correct my testimony a little bit, the items steam, electricity and water are not all divided as indicated there, first, it is just the steam divided into those three accounts. The three accounts charged of $350.00 in one item $100.00 and $410.00 in another make $860.00 which is the steam alone. I can give you the reason why these are apportioned to different accounts, I just said that the steam is distributed as shown by those account numbers on the right hand side of that exhibit under the heading of January $860.00; now in addition there went into our expense $59.14 for electricity, $137.89 for water and the total of all those items amount to $1,057.03; and that total amount shows in our January operating record on page 20 and is made up of a charge to water gas generation, of $350.00 to water, for purification and storage $297.03, and works expense $410.00 that makes the total of $1,057.03 that I have read there from the
795 credit side; now on the debit you will find that the electric department gets steam $860.00 electricity $59.14, water $137.89. The reason for dividing steam into three different accounts is simply a matter of accounting for determining our operating expenses, we think that method gives us the best information of how to conduct the operation of the works. The item we have charged here steam, water and electricity includes the labor of producing the steam, and all the expenses in producing it. No item of labor is charged elsewhere, but that does not include any interest or overhead charge.

Exhibit "90" is the statement of moneys paid by this company to Henry L. Doherty & Co. from January 1st 1907 to January 1st 1913 which exhibit I was to furnish. I made no effort to go back of the year 1912, anyhow exhibit "90" merely includes those payment made in the year 1912. The transaction under date of March 14th 1912 in exhibit "90" voucher # 11981 draft to H. L. Doherty & Co. for $10,000.00 exchange on draft $6.00 total $10,006.00 was a deposit we made with Doherty & Co.'s bank. The next entry under date of March 26th 1912 voucher # 12002 was another deposit made in their bank. The credit balance $35,809.27 of February 1st represents the amount of money we had on deposit down there at that time. March 1st 1912 credit balance $35,311.41 indicates the amount we then had on deposit down there on March 1st.

Included in voucher # 12463 under date of April 26th 1912 the

item "Expense Paul R. Jones, 1/31/12, $125.00" was the expense of the audit, or a part of it, he was an auditor sent out to audit our books. The item below under the 30th of the same month "services 1/21-1/31-12, 11 days Paul R. Jones $220.00" covered part of the same item for the same service.

April 1st we had on deposit with Doherty & Co. a credit balance of $54,494.82.

796 Voucher # 12890 in exhibit "88" under date of July 23, 1912 where is shown an item "Draft on H. L. D. & Co. account purchased $5,000.00 par value Havelock Elec. Co. common stock $5,000.00" indicates that we bought $5,000.00 worth of common stock of the Havelock Electric Co. and at that time we didn't want the transaction to pass through this office and we drew a draft on our New York account. We didn't want it known that we were buying into that company, the Traction Company was furnishing them powere and we didn't want to make it public. We are furnishing the powere there now. The $5,000.00 purchase of the stock of the Havelock Electric Co. enters into our construction account here, that would be a part of the plant account,—not the gas,—it would be a part of the electric plant account that wasn't in the gas department.

The item in voucher # 13250 under date of September 27, note to W. E. Quillan $500.00, in explanation of that Mr. Quillan is in the employ of *the* Doherty & Co., he came through here on his way to New York with $500.00 that he didn't know what to do with and we gave him a note for it and took the money.

At the close of exhibit "90" December 1st 1912 we had a credit balance with Doherty & Co. of $27,430.49 and that was our balance December 1st there. In addition to that the item under date of December 31st "interest on account 7/1/12 to 1/1/13 $1,068.78" that is the 6% on our credit balance down there during that period; that item of interest enters into our receipts here in miscellaneous earnings, and is shown on our financial report; that goes in just as our gas earnings do but in a different line, segregated from it, but in our showing of gross earnings we enter these receipts and the items appear as a part of our earnings.

In making up our construction account we show the total amount expended during the year for what we consider extensions, we show the items in detail. Concerning whether we have displaced
797 one item and put in a new one, for illustration a water gas set, would say that we have never displaced an old one with a new one. We don't take it out of commission and put in a new one. We absolutely have all that we ever had in commission, that is four, we are actually using one, but it is impossible to get along with one machine even though it has the capacity of furnishing more than the demand upon the company. It is possible for us to make all the gas required with one 7′ 6″ water gas set but we can't run that day after day or year after year, we alternate and put the others into work. It has absolutely happened as a matter of practice that we have had to have more than one reserve water gas set, that thing has been experienced here several times, and the reason for the necessity of having more than two machines is this: when we shut

down a machine we shut it down at the last moment because we run it as long as we safely can and when it is shut down it takes a terrible long time to repair it, it can't be done over night, it takes several days and sometime- several weeks to repair it, and in running another machine we are liable to have trouble with that time and again we have had to shut down on a machine in operating condition while the other one is shut down for overhauling and we must have something to take care of the plant; we have no assurance that that condition might not exist here tomorrow, and it it should our 6′ 6″ will not handle our load and we can use that with the Springer set as a last resort to help it out. I am glad to say it is at least two years since we actually used the Springer set, but you must consider that the two 7′ 6″ machines are absolutely new machines and they are in as good condition as two machines can be and be handled during the first years of their use; we ought not to have any trouble with either of those machines but we have had trouble with both of them. The next time we buy water gas sets, we will carry the old sets on our books as a part of the active operating plant just as long as they can be used. We have added the total cost of the new water
798 gas sets to the construction account and charged nothing off on account of the old ones, for this reason, the old ones are still useful machines and necessary in the operation of the property as a matter of precaution, safety and service to the public, the hazard we would undergo, if we shut them down forever might involve us in law suits involving hundreds of thousands of dollars. The city has experienced trouble in not *have* reserve capacity itself.

Concerning my testimony relating to exhibit "35" showing a payment made to the Western Gas & Construction Co. according to our records, including freight, when I spoke of an allowance having been made of $400.00 on the old machine I meant that allowance of $400.00 covers that made on an old engine we returned to that company, it was a steam driven engine originally used for the purpose of driving a blower. That old machine was one of the items in our construction account at that time when we turned it back to the company we credited it, or charged it off from the construction account; that will appear in the 1913 report where that credit was made. I don't say that was made that year, but it has been taken out of the construction account. Oh I don't know how many other items besides that, that we have taken off of our construction account; but that was our practice whenever we did away with a piece of apparatus we took it out of our construction account; I can give another instance at least, at the time we sold those boxes to Charles Hulswith & Co., we got some money from those, we got the cash for it, and put that into our miscellaneous earnings and credited the plant account. I don't recollect the transaction, and would have to look it up as to whether we credited the construction account with the exact amount we received from them. We would not credit the construction account with the original amount at which they were carried, we credited it with what we got for them. Assuming that we carried
799 them in our construction account at the new price and sold them at a junk price, we credited them with the price we

actually got; and that is what we did with this machine for which we got $400.00. Concerning whether the difference for what we got for the discarded item and what we originally carried it in the construction account would still remain in the construction account, I would say as a reproduction value proposition it would but when you come to the present value proposition it would be what we credited. Taking the construction account as a check on what we actually have in this plant, we have all of the items entered there at their original cost, whatever we have taken off, we have taken off what we realized after we discarded the item, that is all we took off. The new item was handled on the construction account in this way it takes care of the thing, but you are trying to make it appear that it is something that ought not to be. If we bought an old engine at $1,000.00 and put in a new one that cost $2,000.00 we wouldn't add to our construction item $2,000.00, we would add $1,000.00 and the difference would be charged to operation. That is what we did in this case, we bought another piece of apparatus, that # 7 Sturdevant blower which cost us $1,060.00 but we didn't charge all of that to construction, we charged to construction the difference between what the old piece cost and the new; I am sure about that, and when you go back to those old books they handled it the same way, you will find it all through our construction for replacement, we only charge the additional amount to construction and the rest of the cost to operation. Sure it has the effect on the operating expense of increasing it to the extent of these charges, and to that extent, keeping up replacement out of operating expense. My knowledge as to the method of accounting and bookkeeping extends only from the time I came here, ever since July 1906, back of that I have no
800 knowledge, but that was always the plan of the company during the management of our people at least.

Concerning my direct testimony heretofore given regarding the 7′ 6″ water gas set three years old, and the total cost given as $10,900.00 and whether that was the price actually paid for it, would say this tabulation shows exactly what was paid; we paid the Western Gas & Construction Co. $10,025.00 and they allowed us in addition to that $841.50 and drayage in the amount of $70.00, and then there was a credit of $8.40 making a total for that machine of $10,925.10; that allowance of $841.50 was the freight on the machine we paid getting it out here, we paid it and they gave us credit on the price for it, and the same for the drayage, their contract provided for delivery and setting up.

Concerning the erection of these gas holder- erected under my administration, and the making of extensions during that time as to whether the company incurred any expense in the way of engineering, I would say yes, but only in a nominal way, I think we hired perhaps a surveyor, or something of that kind; and at one time we hired Prof. Stout to make some plans and give us some advice, what was paid for that would be merely nominal.

The company's office before we moved to our present location at 14th & O was between 13th and 14th on O, 1324 O St., a lit-*el* over a half a block west. Our floor space there was 25 feet on the ground

floor running back 130 feet, and we had possibly 3,000 square feet up stairs and we had a basement under the ground floor. Our main floor did not extend to the alley, but we had a little extrance, then we had a basement, and the floor space above. We paid rent for the ground floor on a lease that would have expired in a year, $125.00 a month and for the space up stairs we paid $80.00 a month; and we paid for the gas shop in the rear $40.00, and then we had another little office up stairs that we paid $25.00 for, that total rental was $270.00 but that don't sound like enough,
801 we used to pay for all of our rental on that property $300.00 a month, I am short somewhere. That was half a block nearer the center of town than our present office. It wasn't on the corner, as far as location is concerned it was a prominent location, but we didn't have a good front and people couldn't find us easily. We didn't have a good front for display purposes, nor a front that could be easily discovered. Yes people lost their way getting to the office, I found a number of people that couldn't find the gas office. The office was there about 9 years. That wasn't considered a high rental location when we rented it, we had a ten year lease on the property, and $125.00 was the amount fixed when we first took it. Mr. Schlissinger told me if we wanted to renew our lease we would have to pay $275.00 for the ground floor. Concerning whether any location on the south side along in that locality is a high rental location, I don't know anything about what other people are paying there. Yes sure, as compared to other streets, O Street is a high rental street and the south side is higher than the north, that is the preference of location.

Yes I have the items paid to Perry Hahn on the East Lincoln holder; we paid Mr. Hahn in three different payments, of $1,000.00, $5,500.00 and $183.27, making a total of $6,683.27, that was all just for the tank work and nothing else on the East Lincoln holder. We were forced by the city to buy that type of a holder, of course, the city didn't draw the plans and specifications but they did specify that we must build a holder with a brick tank in the ground. That was done by the city council and they wouldn't grant the permit only under the condition that we put the tank in the ground, and it didn't make any hit with us either because it cost us a good many thousand more than we wanted to put into that holder.

I was asked to look up our bank balances and tell what our average balances have been in all of our banks, including Doherty
802 & Co., for the period commencing with January 1st up to the present time I have compiled that commencing with January 1st, 1912, up to June 1st of this year, and the total average deposit at the end of each month amounted to $83,930.00 for the period of time specified. I can give the monthly balances in detail during that time in each bank, and I will submit the tabulation showing how I arrived at the average.

We are still looking for the contract covering the East Lincoln holder and in looking for that I discovered the contract for the 7′ 6″ water gas set, dated May 24, 1912, that is the last water gas set installed.

I produce the following exhibits tabulation showing bank balances exhibit "109"; contract for 7′ 6″ water gas outfit exhibit "110"; contract for masonery tank for East Lincoln holder exh-bit "111"; contract for excavation East Lincoln holder exhibit "112"; and specifications for masonery tank East Lincoln holder attached to exhibit "111" being exhibit "111-a."

Cross-examination continued by Mr. Alton D. Adams:

Concerning exhibit "112" whether or not this form of contract was ever actually executed between Mr. Malone and the company, would say that contract does not purport to be an executed contract, it purports to show the price Mr. Malone agreed to excavate that material for and it was the contract under which the work was done. I am aware of the fact that this contract, exhibit "112" doesn't bear the signature of the Lincoln Gas & Electric Company but it was the proposition made by Mr. Malone and signed by him, our signature is not attached to the contract. Concerning whether this proposition was ever in fact accepted by the company, I don't know that we signed a contract which might have been a copy of that one, and gave it to Mr. Malone or not, but that was the
803 proposal under which the work was done.

If we have purchased any meter connections during the past year they have been purchased from Chas. H. Dickey & Co. or the Western Supply Co., or some house that would handle that sort of connections. I don't remember whether it has been our practice to buy a number of meter connections or not. I think it has been our practice during the past year to make up a large number of meter connections. Whether I could produce the bills from either of these concerns for a set of five light meter connections, would say our purchasing agent would be more competent to give that, Mr. Mallatte can answer than better than I can. If we have such a bill, or purchased any five light meters I will certainly produce the bill.

Concerning this exhibit "88" on the first page the quantities there are dollars. Concerning whether the second and third pages of exhibit "88" show the pounds of steam for which the dollars shown on the first page were paid so that the pounds of steam and dollars in the respective months correspond, would say, I don't know whether I can answer than correctly or not, I didn't *not* make up the compilation,—the second sheet in the first column shows the number of pounds of steam evaporated in the electircal department for 1912 and the second column the cost per thousand pounds of water. The third column the gas made in 1912, and the fourth column the pounds of water on the same basis as coal, and that basis has been explained, and the last column the actual number of pounds of water; these pounds of water are those used by the electric department and actually sold in steam to the gas department, the next column shows the number of pounds of coal used in the electrical department and the pounds of coal charged to the gas department and the percentage of electrical coal charged to gas.

What you were trying to discover, as we understand it, was how we arrived at our steam charge in our gas department and
804 that we have submitted, and we have shown in this exhibit the cost of the steam generated in the electric department, we have also shown in the same exhibit the amount of steam that would have been charged to the gas department, using the same basis of computing the steam as we used in determining the coal. Exhibit "88" does show the number of pounds of steam we claim our gas department got from our electric department during the year 1912, it is the column headed "Pounds of water evaporated actual during the year 1912" on the second sheet there. Concerning the price per hundred pounds of steam charged by the electric to the gas department, would say we find as has already been explained, by using the method of charging the steam to the gas works,—this compilation will simply show and give a comparison between what the charge would have been if we had multiplied the total pounds of steam, shown in the column I referred to a moment ago, by the cost per thousand generated in the electric department. Referring to exhibit "88" the column on sheet 2 headed "Water actual" for January, 1912, it appears there he has entered 2,250,000 pounds. The money charged the gas department in exhibit "88" for that 2,250,000 pounds water or steam appears in sheet one in the amount of $860.00. The same item for February was $900.00, and if you will wait just a moment I will tell you just what the cost of that water would have been at the cost of generation in the steam plant which is shown in this exhibit. Now that $860.00 in January has been computed on the basis of 20 pounds of coal per thousand feet of gas and using our cost per pound for coal. Now you ask us to get up this tabulation showing the pounds of water evaporated in the electrical department and the cost of it, and then an estimate of how much steam was used in the gas department and the tabulation shows that now: If I take the pounds of water used in the gas department and multiply it by the cost of evaporating that water in the electric department
805 I would get a comparison between that and our method of charging; if I multiplied 2,250,000 pounds of water or steam by .3829 the cost of evaporating that water in the electric department, we get by the slide rule computation a little over $860.00 and we charge $860.00.

Now taking the next month and using the same column of comparison and multiplying 2,260,000 pounds of water or steam by the cost of evaporating it per pound, which was .3988 we get an amount equal to about $900.00 by the slide rule calculation and we charged them $900.00. The figures I have just given as the cost per pound for generating the steam in the electric department,—it isn't the cost per pound, I should have said per 1,000 pounds. We get at our cost of steam generation approximately from the cost of the coal.

I do not know from recollection when each of the 6′ 6″ water gas set were used to make gas, we compile our station logs and they would show that, that would not be a serious burden to look up and fix the date and I would be glad to do it. It will also state the num-

ber of days that the machine was in use and the amount of gas made. That is in the last month of use, or fraction of a month of use of each of these 6′ 6″ machines, the number of days in use and the gas actually made with it.

The city has all of the tabulation showing the interest paid by the company on construction accounts beginning with 1903 and ending with 1912; I testify that so far as the reports of this company are in, that they are in such form and detail that the interest paid on such construction accounts can be segragated from these reports from other interest paid by going over all of our records, we can get it from our operating reports and you have had access to it all. I am certainly willing to make that compilation. I am also willing to compile all the casualty insurance we have paid
806 during the same period on construction accounts year by year, that is from 1903 to 1912 inclusive.

The company is making all water gas now. It has not made any coal gas during the past six months.

The cost of our coke f. o. b. Lincoln is $7.45 per ton of 2,000 pounds. Mr. Montgomery told me yesterday that our oil is costing $4.635 f. o. b. Lincoln by the car load. We haven't any quotations later than about the first of the year on what we could get gas coal here in Lincoln f. o. b. From my hazy recollection of the price quoted we could have gotten that gas coal for $5.65 or $5.70 f. o. b. Lincoln. It would be a comparatively easy matter to look that up in connection with Youghiougheny coal. I have no tabulation before me showing what it cost to make coal gas, therefore, can not state which is the cheaper at the plant coal or water gas or a combination of the two. I am not so experienced gas operator, and neither are you as to be able to tell right off hand how much it is going to cost to make coal gas. You wouldn't state and neither would I, what the cost would be; I am not going to make any such statement until I have some facts and figures to bear me out. I haven't figured it out what it would cost to make either pure coal gas or pure enriched water gas, I haven't been here for some little time and don't know what it cost us last month and haven't the figures to make a comparison from. I approve the management of the company in making water gas at this time, on the basis that we have found that in the last few years that we could make water gas cheaper than coal gas, we have discovered that first when we were able to buy oil at 2.7 cents per gallon delivered f. o. b. Lincoln. I have just stated what we have discovered, that we could may water gas cheaper than coal gas when the price of gas oil went down, the price stayed down two years and then commenced to rise; we are now buying our oil net on contract with the specifications that we are able to get the benefit of gas oil if the price of crued oil went down; we
807 haven't been able to discover what the price of gas oil is going to be but we don't feel that a sudden change should be made from water gas to coal gas, we are watching the situation and if it should turn out that our price of water gas is going to be so extravagant that the price of water gas is going to be materially increased we shall have to change over to coal gas. I said it was cheaper to

make water gas when the oil was 2.7 cents. The price of gas oil now is 4.63 cents per gallon. I don't remember what the price of coke was at the time the oil was 2.7 cents a gallon exactly, it was about $6.95¢ laid down in Lincoln and is now $7.45. Concerning how much this rise in the price of oil from 2.7 cents to 4.63 cents has added to the cost of making 1,000 feet of enriched water gas, on the basis of 30 gallons per 1,000, that is somewhere near it, we would have an advance in the cost per thousand on oil alone of 6.4 cents. In my opinion the rise in the price of oil would not necessarily increase any of the other expenses of making water gas, except the oil expense,—just the mere rise in the price of oil doesn't increase any expense outside of the cost of the oil for enriching purposes. Concerning how much higher the price of oil would have to go above the figure quoted before I would think it advisable for the company to make coal gas, I would say that would have to be determined by a course of analysis of a good many conditions that I couldn't analyize off hand and don't care to. I know the price at which the Denver coke sells here in Lincoln, we can buy Denver coke ourselves for $6.00 I believe; I think we have been quoted that price, but I don't know that we could get it at that price now, that is on cars, here. It retails to the consumer here in Lincoln at about $8.00 or $8.50 in small quantities; they are not selling a great deal of coke in Lincoln that comes from Denver. There is comparitively no market for coke in Lincoln today. I have no idea, apart from our own consumption of coke, what the annual consumption of coke in
808 tons in Lincoln is, only on a comparitive basis, I make up my opinion on that from the number of wagons I see on the street and a knowledge of the efforts to sell fuel here in town. I have made no investigation, to arrive at any different figures as to the quantity of coke consumed here, but I know something about what the Denver company has sold to the local dealers here in Lincoln, but I don't know where that coke went to. I don't believe they sell here in town a car a month for local use; I have testified that I didn't know the total sales here in town. Whether I have a preference for the Milwaukee coke to the Denver coke we are buying for use, I have no preference for this Milwaukee coke,—or our decision to the Milwaukee coke in preference to the Denver coke was arrived at by careful tests made in our machines, not only once but several times, and we discovered the amount required when using the Denver coke per thousand and the amount of gas we could make in a given time with a given amount of coke our results proved to us that it was cheaper for us to use the Milwaukee long hour coke at a price considerably, in excess of that asked for the Denver coke because of the more economical results obtained. We have not the results of those tests, we threw those all away, but we can get the evidence from our foreman, the man that operated the machine, and Mr. Montgomery, and you can get it from me if you like as to what those results were. Concerning the consumption of those two varieties, the Denver coke and the Milwaukee coke as we found it per 1,000 gas feet made and water gas generated, in the use of the Denver coke it required in the neighborhood of 50 pounds or more per 1,000 cubic feet of gas made

and we also discovered that in the use of that coke we couldn't make as much gas per hour on the machine; we also discovered that we had to take up more time during the day for clinkering on account of the large amount of ash clinkers found in the Denver coke,
809 and although we couldn't discover what the difference was in purification there was some difference, I think there is more sulphur in the Denver coke although that is fairly free from sulphur, but we had no trouble whatever with the long hour coke from Naphthaline or other impurities. It required between 30 and 33 pounds of the Milwaukee coke per thousand cubic feet of gas as shown on our reports. I claim absolutely that fully 50% more in weight of the Denver coke is required to produce 1,000 cubic feet of gas than with the Milwaukee coke. In our practice here of making water gas we have never used anthracite coal in our machines. We have used other coke aside from the Denver and Milwaukee coke, we haven't used coke from other plants but we have made coke here different from anything I testified to and have produced coke that is similar to what you get from Youghiougneny and Kennewan coal. Concerning the coke we produce here in our own benches and the weight of that coke required in our gas generators to make 1,000 cubic feet of water gas would say I don't remember the weight or number of pounds it took per thousand, but I do remember our experience very well; we made here at one time a portion of our coal gas from Kansas coals, and the coke that we got from the Kansas coals was of a very inferior quality and was full of sulphur, so full of sulphur that we couldn't make gas we could turn through our purifying boxes or apparatus in shape to permit them to use it; the coke also absolutely ruined the lining in our water gas generator and also the furnaces in the coal gas benches. The Kansas coal is an entirely different kind from the Youghiougneny or Kennewan coal; it is very much higher in sulphur. When we were making coal gas from Youghiougneny coal we were using in the neighborhood of 40 pounds of coke per thousand and when we used the Kennewan coal it took more coke per 1,000, just how much more I don't know. It will be about a week before I can have these compilations about interest and insurance.

810 Mr. B. C. ADAMS resumed the stand for further cross-examination.

Cross-examination by Mr. Foster:

Referring to exhibit "88" to the item of water $137.89 shown under January it represents expense for water, for the purpose,—I want to get a classification and then I can tell you,—now exhibit "88" shows for the month of January for instance, in account #1100 $350.00, and that is only a portion of the expense as shown for that account. Account #1100 is charged with the proper proportion of the cost of steam as shown by our special account #1809; special account #1809 takes care of, among other things, water which is used for boiler feeding or condensing purposes. Now all of the items in account #1809 are closed monthly into the steam accounts

#1014, 1100, 1110, 1201 and 1210; we show in that exhibit $410.00 in the month of January charged into account #1116, and that comes from special expense account #1815 into which is charged among other things water for general purposes.

Now the item of $137.89 for water covers the water that was used in the big station meter at the works, we have to keep the level constant in that meter and that means that we have to have an overflow and keep the water going through, that is down for the purpose of keeping the meter running accurately, I mean the gas meter, and I might say th-t the purpose of putting water into that building is to take care of that meter but it is being used for other purposes there, shower baths in the basement, and incidental use of water that might be made or used and cast off from that particular meter is charged in this account. There is more than one water meter in the com-
811 pany's plant, but this meter that takes care of this charge of $137.89 is in the purifying house. We have three water meters in the electric and three in the gas department. This amount of $137.89 represents the water used to maintain the level in our gas meter and for general use around the purifying house, which does not include the condensing apparatus, that water don't go through the condenser. Concerning whether my explanation given a moment ago that this is being used for condenser purposes and boiler feed is correct, I would say I showed there the items that would go into accounts #1100 and 1110, but the water that is mentioned here in the amount of $137.89 went into account #1116 and came from special expense account #1815. The purpose of showing the water on exhibit "88" as a part of the steam expense is because you will notcie from the report that we carry a steam account on page 20, #1809 and the accounts shown there are carried into the expense accounts shown on page 11 #1100, 1110 and 1116, and the question has been asked me in such a manner that I have to go back to the general accounts and follow it down and show the analysis of the money that went into the three items I just read off on page 11. Concerning why there is any item of water appearing in this exhibit when it is for other expenses, would say it is because our classification of costs call for that sort of division, we could call the expense account for steam, coal, light or anything else we want to, it is simply an arbitrary division. Whether the steam expense is supposed to include anything that is not used for steam, the account we call steam there in that exhibit "88" in the amount of $860.00 is nothing but steam but that was ch-rged in accounts #1100, 1110 and 1116, and other items are also charged in those three accounts and included electricity and water. You see our account #1116, called works, expense and supplies, includes, from this exhibit, $410.00 for steam, but water also went in there in addition to that as a general expense.

This item of $137.89 for water shown on exhibit "88" went
812 through the meter in the purifying house, and was there for general purposes in the purifying house, that is, incidental. That water was not brought into the plant through any other meter and charged as an operating expense. The water used in the shower baths is used by the laborers in the gas department, there are separate

shower baths for the employees of the other departments, we have a shower bath in the electric plant and steam station. Whether there is any part of the charge for water in any of the meters of the gas plant apportioned between the gas and electric department, there is no apportionment made for that meter, the water is used in the gas department direct and charged to it accordingly; the water used for steam purposes is metered and charged directly to the electric department.

Cross-examination continued by Mr. Morning:

The steam condenser or tower is used in connection with the electric department, we buy a given amount of water to condense our steam with and after we have bought it we try to use it over and over again.

Referring to exhibit "30", our operating report for 1912 item #2300 under the heading "Bituminous gas coal tons, 229.41", that item covered gas coal that we had held over from our coal gas operation which ceased in 1909, I believe it was sometime in the summer. We disposed of that coal to the employees and burned some in the electric plant. Whether there was a shortage in our inventory in coal when we ceased coal gas manufacture, I believe after the coal had all been used up our books still showed a stock on hand. I don't know how much stock was shown at that time. Mr. Phillips can testify to that, he would have to know about it in advance, but he can find out. Concerning how that shortage was handled on our books or charged off, I know it was taken care of in operation,
813 charged to operating expenses by pro rating the shortage over a period, I don't remember how long that period was, Mr. Phillips will know, he can find all of that information.

Redirect examination by Mr. Strode:

Referring to the fact that the price of oil used in the manufacture of water gas, and coke, had gone up from 2.7 cents to 4.65 since about 1910 the increased price of oil and *cole* of course would be reflected in the increased cost of manufacturing the gas. In addition to the fact that the price of materials have gone up, used in the manufacture of gas, since 1909 and 1910 competition by electric current has been such as to affect the sales of gas for illuminating purposes to a very marked degree, ever since the introduction of the carbon lamp it has introduced competition into the field that we have always had difficulty in overcoming. Concerning changes if any, that have taken place in the situation since the close of 1906, with relation to the use of gas and the use of electric current in this city, would say the introduction and use of the Tungstun lamp which made it possible to use current very cheaply has interferred very seriously with the efforts of the gas companies to retain gas customers using the product for illumination. We find now that new houses are very seldom built equipped with gas piping for illumination. The houses are only piped to take care of stoves and water heaters, and have gas that might be used for industrial purposes only; we have felt for a

good many years back that the time was coming when our gas illumination particularly in the residence section, would all get away from us; we have been borne out in our predictions and today we are adding more electric consumers than in our history in a given length of time, although we are not building any more houses in Lincoln than in other years, and although we are not making any
814 more extensions in Lincoln than we have made in years gone by we find that these electric consumers are dispensing with gas illumination in their homes and substituting electricity.

In the last few years we have sold any number of electric irons where previously we couldn't sell any; we find on one of our electric circuits on Tuesdays we have fifty additional kilowatts that we attribute to the ironing load, meaning that we have something over a hundred customers on that circuit that use electric current for ironing on Tuesday and that condition prevails on other circuits, but we have been able to check it up more carefully on that circuit.

We find that people are using electric toasters, *curling* irons, heating pans, milk warmers and other appliances that we handle that interfere with the sale of gas for heating purposes, before their use gas was the substitute.

Our observation here has been and we have had experience in University Place in the last three years as to what we could do with gas for illumination; we went into that town in 1910 with gas and the inhabitants of that town never thought they were going to be able to get gas into the city, consequently none of the house- were piped for gas with the exception of forty, and after three years' effort we have been unable to get any of those people to use gas for illumination, and all of our effort has been entirely along the line of selling for cooking purposes, but we never will be able to get the people there to consume gas for illumination. Since 1906 we have not only practically but absolutely lost that field of operation, and any company that makes any effort for the purpose of acquiring consumers for gas illumination is throwing their money away. It has been proven out by the company I have been connected with during the last month, we have tried and failed and it can't be done,
815 it is lost for good, the Tungston lamp has really cut us out of that field of operation. Back in 1906 we furnished illumination by gas for the stores. At this time the company does that and probably always will in some stores but that field of operation isn't as much as it was and it is getting more difficult every day to keep what we have and get anything addition- at any price, the tendency in the gross revenue of this company has been towards a decrease. That has been due absolutely to the encroachment and use of the electric current supplanting the use of gas, we haven't lost any customers, we have more customers today than we ever had, but we haven't the revenue and we haven't lost any cooking or big industrial appliances. We have the gas in the same number of houses but it is not used for the same purposes or to the same extent, and never will be under any rate. In my opinion I think it would be possible to increase the sale of gas for industrial purposes providing there was a very, very low rate put into effect. To permit

the company to get large industrial users I believe they would have to sell the gas under 50 cents where over 50,000 cubic feet per month of gas was used; that is because of the economy people obtain by using coal ranges long hours in a day where the range or appliance is used a good part of the twenty-four hours if not the twenty-four hours straight through; it can be demonstrated as to how much that service costs by the use of coal. In order to meet that we would have to furnish gas at a rate under 50 cents, and not only that, we are not only competing with coal but installations as they have at the Lincoln Hotel where they use steam tables and appliances that require the use of steam and in that instance the steam is a by-product. the hotel generates its own current and the steam used in generation is distributed through the hotel for heating and cooking purposes and instead of gas, they use steam at a very low cost and to get into that field I doubt if we could touch it at anything like 50 cents.

816 I know of one installation, not here but in another location, where they were burning wood at approximately $6.00 a cord and they used that wood to heat a melting pot, the melting pot had to be kept at 180 degrees 24 hours a day and we substituted gas for the wood, the wood was costing them $6.00 per cord and it was costing them $60.00 per month, we substituted gas for the wood with economical burners and we found at 50 cents per 1000 the gas cost them just exactly twice what they were paying for the wood twice $65.00, that was an actual test and nothing to interfere with the comparison, it was direct.

Concerning whether any engineering expenses were paid out by the company in the construction of this East Lincoln holder, would say that I was asked that if in different installations we had employed engineering assistants, and to that I answered, we had in a very few instances at a very small expense, but I didn't state in answer to the question that we had competent engineering assistants from our New York office in practically every instant w-ere we set up a new apparatus, but in the instance of the East Lincoln holder the New York office suggested what should be the character of the installation from an engineering standpoint, and that we do the work in a certain way. There was no charge made this company for that service under that heading. If we didn't have the benefit of the engineering services and advice of the New York office, in the proper management of this company whether in many instances we would have to secure such services outside, I would say yes, unless we are able to go to some one with broader experience than we can get here, we would have to employ outside help to do justice to the operation of the company and the stockholders interested in it.

Concerning casualty insurance we were carrying and whether there is any limitation on the risks the casualty company carries for the benefit of the company, there is a limit, if I can get the

817 policy I can read it right from it; the policy we are carrying don't cover public liability, or all the liability we might be subjected to, there is a limited liability as to the amount to be paid upon the result of any one accident.

Referring to the amount of bonds outstanding of the company,

I know how many are outstanding. The bonds outstanding that draw 6% are the first mortgage bonds in the amount of $333,000.00, those bonds were extended in 1911, our books still accrue interest on those bonds and our books show the amount of interest accrued is a miscellaneous income of the company so that cancels the interest charge on those bonds, there is no expense attached other than that we have a second mortgage with an authorized issue of $1,500,000.00 of 5% bonds, of the $1,500,000.00 bonds there are but $796,600.00 out as interest bearing bonds that we pay interest on, and of the $796,600.00 we own $29,600.00 and on which the interest is paid to ourselves, the reason for that is when we sold the $500,000.00 of three year notes we put up certain collateral which consisted of all the first mortgage bonds in the amount of $333,000.00 and $400,000.00 of second mortgage bonds, well, we didn't have available $400,000.00 of second mortgage bonds, so we had to buy in the open market some of our bonds to add as collateral, of the $733,000.00 that are non-interest bearing $333,000.00 are held by a trustee to retire the first mortgage bonds and those we could not touch; so as a matter of fact we have outstanding interest bearing bonds in the amount of $767,000.00 in the hands of outsiders; and we have outstanding $500,000.00 in notes, secured by bonds that were retired, out of the proceeds of the notes, in part and all of those securities I have enumerated cover the entire property of this company, both gas and electric; they should be apportioned according to the value of the property. But so far as the interest charge on any of
818 those bonds is concerned it doesn't enter into the earnings of the company as carried in the operating account, has absolutely nothing to do with the reports submitted by Mr. Lea showing the gross earnings of the company and corrected net earnings of the company, he had no interest in those charges.

I now have before me the casualty policy in the New England Casualty Company of Boston, Mass. and condition one "The company's liability for damages on account of an accident resulting in bodily injuries to, or in the death of, one person is limited to $5,000.00, and, subject to the same limit for each person, the company's total liability for damages on account of any accident resulting to bodily injuries to, or in the death of, more than one person is limited to $10,000.00; and in addition to such limits the company will assume and pay all costs and expenses in the trial and defenses in the suits and legal proceedings against the assured."

Condition two reads:

"This policy does not cover loss or expense for injuries or death: (1) caused to any person whose compensation is not included in the pay roll; (2) caused to or by any child under 14 years of age; (3) caused to or by any person employed by the assurred contrary to law; (4) suffered or caused by any person in connection to the making of addition or repairs to, or alterations in, any building, structure or plant, or any part thereof, but ordinary repairs when made by the employees of the assurred whose compensation is included in the estimate set forth in the schedule are permitted."

That is simply a policy covering our operating pay roll such as we have submitted to the insurance company but it might not cover

all of our pay roll even, and then it is under certain limitations and restrictions and doesn't apply to every accident.

The policy exhibit "134" submitted for examination and use by counsel of the city, but not offered in evidence.

With reference to this steam item in the inventories prepared here, and the reports submitted by Mr. Lea thereon, this, company so far as the property which is being valued here in this case has no boilers or boiler rooms or any of the equipment used to manufacture steam. There is no item of property of that kind entered in the real estate, buildings or equipment, either upon the inventory or on Mr. Lea's report. The company has the benefit in the gas
819 department of the steam furnished at their cost without any investment in any property, or anything added to the cost of that steam for the investment of the electric department in that equipment, there is no such charge; so the gas company gets the best of the situation, because the electric department can generate steam very cheaply, and cheaper than the gas department could if it had to install its own steam generating equipment because of the small amount they use. When I have undertaken to compare the cost of this steam I have taken advantage of the fact that the company is manufacturing steam in the electric department, and on account of the large volume for that department, which goes to the gas department. Have added absolutely nothing to naked cost on account of the investment of the company in the equipment to manufacture steam, or for account of any depreciation in that equipment. Whether that price for steam, as a matter of fact, is unreasonably low and results in a saving to the company as compared to what it would be to the gas department had it installed its own equipment for that purpose and maintained a separate plant, would say it was much cheaper than the gas company operating here could generate steam for gas, their investment, if they had to put in a steam plant would be much greater per unit, the cost for generating would be much greater per unit; I know of one plant where the steam expense is twice what the steam expense of this company is, and the out-put of that company is about the same, that company generates its own steam and has no electric plant. That is the Spokane Company.

Recross-examination by Mr. Morning:

Referring again to this bond matter, we have $333,000.00 of first mortgage bonds as to whether they were really paid and left out-
standing to be used as collateral security, would say, tech-
820 nically they were paid off, but actually they were bought. The way we handled them for all intents and purposes they are non-interest bearing, there are no coupons on the bonds. We really own the bonds and if we desire to do so can cancel them when they are released on the pledge contract.

The authorized issue of second mortgage bonds amounts to $1,500,000.00 but of that issue authorized there is $796,600.00 that bear interest and the others have been issued for collateral purposes and not for sale. We have never derived any money from the sale of them, we still have in the hands of the Trustee $333,000.00

second mortgage bonds that he holds to retire the first mortgage bonds, those are in behind the $500,000.00 of three year notes, and we put the first mortgages themselves behind, and in addition $400,000.00 of second mortgage bonds,—that don't include the $333,000.00 held by the Trustee for the retirement of the first mortgage bonds. The amount that represents the actual sale of bonds now of the second mortgage issue would be $796,600.00, those are still outstanding although we own $29,600.00 of them, of course they have to be considered as outstanding although we own them, however the interest is entered as a miscellaneous earning. We are paying interest on those second mortgage bonds to the extent of $786,600.00 less the interest on $29,660.00; so that leaves outstanding interest bearing bonds for all practical purposes of the second mortgage bonds, $767,000.00; so then if we add to that the $500,000.00 in notes recently issued we would have the total interest bearing accounts in the hands of the public, plus probably some small notes held by the banks. That would be $1,268,000.00 interest bearing obligations in addition to such notes as we have in the banks, amounting to $40,000.00 which are interest bearing securities issued against the entire property of the company; the bonds bearing 5%
821 and the notes 6%; we pay 5% on $767,000.00 and 6% on $500,000.00, and in addition to that we are paying 6% on about $40,000.00 borrowed money in the banks and receiving interest on a certain part of our borrowed money, the part we have with Doherty & Co.; that practically offsets the interest charge on notes outstanding in the banks and gives us credit for nothing, and that is the interest bearing obligations substantially of the corporation, which means the corporation embracing the two departments. To apportion that between the two departments, personally if I were the company I should say it should be determined by the relative values of the two properties, I would not say even approximately, what should be charged to each department, I don't know; I don't like to guess at it, I think it would only be a conclusion of the witness.

In a way I made an inventory of the electric department at one time, I don't now remember what it showed, to compare it to the inventory of the gas department I would have to make my own inventory of the gas department to get a comparison between them, I have never made that. The company has never made an inventory for showing its book value of the properties for making its report to the New York office. Have never made an inventory in our balance sheets of our electric property. The only reason we didn't apportion the bond interest to the two departments is because we didn't know what the relative values were to determine. We were able to apportion it for the purpose of assigning to the gas department what part we think the gas department should bear of the expenses, but based on some other ground than physical value. I don't remember of any instance where we based it on physical value, although I think Mr. Lea did base it on the physical value and on the amount of ground it was supposed to use for the purpose of getting at the amount of property used in the gas department, that was simply a

question of measuring a small amount of property, but we
822 never have done it in making any of our reports. I made out a very crude inventory of the electric department, I wanted to know something of what we had in a general way; that was three or four years ago; only made just for the electric department, I don't know whether I have that in my note book or not; I could say that I remember in that inventory we made no inventory on the part of the distribution system except to guess at it. I wouldn't say that was gotten up with any great accuracy I came as near as I felt the items I used would warrent. Whether I could say what that was, subject to a revision, would say that I haven't those notes in this book, they are in a smalled book that I haven't with me, my recollection is that I had something over $100,000.00, either $100,000.00 or $125,000.00, in the distribution system, and $400,000.00 or $500,000.00 in the plant, I don't know which it was $400,000.00 or $500,000.00, I don't remember, I may be able — find something around here before I get away, If so I will produce it. That would make then as I recollect it, the total valuation of the electrical department of something like $500,000.00 to $525,000.00, between $500,000.00 and $600,000.00 for the physical value without including any going value or anything of that sort, and not taking into account the depreciation, the working capital, that is for the reproduction as if it were new but that was some three years ago.

Concerning the second mortgage bonds we bought $29,600.00 of them on the market for collateral purposes. We paid for them $77.00 per $100.00 or par value, that was at the time those notes were issued two years ago. The bond interest of course, doesn't show in the operating report at all. Concerning whether it would — any bearing on the question of explaining at least why we didn't pay dividends, would say it explains the disposition of our money simply.

823 The plant I referred to as furnishing its own steam at a larger expense than this company was the Spokane Company. They are generating coal gas there. They generate steam to drive the blowers, exhausters and heating purposes, they use some steam, probably in such quantity this plant does in making water gas for the reason they put more gas than we do and under larger pressure. The expense of their steam has been about $1500.00 per month, but they are trying no/ to abandon the steam plant to as large an extent as possible and are now buying electric current in so doing have been able to save about $600.00 per month. The steam is used for running the exhausters, blowers and for the Doherty economizer outfit; that is similar to the one we have down here in connection with our coal gas plant, something to aid in breaking up the clinkers in the furnaces of the coal gas benches. In making a comparison I am comparing the coal gas plant with the water gas plant. Of course this property is using steam in its water gas generation and that one has no such use, but that would be offset by the excess steam they use for driving their pumps and blowers Out there they use coke for fuel to make steam, at $3.30 per ton. They make the coke, their coke comes from their coal gas operation. The way I figure the coke

cost $3.30 a ton, that is the plant price, we receive more than that out there for coke, we will receive nearer $7.00 per ton. With that $3.30, and the expense of hauling is enormous and the loss in stock due to wasting away we don't figure we have been netting much more than $3.30 at the plant.

824 Redirect examination by Mr. Strode:

Concerning the question of rent we were paying in our former location, within a half a block of our present location, our lease expired December 1912 and we gave it up in February 1912. I know we couldn't continue there under the same rental, the landlord told me we would have to pay for the lower floor $275.00 a month which was $150.00 more than we were paying, and our total rental in that location would have amounted to $450.00 and our steam heat and light amounted to more there than here, in this building for instance, our cost of steam heat in 1911 for October to June a period of eight months was $412.24; for the year 1911 that was, we went into the new building in February 1912 and for the period from October 1912 to June 1913 our steam heat cost $216.79 as against $412.24 in the other place but a part of this period that I have read off here was counted off in the old building, but even at that you can see what a saving we made in the steam heat; and there were other savings that we took into consideration in coming over here, we had a much better arrangement, it is easier to handle things out of our store room, etc, it does take the time to get things out and put them back, everything is very convenient.

Recross-examination by Mr. Morning:

Concerning whether we manage to lose as much on our appliance business over there as here, we managed to increase our appliance sales here. (Querry and therefore increased the loss. (not answered.)

825 Mr. B. C. ADAMS, recalled for further cross examination.

Cross-examination by Mr. Morning:

Concerning exhibit "150" on the question of fire insurance on our property and whether we carry any fire insurance on our buildings. would say, we don't carry any insurance on our gas buildings, therefore, insurance here is carried here at a rate of .7678 under a general form which is attached to each policy and that form provides for a certain amount of insurance on the electric station plant building and a certain amount on the boilers and pumps in that building and in the boiler house and a certain amount on dynamos and electrical apparatus and in addition to the fire insurance carried under the general form we carry insurance on our office furniture and fixtures. and on our stocks; by stocks I mean such as gas stoves, meters and whatever we might have in our store room and in the plant; we also carry insurance on our barnes and sheds, horses and wagons, harness and feed; we carry in addition to the items I have already men-

tioned cyclone insurance on the 500,000.00 cubic foot holder at the plant and that policy is a five year policy expiring in 1914; then we carry insurance on our electric truck and on the Waverly roadster; and insurance on our building at 33rd and "X", the premium on the policies carried under the general form is divided between the gas and electric departments although we are not carrying any of that on the gas department but are taking 10% of the premium and charging it to gas operation, and we are then taking 80% of the balance of the items appearing on the first page of exhibit "150", we charge 80% of the insurance carried on the bar, sheds, horses, wagons, harnesses and feed, to gas.

All of the premium paid on the cyclone insurance policy is
826 charged to the gas department, and 80% of the premium on the Waverly roadster and all of the insurance covering the building at 33rd & "X"; the premium shown here covers a three year policy, so there is only one third of that, and to the $215.00 which Mr. Phillips testified to this morning, I think should be added 80% of $35.00, if that were added to the $215.00 that addition for insurance distributed according to what the insurance is carried on,—our division has been arbitrary,—but according to the figures on this exhibit we find we are close to it. I remember that Mr. Phillips and I in looking over the way we are handling that found that our percentage of premiums was coming close enough to avoid bookkeeping. As far as the property common to both departments the insurance is apportioned 80% to gas and 20% to electric, some of that is all electric as I have testified, but If we were to make the actual division according to the policies we think we should charge more than we have been charging to the gas department. Where it is all electricity we did not divide it 80% and 20%.

Cross-examination by Mr. Foster:

Concerning the $108,000.00 of bills payable taken up by the proceeds of the sale of the $500,000.00 of notes represented in betterments and extensions and shown in exhibit "151" primarily, or secondarily rather, the $108,000.00 shown on the report to the railway commission referred to the taking up of certain notes and obligations carried by Doherty & Co.; the obligations there incurred represented money that was required by the property in making the extensions and improvements; The construction of this company has been taken care of out of the earnings and money borrowed on short time paper for a great many years, the company hasn't sold any bonds since they sold their second mortgage bonds. Consequently
827 we had to depend upon our own resources and that of our eastern office and the 108,000.00 could be distributed over specific construction items, but I can't say whether $100,000.00 out of the $108,000.00 represented so *am*ny feet of pipe laid in N Street or some other part of the territory, and I can't say that a dollar with the date of 1889 on it was used to carry on that work or that a dollar with a date of 1900 was taken out of our earnings over and above operating expenses, but we can show that there has been construction

that will more than amount to the amount of money represented by the $108,000.00.

Concerning whether the $108,000.00 represents betterments and extensions of the electric department as well as the gas department I could answer that to suit my own convenience, perhaps we have spent so much money in the two departments, I could say the $108,000.00 represented electric and gas improvements, because we have spent more than that amount in either department to cover additions and improvements. I would not say that the $108,000.00 represents all the money borrowed to make extensions and improvements since 1907. It is a difficult question to answer off hand concerning what portion of betterments and extensions were taken care of by borrowed money from 1907 to 1912 inclusive, in the first place it is an unintelligible proposition, the only answer that I can give you that is intelligent is the fact that we have in our construction accounts more money represented than we have borrowed and whatever has been taken out of our earnings over and above the actual amount of operating expenses, and the amount of money we have had to pay for interest charges (interrupted,—whether the $108,000.00 all the borrowed money that has gone into extensions, or money derived from the sale of stock, I didn't testify to that at all. We may have borrowed money that we have paid off. The reports all show
828 that, I can't answer that off hand. If we paid off those debts we got that out of the earnings over and above interest charges and operating expenses. I didn't say that would still be just $108,000.00, to account for it we may have borrowed it from the bank and at the time this report was made we only had $108,000.00 to account for in notes on that basis. Concerning what other borrowed money we have used in that period from 1907 to 1912 would say, as the testimony shows we have issued notes to several construction companies and paid those notes off with perhaps other borrowed money and other sources of money derived from the operation of the property and I can't testify off hand without going through the reports and making a compilation as to what the items might be.

Concerning the net results and getting at how much betterments and extensions are represented by the borrowed money and how much by the earnings, just as many times as you repeat that question I will answer it in the form I have been answering; I can't answer it off hand, my memory is not specific enough to dig out those items, we have undoubtedly used more borrowed money than is represented by the $108,000.00 in this exhibit but if we have, it has either been paid out of the earnings of the property or in some other manner. Concerning whether the $108,000.00 is all that is outstanding now except whatever other accounts payable may be outstanding at this time. would answer in a way yes, but the $108,000.00 don't represent the amount of money we borrowed from banks here in town at the time this report was made, that amounted to $40,000.00 and was not paid off.

829 Cross-examination by Mr. Morning continued:

Concerning exhibit "155" relating to the use of the 6′ 6″ water gas set with the notation run from June 30th 1910 to August 29th 1910 and in parenthesis "flood run alone", we had a flood down there that drowned out all of our machinery, that was the first machine started as I remember and is accounted for as I remember that we didn't think we could get the gas from the new machines into the relief holder and thought we could get it from that machine possibly, on account of the pipes being full of water, that was the flood of 1910, and my recollection concerning why that was run alone is that we were repairing the 7′ 6″ machine before the other set was ready. Then again the notation "run mornings from June 30th 1912 to August 31st 1912, with old 7′ 6″ part of the time every day and part of the time *v*eery other day before starting the new machines", that was the time we were putting in the last machine installed. The Springer set was run on and off during the month of July 1909, I presume I could give the dates by looking up the reports, the first items mentioned concerned the 6′ 6″ water gas set, the reason we had to run it in conjunction with the 6′ 6″ set was to make up the amount of gas required by the city. As far as the piping on the machine is concerned it is connected up for making gas now, the motor for the blower is not on the ground next to the machine but is on the property and stands ready to be used there at any moment, it would probably take an hour to connect it up, it has to be transferred over to this place.

In speaking of floods in these annual reports are several items called flood, 1908 $100.00, 1909 $300.00, 1910 $300.00, 1911 $378.00, that does not mean we had a flood in each of those years, it means that at the time of the flood there were expenses in-
830 curred that were entirely due to the flood itself and rather than charge that amount to the expense of any one month or year we pro rated it over several years, so as to make the account as normal as possible, the flood occurred in 1908 and the total expense was $1078.00. Whether that ground down there where the plant is is subject to overflow, it was at that time we thought it was due to the grading done on the railroad largely in view of the fact that that was the first flood that had occurred down there in a period of forty years, and we haven't been threatoned since because they straightened out Salt Creek channel. I say that is the first flood meaning the first one that was disastrous to us.

Concerning the item in exhibit "155" from June 30th 1910 to August 29, 1910 which says flood would say that I am confused then in the floods there, there was a flood there in 1908 and I have never seen another like it, the 1908 flood stood three feet and six inches on our electric station floor which is the high mark period in forty years, it put our entire property out of commission, it stood as high as the B. & M. Depot and was the first time it had ever gotten over our electric station floor. Concerning whether we had a flood in 1910 because the word is used in connection with the 6′ 6″ machine that is probably due to the fact that we couldn't get coke over the new set or some such a reason.

Concerning the item #1110 in the operating reports headed steam and also an item at #1100 steam for generating water gas would say that was thoroughly set out in the evidence submitted in the early part of last week in detail, the steam in #1100 is used in the generator for the purpose of making C. O. gas, the steam is decomposed as it enters the water gas generator, into hydrogen and oxygen, the oxygen unit-s with the carbon in the coke and makes the C. O. gas of about 300 or 360 B. T. U. per cubic foot, that gas has no
831 illuminating power. Now the steam in item #1110 was used for steam heating of the buildings and perhaps some power purposes and that was explained in the evidence before. In 1907 entered in our account #1110 is steam $880.78, the next year we have $2421.07 and the amount keeps up in that neighborhood practically until 1912 when it doubles and reaches $4889.59 the reason why that item used for power and heating purposes increased between those years is, that in the early years specified we were operating the coal gas plant, that plant was still operated in 1907, up to that period we were operating twelve benches of 6's and from that time on we commenced to cut down the number of coal gas benches operated, at times only operated three benches while the other three were being rebuilt, so the amount of water gas being generated varied. As it varied necessarily the steam expenses and account #1110 also varied, because in making water gas it is necessary to blow air through the generator for the purpose of heating the coke to the point of incandescence and the amount of power required is proportioned to the time the machine is in operation, the blower has either steam or electric power but in any event the expense would go in there even though the electric motor was used, it was steam expense. The blower is used in connection with the water gas generator itself, the bellows fans the fire in the steam generator to get into a state of incandescence and the steam is in there about the same length of time as we blow the air, we alternate the steam goes under a given pressure and you get about the same amount through in a given length of time for the operation then we blow with a fifty horse power steam turbine for about the same length of time that the steam is going under the grate; a 50 horse power engine is small, but small engines require a large amount of steam per horse power, I would say the one we are using require 72 pounds per horse power. I think that is the item that accounts for the difference in the years, as a general
832 proposition the amount of steam required is proportional to the amount of gas generated.

Concerning the increase in cost on this item of steam from $880.70 to $4500.00, there might be several reason, I think we have already shown in our testimony that we have at times varied the method of charging steam, I am sure of it for the earlier years prior to 1907. there was no accurate way of determining the proportion, then again we have changed our blowing equipment at times, the machine installed in 1911 probably is the most economical of the various sized sets, we found we could blow on the new set for the same length of time we were blowing on the old set and making considerable more gas explaining the increase from $3300.00 in round numbers in 1911

up to $4800.00 in 1912 we found in 1911 we could operate our water gas machine at the blast pressure of 22 inches of water and do it very economically but had a very disasterous experience, absolutely wrecked our blower on two different occasions that year, and finally upon the advice of the manufacturers and our own engineers conclude- we had better cut down our blast pressure and are now operating from 16 to 18 inches instead of 22 and our blast is considerably longer but we are not getting as efficient results as in 1911 and 1912. In a greater ratio of power that the various pressures would indicate, that is it would take more power to blast against 22 inches than against 16 or 18 inches, we use more steam for that purpose than we did in 1911 and 1912 because it takes a longer blast and we don't make as much; I don't say that fact would account for all of the difference between $3300.00 and $4800.00, from our experience in operating those machines it would certainly account for a considerable amount of it, and because we raised the price of steam we were paying to the electric department that item certainly would enter into it.

833 Concerning the fact of that being an arbitrary method and what there would be to prevent us from raising the price so high for steam as to upset any rate the city authorities might establish would say if we were so simple minded as to think we could consum-ate a system of bookkeeping designed to deceive the city we would have gone to pieces a long while ago; we don't deny that it is possible, it always has been possible ever since the suit was started to make arbitrary charges, as far as rates are concerned, to the gas department but you will find we never have adopted any such notion, we have tried to make such charges as to give our actual operating expenses in each department, their proper proportion; even if we had a notion that we could cheat the city we had no assurance that certain intervenors would not have come in and tried to reduce our electric rate. The city authorities haven't started in on that yet but we have a competitor; anyhow the steam items in #1100 and #1110 is fixed by ourselves, we charge a department that is involved in this litigation with a price, for steam, that is fixed by ourselves and credit it to the electric department which isn't involved in this litigation. The rule for fixing that price is arbitrary in the manner that we can arrive at it at the same time the engineering facts by which we do arrive at it are the logical conclusion. In determining how much steam was used for so many thousand feet of gas made that was done by introducing in this hearing evidence that was based primarily on the operating of the boilers in the electric plant for the purpose of operating the gas plant and also running motors on certain apparatus in the gas plant and taking the consumption of those motors to determine the amount of power required and by that we could actually determine the amount of steam required.

Going the item #1117 general supervision, we charge this account with the proper proportion of the cost of general supervision as shown by account #1816, and account #1816 says to charge

834 this account with the salaries of the superintend- of works, works foreman and all clerical help on records and accounts

pertaining to the manufacturing department, whether at the general office or the works, works draftsman, premium on surety bonds and all works employees. That is the works foreman and these other items I read pertain to line #1816. I just read what would go into account #1117 in the manner in which it would come from account #1816. The reason for the change in amounts in account #1117 for those various years is largely accounted for by the fact that the general account #1816 is divided according to the amount of coal gas and water gas manufactured, so where we were making all water gas all money charged into account #1816 would come back into #1117 under the water gas account, but if we had been making coal gas that amount would have been apportion- between accounts #1117 and #1021, in the proportion we were making it. if half and half half would go to each or if 20% and 80% it would go in that proportion, so those accounts have changed from year to year. In 1907, 1908 and part of 1909 we were making both coal and water gas, and apportioned that between those accounts; and when in 1910 the element of coal gas was eliminated and we were making only water gas then it all went into the one account.

Take the year 1912 the item of general supervision the increase of salaries and the increase in the number of men both affected the supervision with the increase of out-put.

Concerning what there is about the increase in amount of dollars from 1910 to 1912 in general supervision that requires an increased cost when the out-put is increased, would say you don't put it right. we have been paying in recent years more money to our superintendents than in earlier years, when I first came here I was,—and I boasted of it,—a college graduate and I was paid a very small salary. the men under me at that time were most all just out of college really working at workman's wages rather than amounts paid to
835 men of experience, but as time has gone on getting more money, and we found we had to pay more money in later than in earlier years, men demanded more money and if we want good men we have to pay the price, I think that is an unusually small increase. We actually did increase the salaries of the men involved in this item in 1910, and made an increase in 1911 on the same item and we have increased from paying our superintendent in 1906 $100.00 a month to $200.00 a month. I don't remember what the advance in his salary was from 1910 to 1911 but it has increased from $100.00 per month in 1906 to $200.00 at the present time, and the works foreman and other men have gone with it, such items that enter into this general account that says it should take care of the works foreman, etc. We have absolutely raised all of the salaries in the clerical department since 1906, no one can get clerical help since then at the old salaries.

Concerning line #1000 coal carbonized for the years 1906, 1907, 1908 and part of 1909 which in the respective years, omitting the fraction and giving it in round numbers for 1906 was 7579 tons of coal carbonized; 1907 7098 tons; 1908, 5565 tons, 1909, 1975 tons making the labor cost in 1906 .632 for 1907, .804 assuming those figures to be correct and the reason it cost more to make coal gas in

1907 than in 1906 I would say that the cost at our plant is largely determined as to labor by the method we have to pursue in getting our coal from the stock to the retorts, this account says charge as used from stock account at the rate of cost in shed including the cost per ton of expense as shown by expense account #1800 which account says: "charge with labor, weighing, unloading, piling and trimming coal in shed, or in unload coal from car or boats, including cost of operating hoisting apparatus. Include cost of shovels, etc., used in handling coal and repairs to same, also insurance on coal in store and on coal sheds and apparatus, and material making repairs to coal sheds."

836 The item there that was always big and variable was the labor item in getting the coal on the pile and then off, and you can readily see that where we were unloading from the cars into the shed where the retorts were we have an enormously large expense compared with what it would cost to unload it into stock and take it back into the retort house, sometimes we are able to unload almost continuously from the cars into the retorts and there is no necessity of piling it into the yard and carting it back on account of shipping arrangements. Whether that explains the increase between 1906 and 1907, I don't know what the situation was, I can only tell what the items were and my report here shows it was the difference between $43,033.89 and $42,844.46. In line 1000 for 1906 as the total cost of carbonizing coal I have $43,033.89 or about $1000.00 difference for 500 tons of coal; for the same item for 1907 I have $42,844.46.

Going to line 1010 retort house labor which line includes certain items of labor cost and making a comparison between these years on the same line for 1906 on line 1000 tons coal carbonized 7579 and a fraction, and the labor cost on that in line 1010 retort house labor $4790.97; taking the same item for 1907 7098 tons coal carbonized and the retort house labor $5708.18; and in 1908 tons carbonized 5565 and the cost of retort house labor $5167.00 assuming that to be the correct amount resulting reduced to the cost of retort house labor per ton carbonized is in 1906 .632; 1907 .804; 1908 .928 explaining why the increase for labor during those years would say account #1010 includes the labor of all descriptions from coal in bin or [illegible] in the retort house to coke leaving the retort house and did i[illegible]l these years, and those items would vary it was for us to get it, the only thing I can think of off hand that would give that difference would be the fact that as time went on our retorts became older and we couldn't charge them with as much coal per retort, conse-

837 quently our expenses would go up because we wouldn't be able to reduce the number of men and in order to make a detailed analysis of that I would have to go through the reports. It might have been more difficult to get the coal to the retorts in one of those years than in another. Then there is the question of the amount of coal that would carbonize per man retort, if we have the same plant and the same number of men and can't carbonized the same number of tons in 24 hours our expense would go up per ton. Then we have also in account #1000 the cost of the coal itself and I think too, if we were to go back we would discover that we bought other coal than

Youhougneny, I think we bought a lot of Virginia coal that didn't give us the yield, that would make a difference on the labor cost per ton, but to get right down to the complete analysis I would have to go to the time cards and get the amount of labor used there, that item of expense has not only been increasing since 1906, but ever since 1900, 1901, 1902 or 1903, if you were to draw a curve showing the general tendency of that item for labor you would find it was upward just as all other items were upward. You have got the whole situation, and when you commence to twist it for the purpose of confusion you are going to get into trouble. You can get the tons of coal by stock adjustment, by stock adjustment I mean, we find that we have charged up so many tons of coal to coal carbonized and when our stock is down so that we can measure it we find we have either more or less stock as shown by our estimates than we should have, we may have clear ground and a lot left, or the other way, and these stock adjustments are made every time we take an inventory, but they wouldn't show them, they show the amount of coal charged to coal carbonized month by month the way we get it in, as our men take the coal from the cars to the retorts, and again the coal that is given on the bill and the coal that is in, and the coal that is left to determine then the amount of stock left from a measurement
838 of the pile. We don't check back against the coal we bought and the coal that went to the retort and the coal we have on hand except at the end of the year, then we have to make an auditor's adjustment to take care of the stock one way or the other. That adjustment shows in these reports certainly, concerning whether they are correct, would say, when you take into account stock adjustment, but you start in with 1906 and say here is so many tons of coal for that year and you should have made a stock adjustment which we have carried out on the next year, these reports show the adjustment but they are all a year behind; when they take a ton of coal into the retort house they don't measure that ton of coal and take it in, they unload it on the ground and take it as they need it, and don't know how much they have used until they have taken an inventory of what they have left.

Now coming to the heading "distribution expenses", and especially to line #1306 gratuitous work which in 1908 is charged at $1376.36; item #1306 takes care of the labor and material required for general complaints in clearing out, changing or adjusting house pipes, gas fixtures, burners or any portion of the consumer's property beyond the meter; investigating the reports of poor service, or large bills, including taking pressure on complaints; labor placing clock meters and changing meters for request tests, and including inspecting and testing new piping, including car fares for inspectors on such work.

Now in 1908 that item was $1376.36, in 1909 it was $2297.17 in 1910 it was $2658.62; in 1911 it was $2904.17 and in 1912 it was $3274.13 that item seems to have increased; now taking a concrete case supposing a meter is complained of and there is a leak about the meter at a consumer's home, we send out some service man, it might be any one in the service department, he is on the regular pay roll but almost always has other duties to preform than would be included

in this item of gratuitous work, it might be only an incident
839 to his main work and it might be all of his duties, assuming that he would go and be gone an hour and comes back to his regular duties, to handle that hour and get it into this account he would charge it on his time card, each man is responsible for turning in his time card and he tells on his card what he has been doing during each hour, sometimes it goes further than that, each fifteen minutes. We have a time card showing on the top what department a man is working in, after it is filled out it shows the kind of work the hours, the rate, and we put in the account number, (producing a blank) suppose I were in that particular department, to illustrate, and were sent out to fix a meter that would probably be a service complaint and I would fill out this blank and probably put that in, and my rate per hour, that is made out and goes to the gas foreman and then to the pay roll clerk who would put in the account number, the man puts in what he did and the time and the foreman signs it and turns it in, he has one for each man and the distribution is made to the different accounts from these cards. This gratuitous work then is the work practically in taking care of customers and is determined largely by the number of customers we have; they have been increasing right along if you will go back ten years you will find that our cost per thousand is fairly uniform, that is all shown in Mr. Lea's report. We figured those units on the 1000 foot basis. I might say there, as a part explanation for the increase in 1911 and 1912 over 1910, that we have had some fairly severe winters in recent years and the winter of 1911 we probably had more complaints than in a good many years, on account of complaints originating from freeze up of some kind.

Concerning the item in line #1114 in the 1911 report, which is general apparatus repairs, expenditures for that year amounting to $5,000.46 which seemed to be in excess to the years previous and following I can't say off hand but there is an abnormal charge
840 there for something, I can get that from the books.

Now going to the general expenses in line #1509, that is made up of executive salaries, general clerical expenses, general office expenses, incidental expenses, rent of executive offices, legal expenses, new business expenses and taxes. In line #1500 are included salaries of the president, vice president, secretary, treasurer, auditor, general manager, and all other officers whose jurisdiction extends over the entire business, including fees or salaries, also fees of transfer agents, registrars of stock and bonds, and fiscal agents. I have the reports here for 1906 and 1907, the general executive salaries for the years 1906 to 1912 inclusive in line #1500 were: 1906, $2804.70; 1907, $3215.52; 1908, $5001.41; 1909 $6113.06; 1910 $9806.31; 1911 $9454.17; 1912 $8917.30.

I don't believe I could tell off hand the salaries of all the different officials, giving their respective salaries in 1912, that are entered in that account; I think I testified at one time as to the salaries of the various officiers, I remember some of them. As to what occasioned the increase from 1906 from $2804.70 up as high as $9454.17 in 1911 would say, in 1906, or about that time, the general manager

was getting $100.00 a month, at that time it wasn't possible for the company to get enough money to meet its pay roll. At that time the president was getting the same has he is now $250.00 a month I think. The chairman of the board of directors didn't get a salary at that time, he was also president of the company, in 1906, and the salary of $3000.00 per year covered both of those positions. I think in 1909 or 1910 we found it necessary to make another office and added $2500.00 for that expense, it was three or four years nearly after this dollar gas litigation started, in 1907 it was $2804.70 gradually increasing until 1911 when it reached $9454.17 and then drops back in 1912 to $8917.30 that was because they did
841 away with the salary of the vice president, up to that time Frank Frueauff the vice president got the salary a part of the time, of $250.00 a month; that is the Frueauff who testified here who is now the president; he was promoted from vice president to president and took his salary with him and then they made me vice president for nothing. Back in 1906 we were paying the secretary $90.00 a month, now we pay him $150.00, and as I said they paid the manager somewhere around $100.00 and then in 1912 they paid him $300.00 a month, all in the face of this confiscatory rate and with a disposition on the part of those working for those salaries to quit.

Explaining the general clerical salaries at line #1501 included in that are salaries and wages of all clerks connected with the general office, except such as may be directly engaged in appliance and other special departments, salaries of clerks connected with manufacturing, distribution or collection department offices to be charged to those departments all clerks connected with the general office. In that was entered for 1906 $493.62; 1907 $394.80; in 1908 $513.00 in 1909 $748.00 in 1910 $804.40; in 1911 $1066.85; 1912 $1209.05, those salaries are apportioned between the two departments, as also are the executive salaries at line #1500, on the basis of 80% to gas and 20% to electric.

Going to line #1504, rent of executive offices, that includes rent paid for executive offices, including proper proportion of expense, for light, heat and janitor services, we call that part of the office down stairs in this building, general executive offices to which we apportioned the rent. We try to arrive at it apportioned to the floor space occupied. We apply eleven divisions to our total rent; the items in each division for 1912 as an illustration as shown by line #1504 is explained as follows; the amount in each division and the corrected total rent was $559.54 for July 1912 up as follows:
842 1304B $50.36; 1403 $55.95; 1504 $111.91; 3215 $27.98; 3227 $27.98; 3931H $27.98; 3264H $11.19; 3293A $5.59; 1804B $50.36; 1819D $111.91; 1819H $55.95; 1820H $22.38, giving a total of $559.54 the rent for July 1912. The items for July 1912 in the amount of $559.54 is made up as follows: John Bernstein, window cleaning $8.00; Lincoln Water Works Department $11.62; Anna Tuttle, rent of shop $40.00; John Bernstein window cleaning $8.00; Chapin Bros. $450.00; Ben Holman rent Havelock office $6.50; Lincoln Gas & Electric contingent $1.00; pay roll janitor $52.42, there are some small items that are not strictly rent

but contingent upon our having to be in the same office and there is a credit to that of $20.00; there is no item there intended to cover payment of rent to the New York office.

Turning to line #1503, incidental expenses, that item covers the cost of publishing annual reports in newspapers, advertising notices of stockholders meetings, dividend notices and other corporation and financial notices of a general chara-ter; traveling expenses of general officers and others connected with the general office, association dues and expenses attending meetings, newspapers and periodicals, and contingent expenses of management, not otherwise provided for. Items advertising the promotion of gas are not included in that item, it is not of that character. That item includes semi-official or official notices. Tracing that account #1503 from 1906 to 1912 inclusive we have the following; 1906 $2137.77; 1907 $1723.38; 1908 $2679.81; 1909 $3715.44; 1910 $2878.32; 1911 $5162.84; 1912 $4775.01. Explaining the increase of that item since 1906 the Accounts Payable Journal shows each and every item that went into those years under that account, I can read that but I can't remember it off hand. In a general way the growth of the business, largely has caused that increase. I remember one item in there in 1911 covering the cost of the compromise we attempted to effect
843 with the city on this very suit. That expense is shown in the journal, I think it was between $1000.00 and $1400.00. We attempted to compromise, we offered to compromise providing 75% of the users would waive their right to any difference that might have accrued between the $1.00 and the $1.20 rate in consideration that we would put $1.00 gas into effect; that was in 1910 but we charged it out in 1911. We sent out solicitors to get the consumers to waive their claims for the difference between the $1.20 and the $1.00 rate in consideration of our putting $1.00 gas into effect if we could get 75% of them to waive. The money spent in that was spent in attempting to get signatures, some advertising, and literature, that was carried in the 1911 account and probably explains why that was the highest year.

Then in 1912 the item is still, that is the sum total of all the items under that heading for 1912 was still $4775.01, explaining that under line number 1503 in the 1912 report the first item under date of January 5th Charity Organization $20.00, the item "W. I. Jones expense account, see Jones's death" that covers the expense of getting the father and mother of a man named Jones to the funeral, Jones was one of our employees who died.

The item under date of January 31st "B. C. Adams expense $40.00 was 80% of the expense money I drew every month, the Gas Company allowed me $50.00 for expenses whether I spent more than that or not, that was in addition to my salary; my salary was on the basis of $3600.00 per year, $600.00 on top of that would make it $4200.00; that covered incidental items of expense that I might be put to not on my own account but of the company, such as lunches and various items, covering entertainment of those who came through here or that I came in contact with. It is a fact that I have been getting $4200.00 per year and have been paying out of that

some expenses the company should stand and for which I was
844 paid $50.00 a month. That practice has been in vogue ever since I became manager, prior to that time the manager was allowed to turn in his expenses and the New York office thought the cheapest way was to put a man on a kind of expense and I thought so myself, if I turned in the expense items it would have run more than that. That has been running on that basis since about 1909; none of our employees are allowed an expense account.

Under date of January 31st the item "contingent $52.65" probably means traveling expenses, and was cash drawn out of the drawer and a receipt put in the cash drawer and a check drawn to cover it; I might go to New York and my receipt would be in the drawer and when I came back we would clear up the drawer by paying the check, it would be a contingent item until that was cleared up.

Under the same date the item "Lincoln Gas & Electric Co. rebates $51.40" means adjustments on accounts, rebates on bills here, complaints, or something; adjustment of somebody's bill.

The item "Lincoln Commercial Club dues, $12.92" represents dues of those in the company who belong to the Commercial Club, the company pays the dues in the Commercial Club of the members of the company; they never got as far as paying for our church subscriptions and lodges; the company pays my membership in the Club; the company pays the Club dues for Mr. Doherty, Mr. Montgomery, myself and Mr. Schuff four of us. The regular dues are $14.00 per year and four times $14.00 would be the sum total of what the company pays for dues just — much as anything would represent a donation, incidentally not to help the Commercial Club line up for the company I think there isn't a member outside of the secretary of the Club that knows a thing about it. You will find several items like the one "Savoy Hotel Cafe $11.32 January 31st" because the heads of departments go there to lunch every Monday
noon they charge the hotel bill to the gas consumers and run
845 it into that account. The item "B. C. Adams February expense" that is the same old friend we had a moment ago.

Under date of February 29th "B. C. Adams's expense managers meetings New York, $280.00" that was spent in going down and back and staying there on the job; that $50.00 didn't reach it, I don't remember how long I stayed there but long enough to sink $280.00 I don't think that was going strong I think I let them off easy by coming back. February "Savoy Hotel $20.92" is one of the items I spoke of where the heads of departments lunch there. None of these men get these executive salaries, just myself. November 30th "Nick Arrigo $2.00 cigars" I think that was occasioned by the legal department of the Municipality, I think that was bought about the time we were having that election. I don't think some one had one on me and I had to set them up. The item "Henry L. Doherty & Co. expense of Winans $18.23" that is the auditor. Under date of March 30th "Lincoln Commercial Club dues $50.68" that is a subscription they got out of us I think, sometime back we had a standing subscription to the Commercial Club in addition to the due- of the members of $200.00 per year, but we quit that, I think we were

asked to subscribe $400.00 and I talked them out of $200.00; I think we carried that two or three years. We haven't any subscription now but they send the bills right along. We stopped payment on that in 1912 and didn't pay anything in 1913. March 30th "Savoy Hotel Cafe $14.90" that is our old friend again the heads of the departments taking lunches at the consumers' expense. "Frank D. Eager April 13th 1912 donation $40.00," that is for these cluster lights down the street operated by the city, I didn't say we wanted it, they wanted $40.00 and everybody else paid it and it was one of those affairs that it is very difficult for a corporation to get out of. I told — I thought we ought to light the lamps we were going to donate but we didn't get any consideration for that. "B. C. Adam's expense to New York April 15, 1912, $48.15," I think I went down there on this gas business, but that wasn't
846 all of the expense; I think that was in connection with the settlement we were trying to effect and I went down to see the New York office about it. "April 30th 1912 Lincoln Gas & Electric Light Co. contingent $58.80" I can't tell what that is without getting some more books or vouchers, I can't explain it off hand. "Nebraska Wesleyan University donation $80.00" under date of May 13th that was a donation to this outfit at University Place where they were trying to get an endowment fund. We were not trying to encourage the gas business out there, an item of that sort is absolutely forced on us, there is no way to get out of these things that I know of and exist. March 31st "Savoy Hotel Cafe $20.04" that is our old friend again. J. D. Schuff is our new business manager. May 29th "Expenses Iowa District Gas Association $229.10, we got the Iowa District Gas Association to come to Lincoln and our share of the expense was $200.00 and we charged it under Mr. Shuff's name, I think the Commercial Club also donated $200.00 to that. Under June 12th 1912 "F. O. Pierson donation $20.00," that was some fraternal or religious order. June 29th "Chapin Bros., palms for office $14.25" they were evidently bought for the office, those properly should have been charged to new business rather than that account. They should go in somewhere as a part of the necessary expense of making gas, they look well against the marble just the same as the door mats against the doors. June 29th "Iowa District Gas Association due $18.00" that means that this company is a member of that association and pays those dues. "Joers Motor Company auto hired $13.25" I don't remember what that was. June 29th "Savoy Hotel $27.96," that is the heads of departments taking lunches. June 29th "Jacob North & Co. banquet songs and tickets $9.35" that item covered the banquet tickets and song sheets for the Iowa District Gas Association. June 29th, "Sanitary Fruit
847 Company, cigars $5.00." I don't remember that item. "Lincoln Gas & Electric Light Co. contingent $10.20," I imagine that is one of the items for which we put a slip in the drawer, it has possibilities of covering other things, yes, all of which can be seen on the voucher and all of which Mr. Adams the City Expert has had access to. "L. J. Dunn, treasurer donation $20.00" that was for the Y. M. C. A. "Savoy Hotel Cafe $9.80," that is for

the meeting once a week for the heads of departments. There is all the way from six to eight people usually, sometimes more than that at the once a week luncheon at the Savoy Hotel. "Lincoln Sanitarium, R. A. Phillips $13.56" Mr. Phillips was taken sick on his way back from Denver and we sent him there at our expense. "Nebraska Prison Association donation $8.00" under date of August 26th. We donated to that association every year. September 20th, Treasurer German Day donation $40.00." On items of that character I always tried to get out on a basis of what others in town donated, if Rudge & Guenzel donated $100.00 I usually thought we ought to get out at about $20.00; or I would get a line on what Miller & Paine donated; they always thought we ought to donate more than anyone if our gross earnings were $450,000.00 as against someone else 1,000,000. These donations have never been voluntary, they have always been forced on us. As to whether it amounts to this, that the men connected with the company and getting substantial salaries would escape making a subscription by unloading it on the company while the ordinary man like the lawyer makes his individual subscription, that is ridiculous as I look upon it, the same as Miller & Paine it comes out of the company funds, it don't come out of Mr. Miller's individual pocket, that will hold true for all of these people, while you lawyers who make your living off of them have to make your own donation out of our own pocket.

848 Mr. B. C. ADAMS, recalled for further cross examination.

Cross-examination by Mr. Foster:

Concerning Exhibit "270" and the items contained on the first page for the year 1907 and contained in the totals under account #1505 in operating expense reports, I would judge they were taken from the Accounts Payable Journal or the expense vouchers and that they have appeared in the summaries of our operating reports. Concerning the item in Exhibit "279," under date January 31, 1907, "employers' Liability—insurance $13.32," I see that it states on this exhibit that it is transfer voucher #318, I suppose the amount of $13.32 was in error charged to some other account and then by transfer voucher put in to this account #1505, I am familiar with the way this account is handled and that is why I am answering as I am. It covers our liability insurance premium for employer's liability; we have shown in court here the policy under which we carry that liability. That don't cover all of our employees. We have included some of all departments, except the executive department, I don't think of anyone in our executive department that would be covered by the liability policy. As to using the words," Executive Department as it appears on the books as an arbitrary classification, I will just say officers, I wasn't covered, neither were the secretary nor the attorney. The second item appearing on that exhibit for the month of January 1907, is "H. F. Rose, January salary $41.67," that was for legal purposes the account says salary I don't know whether there was more than one salary paid to Mr. Rose by this

company, there was not to my knowledge. Where the name of H. F. Rose appears throughout the exhibit with the month
849 and amount of salary I expect that was for services as an attorney for the company, I wasn't manager at that time, and had nothing to do with that department. I think wherever the item "Employers' liability insurance" appears in this exhibit is the same as the first item described.

March 30th 1907 appears the entry "L. G. & E. L. Co. rebate C. O. W. $4.44." I think that was for gas we furnished to Mr. Whedon that we charged off our books and received no pay for it. I don't know the reason it was charged off. The item "C. O. W. rebates" appears a number of times and I presume is the same thing in each instance, I would know what it was for if I saw the item or rebate slip, I judge from this exhibit that you have taken that amount from the rebate slips, I think it would cover the gas furnished Mr. Whedon free. I presume that holds true for all of the items that appear as "C. O. W. rebates" in this exhibit. Under date of April 30th 1907 transfer voucher #357 appeal to Federal Court $20.83 I don't know what that Item represents, but think it had something to do with our appeal in this gas case. It is and was at that time one of the expenses in this case met by our company, and wherever the item "Federal Court appeal" with the amount following appears it is for the same sort of a charge and is one of the expenses of this case.

Under date of May 31st 1907 the item "Transfer voucher 371-c supersedeas bond, $125.00" I don't know what that was. It wasn't for the $150,000.00 bond in this case, we couldn't have gotten it in at that time. It might have been for some other case, we had our occupation tax cases and our franchise case, if it was every month that is what it is, it covers our premium on the bond in the dollar gas case, the premium on the bond takes care of the over charges should the court find there had been any overcharge. Wherever that item "Supersedeas bond $125.00 appears in this exhibit *is* represents the same sort of an expenditure.

850 Under date July 31st 1907, the item "L. G. & E. L. Co. City Occupation Tax Case $5.00" I don't know what that repsents, it had something to do with the occupation tax case, it was an expense in the suit as I understand by the city which we are resisting. Under date of September 21st 1907 the item "William Grant legal expenses voucher #3600 $100.00" I don't know what that was for, probably the manager at that time would; William Grant was the city engineer, I believe at that time; I have an idea that was for some work in connection with the discovering the cost of our gas mains in this city, I don't know whether he was city engineer then or not, I know he did some work in that connection. He was not an attorney to my knowledge; I don't know what he purported to be. I wouldn't say that was in connection with this suit, but with work done in discovering the cost of putting in our mains while this suit was pending; we weren't interested in that especially except for this suit.

Under date of October 8, 1907, the item "M. E. Wheeler, report-

ing and transcribing company v. city $117.40," Myron Wheeler was the reporter that took the evidence in the case the first time it was tried. In this case. I presume that was one of the expenses of this lawsuit, he had some expense but I don't like to testify that I know positively that is a fact when I only have this exhibit before me which I didn't make up. That would be my best impression, subject to revision.

Under date of October 31, 1907, the item "H. L. Doherty & Co. C. A. Freaueff's expense, $30.00," I expect that was in connection with a visit Mr. Freaueff made here. I don't believe Mr. Freaueff was ever a witness in this law suit, that is C. A. Freaueff, he is an attorney. I presume he was here on legal business connected with this lawsuit at that time, that would be my best judgment, and that item, in my best judgment, is connected with this suit.

Under date October 31st 1907 the item "Lincoln Hotel M. E. Malone's expenses $10.00," that represents his expenses here
851 in connection with this case, Mr. Malone was one of the witnesses in the first hearing of this case.

April 30th 1908 item, transfer voucher "530, expense Gardiner & Freaueff, voucher 5507-8 $45.10," I don't know what that is. Gardiner is in the New York office. I don't know whether the other is Frank or Charles Freaueff; I would say from the manner in which they charged our expenses and that appearing under account #1505 that it had something to do perhaps with the legal expenses of this suit, I think that is an item connected with this suit; and wherever the item "expenses of Gardiner & Freaueff, voucher 5507-8, $45.10 appears in this account I think it is the same sort of an item as the other, and connected with his visit as a witness in this case.

June 8th 1908 the item "G. H. Thummel, court cost $10.00" and below it the item $1.00, I don't know what that is, my guess would be perhaps as a witness in the case or something of that sort. I expect those items are court costs in this case.

June 26th 1908, the item "M. E. Wheeler, reporting testimony company v. city before U. S. examiner $152.40," was one of the expenses in connection with this suit.

July 31st 1908, the item "E. C. Strode, July salary, $66.66" that represents the proportion of his salary as attorney for the company that was charged to this account; I don't remember what division was made of the salary of the attorney between gas and electric department, I expect 80% to gas and 20% to electricity, I don't remember. It is in the record here somewhere; and wherever that item appears it is for the same sort of service where the items are the same. Mr. Strode takes the place of Mr. Rose in this account as attorney for the company. Where prior to the month of June 1908 the amount of the salary for the attorney was $44.66 as charged to this account, and subsequent to June 1908 was $66.66, I account for the increase in the amount on the ground that Mr. Strode is a better trader than Mr. Rose. I don't know what Mr. Strode's
852 reasons would be for naming one salary or another. Mr. Rose's salary as attorney for the company prior to the commencement of this lawsuit was probably $1,000.00 per year, I don't

know; I don't know what Mr. Strode's salary is now, while I was here as manager I think it was $3,000.00 per year.

November 7th 1908, the item "H. Honeywell copying briefs company v. city $29.20" is an expense in connection with this suit.

November 30th 1908, transfer voucher #628, distribution, rent and heat $10.00" my recollection is that covered the heating of the room where they held court and the rent, and was one of the expenses in connection with this lawsuit.

December 16 1908, the item "Benton Bros. printing brief, company v. city $38.25, I think that was for this suit; it might have been one of the others, but I think it was this one.

December 31, 1908, item "transfer voucher #642, rent and heat," I think that was for the same purpose as the other rent and heat charge. All these item- enumerated as having been charged during the year 1908 appearing in Exhibit "270" are contained in the totals of account #1505 and shown as a part of our operating expenses in Exhibit "26" if the items have been properly taken from our accounts payable journal and expense vouchers, they are shown in the operating report for that same year, as a part of our expenses reported. The same thing holds true where the same items appear throughout the year 1909, as shown on this Exhibit "270," and are included in the operating expenses shown in Exhibit "27" for the year 1909.

June 30th 1909 the item "Transfer voucher #731-*d* $42.33," and the notation "voucher missing" I do not know what that is for.

July 31st 1909, Item "Transfer voucher #751, vouchers missing from file, $44.60" I do not know what that represents.

853 That item appears through a number of months here but I have no idea whether it is for the same thing, there would be a voucher for each month, but the same amount following each month possibly it might have been some expense incurred in advance and charged off by months; it is likely where the same amount recurs over a period of a number of months that it represents a larger item subdivided and spread over those months, a suspended account to equalize it so that it would appear normal instead of abnormal. I don't know what the item is without looking up the voucher there would have to be an explanation of it somewhere.

I was manager of this company most of the year 1909; I think I was acting manager for the period from February,—possibly March, or April,—I don't remember which these items aggregate the sum of $845.13 I haven't any recollection of that sum of money being spent for any particular purpose and handled in this manner, being in the legal expense account I would think they were probably something in connection with this suit or some one of our suits. I don't know that this money was spent in connection with this suit. The size of an item would indicate that it had something to do with this suit.

July 31st 1909 the item, "transfer voucher #751 appeal bond $75.00" that item occurring eleven times thereafter and amounting to $825.00 I presume it had to do with the premium on our supersedeas bond in this case and wherever that item appears throughout

this account the same answer holds good, and represents the same expense.

November 18, 1909, the item "E. G. Maggi legal services rendered, voucher #7268 $12.00," represents the payment to Mr. Maggis for some services he rendered, I haven't any recollection what that service was but doubt if it was in connection with this case.

854 March 17, 1910, the item "E. C. Strode balance February salary, $133.33" represents legal services rendered by Mr. Strode. Prior to the month of February he received for his services to this company in this account $66.66 which raises the monthly charge on this account just double that of $66.66. I don't know that this is a balance in addition to the $66.66. I expect that is where the raise in salary was dated back and a voucher issued for it. I suppose Mr. Strode demanded more money and that was the reason for raising his salary. I don't know what if anything, it had to do with this suit. I don't think I was present when this arrangement was entered into. I don't think I knew anything about what the reason for the raise was. Since February 1910 Mr. Strode's salary appears to have been $200.00 per month as charged into this account; I expect $50.00 was charged to the electric department for the same period; so that from that time to date the gas department has been paying 80% of the legal expenses and the electric department 20%. The division was made that way because it appeared to us that it was the correct percentage of the expenses in the two departments. I don't believe the fact that this litigation was in the gas department and not in the electric was ever considered in making the distribution of the expenses, I don't think it was considered in raising Mr. Strode's salary, I hadn't anything to do with that if I remember. April 30th 1910 the item "C. A. Freaueff April salary $40.00" was paid him for legal services; in conjunction with Mr. Strode he has examined, I just, — pretty nearly all the contracts, the large contracts that had to do with the operation of the company, he has drawn a good many of the papers too; that is a regular salary drawn by Mr. Freaueff and wherever that item appears in this account it represents the same thing.

855 June 27th 1910 the item "E. C. Strode, telegrams to Armstrong, Doherty and Freaueff $5.70" that item appearing in this account would indicate that it had something to do with our legal affairs. As to what legal affairs that we would have that would require telegrams to those people other than this lawsuit would say the occupation tax case and the franchise case, Oh, we have had other matters of various characters and with the purchase of other companies, such as the Havelock,—getting a franchise in Havelock and University Place for gas. The reason for charging such an expense into this account is that in one of our legal expenses, I don't say that we did I say we have had expenses of that character; as to why we charged this item into this account I don't know. Whether, when there is anything in connection with the occupation taxes and the franchises and is taken up with the New York office is in connection with the settlement of this suit I would say not necessarily, or whether it generally was, I wouldn't say that either.

July 30th 1910 the item "transfer voucher #950 Myron B. Jenkins, expense $10.00" I think that was in connection with some investigation we made in College View in reference to running our service our there; that is my recollection as I remember Jenkins is a man who lives out there; I know I had someone out there to do some work there. Wherever the name M. E. Jenkins appears in this account with expenses incurred it is for the same sort of an item.

June 30th 1910 item "transfer voucher #935, appeal and bond, $219.33," I expect that has to do with the premium we have to pay on the bond in this dollar gas case, and wherever that item appears in this account it is for a similar expenditure.

October 31, 1910, the item "transfer voucher #999, Strode, Denver trip, $26.66" I don't know what that represents, but I think
856 Mr. Strode met Mr. Freaueff in Denver; I don't know what business they were discussing, I imagine it was this case, I wouldn't say; that item occurrs a number of times in this account and was probably distributed. In all the items contained in this exhibit for the year 1910 they are contained in the report of operating expenses under account #1505, as contained in Exhibit "28" already in evidence.

March 31st 1911 the charge "H. L. Doherty & Co., legislation $40.00," I don't know what that item represents, I presume the money was paid to Doherty & Co. It was during the time I was manager.

June 30th 1911 the item "transfer voucher #1190, clerks' cost and printing records dollar gas case, $138.33," that was an expense connected with this suit, and wherever that item appears throughout this account it has reference to this case, and represents the same item.

October 31st 1911 the item "transfer voucher #1323, Freaueff & Robinson, apportionment of expense on $500,000.00 notes ($573.95) $76.53," I don't know what that expense was unless it was some expense attached to the issuance of the $500,000.00 three year notes, incurred by Freaueff & Robinson, attorneys, they are the New York attorneys for this company, those are the notes heretofore referred to in this case, and as to what that expense has got to do with the operation of the gas property in this company in Lincoln, would say, it has got to do with the keeping the thing going; in the way of financing it. I take it this is an expense incurred by Doherty & Co. in floating the $500,000.00 issue of notes; the total of those expenses is $573.95 apportioned here in amounts of $76.53 each over several months.

October 31st 1911 the item, "L. G. & E. L. Co., certified copies appeal dollar gas case to District Court $3.70" that represents an expense connected with this case and wherever that item appears in this account it represents a similar expenditure.

857 December 30, 1911, the item, "L. F. M. Easterday, figuring dollar gas case, $8.00" that is another expense in this case and wherever it appears throughout the account it represents the same expenditure.

December 30th, 1911, the item, "Freaueff & Robinson, Freaueff's

Washington expense account $66.36" that represents the expenses of his trip to Washington in the argument of the dollar gas case; I don't think he participated in the argument in that case but went there to advise with Mr. Rose.

December 30th 1911 the item, "transfer voucher #1380 balance due Freaueff & Robinson on note, expense account, $229.58; and on supersedeas bond $750.00 making a total of $979.58" that is an expense chargeable to this case. All of the items appearing in this exhibit for the year 1911 are reported in Exhibit "29" under account #1505 and are chargeable to this case as a part of our operating expenses.

March 31, 1912, the item "transfer voucher #1432, Stout & Rose account dollar gas case ($3,122.37) and the amount charged under this date $260.20" is an expense chargeable to this case; $3,122.37 was the total amount which was charged off at $260.20 per month until it was all taken care of and that is the item for their services in the dollar gas case in the United States Supreme Court and also to cover their services in the Federal Court and is in addition to any sums paid to Freaueff & Robinson and to E. C. Strode; I think it was their services up to that date and expenses probably.

April 30th 1912 the item, "H. L. Doherty & Co., voucher #12104, missing, $27.96" I don't know what that represents only that it must have been some legal expense, I don't know whether it has any connection with this case. No one in the gas company's office can tell what this item is unless they have something to guide them, I don't think anybodie's recollection would cover an item of that
858 sort even for an item of that size paid out within two years, when you consider the thousands of accounts a man can't remember an item of $27.00; but if it appears a number of times then there must be an explanation on the voucher or on some of our records to show what it is for.

May 31st 1912 the item, "E. C. Strode copy of the application of bond dollar gas case $1.00, E. C. Strode expenses to Omaha dollar gas case $8.10 total $9.10" that $9.10 is chargeable to this case.

June 29th 1912 the item, "transfer voucher #1486, paid to F. D. Blendermen for securing rate in dollar gas bond $100.00" my understanding was that Mr. Blendermen was able to prevail upon the bonding company to reduce our rate on the bond and for that service we paid him $100.00; that was an expense in connection with this case. I think we also paid Freaueff & Robinson for some work they did in securing a rate reduction.

Under the same date and same transfer voucher number appears the item "apportionment premium National Security Company, bond dollar gas $136.36" that was an expense in connection with this suit, and wherever that item appears in this exhibit it represents a similiar expenditure.

Under the same date appears the item, "transfer voucher #1498, telegrams dollar gas case $4.44" that is another item of expense in connection with this case. In regard to the $136.36 that is a subdivision of a larger item.

June 29th 1912 item "transfer voucher #1499 services of Freau-

eff & Robinson dollar gas case $208.33," that represents their services in the dollar gas case; I don't know what the total amount was of which this is an apportionment. Whether that is for the service of Freaueff & Robinson in this case in the Supreme Court of the United States, I don't know; I would have to see the original invoice; they charge us quite a little for the supersedeas bond in connection with this case but I would say that the larger part of their expenses
859 they have charged us in connection with the dollar gas case. I think where the name of Freaueff & Robinson appears in this account with the amount of $208.33 that is a part of some larger item subdivided, and is for services in this case. That is C. A. Freaueff, he is an attorney and a brother to the Freaueff an officer in this company.

All of the items shown in this exhibit for the year 1912 are contained in the charge to operating expenses under account number 1505 as appears in exhibit "30,"—I would only make this exception that would be, in the case of our having some date after the report had gone in and been closed for the year of having accounted incorrectly for some of the items and later charged them into some other account, but I don't imagine that is the case.

These accounts taken off the book, accounts payable journal, are all legit-mate charges to operating expenses, but they might go from that book into operating expenses and then we have an audit and discover that we have mis-charged some items and by transfer voucher take it out and put it in the proper place, but that probably isn't the case with any of these particular items.

Exhibit "271" intitled Rebates & Allowances, the item January 31, 1907 "voucher # 2613 S. H. Burnham, gas and electricity $47.15," that covers gas and electricity furnished Mr. Burnham, he was a director of the company and I think owned a little stock, I don't remember how much, don't know as I would know; at the time of the reorganization, when we took it over the McMillians he had quite a lot of our stock, I don't know when he disposed of it but think when the price went up. That had no effect on the amount of rebates received by Mr. Burnham. Where the name of Mr. Burnham appears in this exhibit as having received rebates it is for gas and electricity, I think it couldn't be for anything else;
860 the only other thing it could be for would be services in the way of consultation with Mr. Burnham or something of that sort. We never got any financial assistance as far as that goes, Mr. Burnham was a director in the Lincoln Traction Company after this thing was started.

January 31, 1907 the item "C. O. Whedon, gas and electricity $13.67" I don't know why that amount was rebated to Mr. Whedon. I don't know how far back that extends. It continued after this date of January 31, 1907 until the time of Mr. Whedon's death. I don't know what the consideration for it was, don't know whether he was a stockholder or not, he was the attorney of the company at one time prior to Mr. Rose's occupancy of the office. As to who authorized me to allow that name to remain on the free list, I don't know that I was ever authorized in just that way. The Board of

Directors never said anything to me about it, neither did the president. I think I talked with the auditor about these rebates and allowances on various occasions, he didn't think very well of it, but didn't discuss the reason why they were allowed to remain. I never had any direction as to the distribution of these items to the various accounts. As to where the company's employees get their authority for distributing these accounts, the old distribution was an arbitrary one, where the authority came from I can't say, I had nothing to do with it at that time; I think when it was changed over I asked that a division be made of 80% and 20% as well as on those other accounts, I asked our secretary to make that division. I don't know as I had any good reason, if I were to do it now I would divide it according to the consumption of gas and electricity. I found that free list in existence when I came and permitted it to remain. Mr. Burnham is a stockholder of this company of necessity at the present time; I don't know the amount of his holdings, I can't find out, our stock register don't always show all the stock held by an individual, he might hold stock in someone else's name with an endorsement on the back. He is a stockholder of record, but how many
861 shares he holds I don't know, I think our records show probably one or two hares. I think I do know a reason for allowing the rebate to Mr. Honeywell at this time, for 1913 and 1914,—no I can't say either, I don't know why he was put on the free list, but probably because he was an officer of the company, I do know about Mr. J. K. Honeywell, he was at one time manager, machinist, meter reader, collector, gas maker and almost everything for the company and I think the company felt that Mr. J. K. Honeywell should have some consideration, Mr. J. K. Honeywell came in at one time and asked me if he should not pay his bills and I told him to let it drag for a while, I did have something to do with that particular person.

I don't think Mr. E. Bignell has any connection with this company, I think I sold every share of stock Mr. Bignell had some year or two ago, in 1910, his name still appears on the rebate list the reason for that I couldn't tell you; I don't know why it was put on, I think Mr. Bignell was a stockholder since the reorganization up until I sold his stock. I am sure he never received any dividends on his stock, we never paid any dividends on any of our stock. I did try to get Mr. Bignell at one time to receive some compensation for services he rendered, I wanted to keep the electric lighting service at the Burlington and particularly the passenger station but I couldn't keep it, the Traction Company got it. We still retained him on the free list.

I don't know anything about the reason for T. H. Pratt receiving rebates and allowances at all. He stopped April 8, 1907, your tabulation shows he began January 8, 1907. I don't know that it extended back a great many years beyond that. I don't know anything about the rebates and allowances he received but the tabulation you hand me here shows that he received rebates back to March 1, 1902. I don't know the reason he was on the free list. I don't

know who would know about that. Mr. Pratt was never
862 connected with this company in any way to my knowledge, he has never been connected with the company since I have been connected with it; to my knowledge he was never a stockholder or an employee of the company. The fact is he was city clerk, and also a member of the City Council at one time, but not a member of the Council during this period of gratuity, he wasn't receiving anything from us as a gratuity at the time he was a member of the Council.

I don't know whether Mr. J. K. Honeywell is a stockholder of this company or whether Mr. Whedon was, yes they were both stockholders at one time.

January 31, 1908, on this exhibit "271" the item, "voucher # 4165 'W. L. D.' $5.89," I don't know anything about that.

January 23, 1909, item "voucher # 5730 'A. B. J.' gas and electricity $65.85" I can't think now what that would be. Mr. Honeywell might know about that. The reason these items should be charged as operating expenses in this rate hearing, they are certainly an expense, as to why they are a necessary cost in the manufacture and distribution in Lincoln would say, that it is a practice hard to discontinue, an ancient custom against which the mind of man runneth not to the contrary, in the case of J. K. Honeywell I think that was justified in every respect; I don't know why the others were incurred in the first place, they may have been compensation, they may have been justifyable operating expenses. Other than the allowances to J. K. Honeywell, I don't know who can tell about them, it is a history that I don't know anything about, possibly the gentlemen themselves would know. These rebates are put in as allowances and rebates and are taken out of our gross earnings, in so far as the division was incorrect, half and half, we have taken the electric bills out of the gas receipts, if they didn't use half gas and half electricity the gross amount of expenses would not be a proper
division as it has been divided, in other words, as to charging
863 the electricity also to the gas department, providing that more than half had been electricity used, if less than half had been electric-*yt* used they haven't charged enough to the gas, you understand these items as allowances and rebates are deducted from the gross revenue, they affect the gross earnings of the company; if the consumers were paying these amounts the cash receipts would be just that much more, it amounts to about $1,000.00 a year. There is one element that occurrs to me; we perhaps haven't charged them for electricity at the same rate as other people, if we put them on a high rate to commence with we never changed that rate, but it made no difference as to whether we did or did not as to that, I don't know whether we made a change in their rate from what we were charging other people or not. It might affect the net results in reducing the gross operating income from gas, if we were making a division based upon the usage of gas it wouldn't, but if we had reduced our electric rate then we haven't charge- as much electricity against the gas as we would at a higher rate, and if we charged a higher rate for electricity we have taken that much more out of the gas revenue.

Cross-examination continued by Mr. Morning:

The division made in our system of accounting of these rebates between the gas and electric departments corresponded to the division made to other general expenses; when we were dividing the general expenses equally, these were divided equally, and when we changed our apportionment we changed correspondingly each division. With those gentlemen who received free gas if they were also electric customers they were also getting free electricity, and they were all customers of both departments, unless it was T. H. Pratt during a portion of the time.

864 Concerning rebates to C. O. Whedon we have also entered into the legal expenses at least during a portion of the time, items as if they were paid to C. O. Whedon which I testified were for free gas, that was my understanding from the exhibit I had here. As to how that was done, that was before my time, my judgment would be that the manager at that time thought that a part of Mr. Whedon's gas ought to be charged as legal expenses and the balance as an allowance and rebate, so that the total amount rebated to Mr. Whedon would be the amount charged to allowances and rebates and legal expenses; I think the sum of the two items would equal the sum total of his two bills, it ought to do that, and when I get my itemized statement I can tell what the facts are. My opinion as to the method of handling these rebate accounts is so far as they represent gas an- electricity to these gentlemen, is *th* at we took the meter readings and charged them the resulting sum on the consumers' ledger; we showed these amounts as accounts receivable from the sale of gas and electricity and then when we showed our allowances and rebates these amounts were also carried with the allowances and rebates as if the money had been paid out by us. To illustrate, taking Mr. Burnham's gas bill during that period, we show on our financial reports a line for gross receipts, what I would call the top line, that includes all we charge up on our consumers' ledger against the customers for gas and electricity used, and as shown by meter readings, that would include these items; and in another line underneath that we show the allowances and rebates, and in that line would be some items we have allowed in our gross income, then by deducting the allowances and rebates we get our net gross income; then from that income we deduct our bad debts, and when that deduction is made we have what we hope our net gross receipts are going to be. In the first line of gross receipts we

865 don't assume that we are going to get the cash, we assume that is what we ought to get from the gas and electricity sold, and then we deduct from that what we know we have rebated. In our gas operating report in line #905 we show a certain amount of gross receipts for each year, and line #905 includes the amounts we charge up against those gentlemen, in the operating report it is true there is reflected in the gross receipts a sum sufficient to include this money that represents their gas bills just as if they had paid the cash; in line #905 the gas bills of those gentlemen are shown in our operating report as if we had collected the cash but in line

#906 we add the meter charge on minimum bills; then in line #907 we show the forfeited discount; then in Line #908 we show the total earnings from gas, that includes the total free gas as well as meter charge on minimum bills and the forfeited discount; from that we deduct the bad debts; then in line #910 we have the gross earnings in the gas department. Line #910 will then show the total sales and forfeited discounts as covered by the items I enumerated in the various lines and the allowances and rebates are deducted later so we have included in that line the sales we would expect from these gentlemen. In other words Mr. Burnham's gas bill during all of that period our gross receipts for each year is included in line #910 of the operating report and we have charged into the expense of operation his, and all of these other gentlemen's, gas bills as if we had paid out the money as an expense. In line #910 there would be a duplication, as against the consumers in this hearing, if we failed to enter in our gross receipts these bills as having been collected and then if the deduction as to operating expenses was made it would double it up,—no I will take back all I said. The gross receipts as shown in line #905 represents the gross receipts after the allowances and rebates have been taken out and not as I before stated; the total gross receipts we might expect from our gross sales is shown in line #1605 on page 16 of the op-
866 erating report, then from that amount is taken the allowances and rebates which includes such items as the gas and electric bills of Mr. Burnham and those other gentlemen, then we get the net amount shown as the sales; then that amount is taken as shown in line #905 and represents the net income we may expect from our sales exclusive of bad debts. We include the free gas bills in the gross receipts as having been collected before we deduct the free gas bills, and don't subsequently deduct them again as operating expenses; we deduct them in arriving at our gross receipts, so there is no duplication. We make these reports monthly.

Our cash account is expected to balance with our ledger account of cash received. Supposing Mr. Burnham's free gas bill was $10.00 the books would not be out of balance in case we didn't get that $10.00 because we have already taken care of that account, the cashier counts the rebate slips as money. These rebates and allowances are charged in the accounts, for instance in this item of C. O. Whedon rebate in line #1505 that is the same item I was asked how it could get into the legal expenses and also into the allowances and rebates; we deduct the rebates and allowances from the gross receipts in line #1606 and on line #1607 we have the gross receipts, and that is what we carry to line #905, and all we deduct from that is the bad debts, what is left is the gross operating income. From that we take the operating expense account. In the case of Mr. C. O. Whedon I think the amount shown here as legal expenses for Whedon in the amount of $4.44 in January 1907 was deducted from Mr. Whedon's total bill for that month and charged to expense and the balance charged to rebates and allowances. I am assuming that these things have all been charged against allowances and rebates, if they haven't they have gone into this incidental account,

referring to account #1503 called incidental account, and
867 these rebates shown in Exhibit "271" should have been charged, and I am assuming they were charged to allowances and rebates, if they appear regularly in the incidental expense account they should not be in the other account, but we have other items besides these. I will look that point up and will answer that question later.

Whether we have any other method, besides the one shown in our account of rebates and allowances for rebating gas and electric bills, in answering that I can straighten out the tangle, I was in this morning, the bills that accrued against Mr. Bignell, Mr. J. K. Honeywell, Mr. Homer Honeywell, Mr. Burnham and Mr. Whedon were carried in our gross revenue and went all the way through and are to be found in line #910 and the charge offs for those items were carried in the operating expenses account and appear in the expenses in the line underneath line #910, they did't appear in the rebates and allowance account #916 of the operating report. The amount deducted from gross revenue earned on line #1606 represents the allowances and rebates for gas, that might be an adjustment of an account, from over-reading of meters or something like that, it is carried in our accounts payable ledger there on a sheet as allowances and rebates but isn't carried as an expense. It is found under the heading of allowances and rebates. I have now outlined two methods by which gas bills have been rebated to consumers or persons, one against expenses and one taken care of through allowances and rebates. There is no other method besides that that I know of,—the only other way would be to connect the service in without a meter and make no account of it at all, I do not know of that being done. I think we have charged off as bad debts the bills of persons by way of rebates. I can't say whether we have done that where money was coming to the person, from the company, whose account
was charged off. In our accounts there appears an account as
868 "W. M. M." it sounds like W. M. Morning; I don't know whether it is W. M. Maupin or not, I will ascertain whether that is correct or not. I testified that the name W. M. N. appears in our account as one who received a rebate and allowance, I don't think that would be W. M. Morning.

Referring to Exhibit "323" being the incidental expense account known as account #1503 the item under date of January 5, 1912, "Charity Organization donation $20.00" that represents a portion of the donation made to the Charity Organization.

The next two items under January 8th 1912, "W. F. Jones expense account C. Jones' death $60.00 and H. H. Hehley expense account C. Jones' death $7.00," and the next item under date of January 9, 1912, "Castle, Roper & Matthews, undertakers, C. Jones' death $227.00" was on account of the death of C. Jones. That was included in this incidental expense account because we didn't know just where to charge that, that account is a sort of a catch all. C. Jones was an employee of the company and in their direct pay.

The item "G. R. Wolfe & Company cigars $9.60" represents cigars, I don't know who they were given to or who smoked them, they are

here given in the gas expense account because it was an expense incurred by the company; the general purpose they serve in the making of gas is, they would help a lot of people make gas.

January 20th, "George Bros. proxies, $11.31" I suppose that is for printing the proxies of the annual election notices to be mailed out.

January 31, "B. C. Adams, January expenses $40.00" that was a portion of the expenses; I received every month, $50.00, for which the company received an intangible source of benefit largely. It is justified on the ground that it was an expense that had to be taken care of.

869 January 31, "transfer voucher #1386 Windsor Trust Company for handling notes (650.00) $16.25," that probably had something to do with the $500,000.00 three year notes. I don't know what the charge made by the Windsor Trust Company for that item was, I don't remember, that information is all in the record, and was all introduced at the time we went over the note history. I don't know from this exhibit what the item is and I can't tell you; the secretary of the company would know, and I expect our record will show, the transfer voucher itself ought to show, if the vouchers don't show any more than that I don't know what it is.

January 20th "Savoy Hotel Cafe services $11.28" that covers the expenses probably the employees, at the Savoy Cafe. I imagine these amounts shown in this account #1503 in relation to the whole amount spent for the item shown there is 80%. I think this would be 80% of the amount paid for this item.

The item "O. B. Clark secretary, dues, $8.00," that is dues in the Business Men's Association. I know what that Association is in this way, the Business Men's Association has a definite purpose, we donated to it for a definite purpose, but I don't know if I just — what to say what their business is for a matter of publication.

The item "Iowa District Gas Association dues, $3.00," is for dues in that association. Our company pays dues for one or more individuals to five or six organizations of this character.

The item "Lincoln Commercial Club dues, $12.92," is the quarterly dues of the company, I think, either the membership of the company or those employed by the company, I think the company as a company holds a membership in the Club. When I was here I had a membership and Mr. Schuff, and at different times we had more than that number for which the company paid the dues.

The item "Lincoln Candy Kitchen candy $2.40" I think that was probably used around the office.

870 The item "Savoy Hotel Cafe, $11.32," is the same expense indicated once before for the heads of departments.

Wherever the item, "B. C. Adams expenses, $40.00," in each one of the monthly accounts, that is the same item testified to before. I am not prepared to state what the item "Windsor Trust Company, note expense, $16.25," represents. I doubt if anyone in the office can tell what that item is for, unless perhaps Ross Phillips could tell.

February 29th the item "transfer voucher #1411 Adams and Strode New York trip ($250.00)" closed with this entry $50.00,

that is for a trip to New York by Mr. Strode and myself, I can't just exactly recall what that trip was for.

In the same month the entry "B. C. Adams expenses managers meeting New York $280.00", I take it that trip was for the purpose of attending a managers meeting of the Doherty properties. I did not make two trips to New York in February, that first entry don't necessarily mean that Mr. Strode & myself were there in February; probably that occurred sometime prior to that and had not been charged off.

The item "Lincoln Gas & Electric Light Company rebates $34.64", represents those men whose names appear in the rebate and allowance exhibit I think.

The item "Lincoln Commercial Club dues $40.00", that represents dues paid to the Commercial Club for membership, I don't know whether the dues are $14.00 a year, I don't know what they are; I expect that $40.00 item is a portion of the subscription of $200.00 we made to the Commercial Club, and wherever that $40.00 item appears in this exhibit it represents the same expenditure. The $200.00 contribution to the Commercial Club represents a subscription they solicited on the ground that the business men were giving certain amounts to the Club and they thought we ought to pay our proportion, it was an expense incurred by the company by reason of its existence here and that is our reason for
871 charging it into operating expenses. That contribution wasn't made for any given period, we were laid down on by the business men to continue our subscription as other business men were continuing theirs and we did it.

The items, "Savoy Hotel Cafe," appearing throughout this exhibit represents the same thing every time; and the same is true for the expense of handling the notes.

March 30th 1912 the item "Nick Arrigo cigars $2.00" I think they were for a director's meeting, I don't know.

"H. L. Doherty & Co., expense Winans $18.23", I expect that is a part of his expenses for auditing. Winans was one of our auditors.

Item "Fremont Tribune, subscription $2.40" that is our subscription to that paper, this company, it might be should not pay for that; may be we were trying to sell tar over in that market for one thing.

March 30th "Lincoln Commercial Club dues $50.68", that is for dues in the Club, I can't tell without seeing the voucher whether that is something else besides our subscription.

Item "Nebraska State Journal subscription $6.00", that is a subscription to the State Journal which all the business men are subscribing for, that is justified as a charge in the operating expenses of making gas by virtue of the fact that the company is doing business here, and we are expected to do things as other people do them; the paper is a necessity, they always have some items of interest in the morning edition we want to see.

April 13, "Frank D. Eager, donation $40.00", that is a donation

to the fund raised for putting in the street lights that the city was to operate, I am sure about that, the total subscribion was $50.00.

In April the item "Financial World subscription $3.20", that was a subscription to a financial paper that had to do with corporations such as ours, it has to do with the manufacture of gas
872 in the same sense as our subscription to the State Journal, we have to do with the things other business men do.

April 30th the item "transfer voucher #1454 expenses G. A. Montgomery to Lincoln $41.20", that represents the cost of delivering Mr. Montgomery from Montgomery, Alabama to Lincoln, Nebraska.

May 13th, the item "Nebraska Wesleyan University donation" represents a part of the subscription to a fund that University was raising and to which a large number of business men in Lincoln subscribed.

The item "Wisconsin Gas Association dues $3.00" that is my dues for the association, which I continued for the reason that they got up one of the best pamphlets on the experiences of their meetings, of any of the gas organizations. That is all gas.

The item "J. E. Schuff expenses Iowa District Gas Association $239.10", that represents the amount of money expended by Mr. Schuff during the visitation of the Iowa District Gas Association here, for the entertainment of the people who came, we were urged very strongly by the Commercial Club to get them to come here, in fact they donated to the expense, that isn't all of it only a portion. I wouldn't say that is all of the expense Mr. Schuff incurred.

Wherever the item appears as expenses of Montgomery to Lincoln in this exhibit it is the same thing I explained a moment ago.

May 31st 1912, item "American C. & C. Co. hats for Iowa District Gas Association $20.75", we bought all the hats worn by the members during the banquet one evening. They did not all lose their hats.

June 12, 1912 item "F. O. Pierson donation $20.00" I don't recollect F. O. Pierson, that was probably some association and the voucher was drawn to F. O. Pierson. It had nothing
873 more in connection with the manufacture of gas than the subscriptions to the various journals.

June 17, "J. G. Bovey, auto hire $4.80, somebody hired an automobile, I can't stay what it was used for or who used it.

June 29th "Chapin Bros. palms for office decorations, $14.25", that was for palms for the office which are located all thro-gh the office from the front all the way back, they are a part of the office equipment.

June 29th "Iowa District Gas Association dues $18.00" that is for dues of the members of the Association, this company evidently had six of its officers and employees in that Association evidently at that time.

In June the item "Joers Motor Company, auto hire $13.20" I don't know what that was for, at that time the company did not maintain any automobiles, they do now for the manager and business manager.

In June the item "National Commercial Gas Association dues $25.00" I think that is the company's membership, we haven't any individual memberships in the National Association.

In June the item "transfer voucher #1500 entertaining Iowa District Gas Association ($150.00) $25.00" that is some more expense attached to the Iowa Gas Association Convention, that expense in this instance was borne directly by the company. That item for $25.00 will appear six times in this exhibit.

June 27th item "Y. M. C. A. donation $20.00", we donated $100.00 when they put up a new building and then donated $25.00 a year in addition to the other donations of that character.

June 29th item "George Bros. badges $2.00", that was probably for badges for our men, I can't say.

June 29th "Jacob North & Co., banquet, soup and tickets $9.35" I don't believe we got the soup; I expect if that were properly set down it would mean that we bought the tickets for the banquet for this Iowa District Gas Association.

874 June 29th "Sanitary Fruit Company cigars $5.00" I don't know where they went.

July 17 "L. J. Dunn, treasurer, donation $20.00", that is a part of the Y. M. C. A. donation and wherever that item appears in this exhibit it is for the same thing.

July 31, "transfer voucher #1524 expense manager meeting at Denver, Adams, Schuff, Mallatt, Montgomery and Phillips, $55.88", that represents a part of the expense at least incident to the gentlemen mentioned having attended the manager's meeting held in Denver last year; the meeting is one that we wanted our men to get all the experience and benefit they could out of. Wherever that item appears in this account it is for the same expense and is a subdivision of the same expense, it is a suspended item.

The next item "Lincoln Rotary Club dues, $9.60 in July 1912", was for dues in that Club, I was a member for the Gas Company for a while and I think Crawford Kennedy was; that item appears from time to time in this account.

August 1912, item "transfer voucher #1553 Denver trip $55.88", that is a subdivision of the same item of expense as the other.

August 27th item "H. L. Doherty & Co. contribution $160.00", that would show on their bill to us from which that voucher was made, I take it Doherty donated that much as a contribution to one of the National Associations and we paid it, the bills sent by Doherty to us would explain it, or the correspondence. Our Board of Directors does not always authorize these expenditures, some they have through their executive committee. I think Mr. Doherty, Mr. Freaueff and myself were that committee, I don't know who is now. I passed on this item of H. L. Doherty & Co. contribution, I would have to see the bill and voucher to tell what it was.

875 August 31st item "Denver Omnibus Co. service $2.40", that was an expense incurred for getting Ross Phillips from the hotel to the station when he was taken sick; it was charged to us and we paid it by check and voucher.

August 1912 item "The Gas Industry $2.00" that is a subscription to a trade journal.

August 1912 item "Joers Motor Co. auto hire, $11.20" that is for the expense of an automobile.

August 1912 "Lincoln Sanitarium R. E. Phillips $13.56" we paid his bill at the Sanitarium when he came back from Denver.

August 1912 item "Nebraska Prison Association, donation $8.00", that is a donation to that association, I think a part of the $10.00 contribution.

Same date "Progressive Age subscription $2.40" that is a subscription to a trade journal. The Progressive Age is a gas journal gotten out monthly.

September 20th, "Treasurer German Day Committee, donation, $40.00", that was a donation or subscription to the German Day Committee, and has the same relation to the manufacture of gas as many other items of that sort, that we pay by virtue of our being here in business; we are practically compelled to donate to things of that character, public movements, supported by business men and individuals.

The item "American Gas Institute, dues, $10.00" I think that is for my dues in the American Gas Institute.

October 28th "City Mission Treasurer, subscription $40.00", That is a subscription to the City Mission located on South Ninth Street, I don't remember the number.

October 31, "H. L. Doherty & Co. traveling expense New York, $80.00", that was probably a part of the expense of the auditor.

Same date "Chapin Bros., flowers, $8.00", that might have been purchased to decorate the office for some purpose or other.

Same date "Harvard University, D. Wyman Public Service
876 Company, $3.46", I don't think that is properly charged; I think that is a book we purchased written by that man on some gas subject.

Same date, "Havelock Commercial Club, subscription $4.00", that subscription was not necessarily towards the promotion of a friendly feeling towards the Gas Company in Havelock, it is a donation usually among the business men towards an organization of that sort; we sometimes go outside of the City of Lincoln to make donations, we helped the gas business in University Place too by virtue thereof and helped the business in Lincoln because of its increased out-put.

November 11, "W. T. Barstow, secretary, donation $80.00", I think that was a donation to the private school of Witten-Carlisle School; that was another popular thing to subscribe to, I think we got a bond or share of stock something of that kind, but whenever we got anything of that sort with a donation we never felt that we should carry that as of any value, we put it in the books as a $1.00 and charge it off to expense.

November 30, Lincoln Gas & Electric Light Company contingent $168.91 that is some contingent items that would be shown by the books and records of the company.

Same date "Sanitary Fruit Store, cigars $2.40." I don't know where they went.

December 31, 1912, "The Gas Record, advertising $2.00" I think that was a subscription to another trade journal.

Same date "The Lincoln Herald, advertising $1.60" I think that covered the publication of our indebtedness, etc., as required by law each year, our annual corporation publication.

Same date "Nebraska Manufacturers' Association, subscription and dues $20.00", that is an association of manufacturing companies; we went into that because of our tar product.

"The National Commercial Gas Association, subscription and dues $12.00", that is the same item that appeared early in this account.

877 "Sanitary Fruit Store cigars $8.00", I don't know where they went. These items I have testified about in 1912 if taken off correctly, are charged in the totals contained in item #1503 in the operating report found in exhibit "30" covering the operating expenses of the company for that year. I heard the testimony of Mr. Thomas that these accounts were taken off the company's Accounts Payable Ledger, if so they would be a part of the operating expenses for that year and appear in our annual and monthly reports.

January 1911 "transfer voucher #1059 Dollar Gas Agreement expense $126.62", that had something to do with the agreement we were trying to accomplish in this Dollar Gas Case, I think that was an expense in connection with the special election to settle this case. This charge of $126.62 is simply one of the charge- made in distributing this expense over a certain period in our account, that wasn't on account of the election, that was on account of the individual settlement we were trying to make with our customers. The election expense was for a different sort of a settlement attempted. That was where we tried to compromise on the basis of rebating the difference between the $1.00 and $1.20 rate back to December 1910, and giving dollar gas from that time on, we made an effort to get 75% of our customers to sign an agreement on that sort of a basis. Dollar gas was to go into effect in December 1910, after about a thirty day effort we got about sixty and some odd per cent.

January 1911 "transfer voucher #1059 traveling expense Armstrong $45.48", I think Mr. Armstrong was in New York to confer with our people in regard to the compromise we proposed, in connection with the settlement of this matter. That settlement I am speaking of now in connection with that expense was the proposition our company was making to the city on account of the dollar gas rate to comply with the ordinance, to begin in December

878 1910 in consideration of the agreement being signed by 75% of the gas consumers waiving this extra 20 cents we had been collecting since this injunction suit commenced, that had accrued from the passage of the ordinance up to December 1910. Had we gotten the 75% of the consumers to sign that agreement we would have put the dollar gas rate into effect December 1st 1910. That expense was incurred largely for clerical work and classifying

our customers so we could get after them, our difficulty was to get at a system to keep accurate records as to what they said, when we were to see them again, etc. Had we gotten that waiver signed by 75% of our consumers, we would have given to them this confiscatory rate on December first 1910 and it would have been there ever since and it would have eliminated the possibility of ever having to pay for the difference between the $1.00 and the $1.20 rates between January 1st 1906 and January 1st 1911. That was during the time when the decision stood against us and we were up against the proposition of a confiscatory rate.

Referring to Exhibit "323" of February 1911 item "transfer voucher #1096, dollar gas agreement expenses $126.62," that is the same item shown in January for that year, and represents the monthly charge off for that account.

Same month "transfer voucher #1098, traveling expenses of Schuff to Chicago Convention $8.00," I don't know how that comes to be only $8.00 it is probably only a portion of the expense and the portion charged to this account. I don't know what convention that would be, it might have been the American Gas Institute, the National Gas Association or the National Electric Light Association.

Same month, "Lincoln Gas & Electric Light Co. rebates amounting to $140.64," I wouldn't know what that was without seeing the slips; they are rebates that show on the Accounts Payable Ledger that are carried into the operating reports and are so shown here.
879 Whether this is the item of rebates for gas and electricity furnished persons free of charge I wouldn't know without seeing those slips; the rebates and allowance in the gas department ordinarily cover just the gas items.

March 1911 "Charity Organization, donation, $20.00," I think that is the annual donation to the Charity Organization charged to this department.

Same month, "transfer voucher # 1111 for $21.33," I wouldn't know what that was without seeing the voucher. If it appears a number of times in this account it represents an expense that was being charged off monthly.

Same month, "transfer voucher #1111 special strike expense $20.35," that was an item of expense we had incident to a strike in the electrical department, I don't know why that item of expense shows here, I would have to have further information on that.

We had a strike in the gas department, I wouldn't say whether in 1911, our stokers all went out at one time, but it doesn't seem to me that was the date. I don't remember of any serious strike except in the electric department, I would have to see the transfer voucher to know why that was put into this account. I presume wherever that item, "Special strike expense $20.35," appears in this account it represents the same expenditure.

May 1911, "C. Kennedy, Cafe, voucher # 1213, Raymer, beer $24.00, cocktails $6.00, waitor $10.00, total $32.00, as to what connection that item had with the manufacture of gas for Lincoln I haven't any information about it; I think that was an occur-ance

that took place while I was away, I questioned Mr. Kennedy about that.

May 1911, "H. L. Doherty & Co. Inc. expense $5.60"? the only explanation I have for that, Doherty & Co. from time to time charged us for telegrams they sent us and charged back to us, relating to matters pertaining to the company here.

July 1911 "The True Voice, donation $10.00," I think that
880 is a religious publication and coertion to a certain extent was our reason for making that donation.

Same month, "transfer voucher # 1245 B. C. Adams, incidental expense to Denver $11.40," and on the same voucher "B. C. Adams traveling expense to Denver $8.55," I went out to Denver some time in 1911, I think to get some new business information; they were having a meeting there of the commercial departments in Colorado, I went out there to listen to their discussions.

"Lincoln Gas & Electric Light Co. contingent, voucher # 10723 B. C. Adams, trip to Fairbury $5.82," Mr. C. H. Freaueff came through here on his way to Denver and I rode to Fairbury with him and discussed this dollar gas case.

In the same item "Schuff expenses to Omaha Ad Club $8.00," Mr. Schuff went over to Omaha with the Ad Club, not on a forced trip specially but a number of business men went from here, various business concerns were represented largely, I saved $8.00 by not going myself.

August 1911 "Savoy Hotel Cafe $82.68," and "Lincoln Hotel Cafe $80.80" I don't think that was the regular department head dinners, I don't know whether it was some special event I would have to see the vouchers for that, I would have to make the same answer that I have made heretofore that it is one of the expenses paid in a general way.

September 1911, "B. C. Adams, expenses to New York, $152.00," that trip was in connection with the companies affairs, just what at that time I can't say. It was necessary for me from time to time to confer with the Eastern Office, and either I have gone down there or they have come down here, whenever Mr. Freaueff or Mr. Doherty have been out here nothing was charged to expense, I don't know who has paid it. I wouldn't say it was an expense made necessary by having the Eastern Office. Whether there have been but two things connected with this case that necessitated that,—one this dollar gas case and the other the issue of our stocks, bonds, and notes,—I wouldn't limit it to those two things; I have made trips for
881 the purpose of discussing the character and kind of apparatus we were to buy here for manufacturing purposes, to confer with them with reference to the distribution system in regard to changes of importance for improvements, of course, I don't deny that most of the trips we have made in the last two years were made in connection with this case. I don't know whether this trip was made in connection with the distribution system or for the purchase of any apparatus. As to whether our changes in the distribution system were made in 1910 and for the last large piece of construction, no in 1912 the gas holder. The East Lincoln Gas holder was

constructed and put in operation in 1912 or 1911. Our first expense was charged to that holder in December 1909. I wouldn't say that all questions to be discussed with the New York office with reference to the purchase of apparatus or changes in the distribution system were settled by that time. We have purchased nothing of any considerable importance since that time except water gas sets. The policy of putting in water gas sets, and supplying Havelock and University Place wasn't definitely decided at the time we put in the East Lincoln holder. I will ascertain whether this item is properly chargeable to the manufacture of gas, or whether connected with this litigation, or incident to the issue, stocks, bonds, or notes.

September 1911, "J. D. M. Buckner, donation, $8.00 that was probably a donation to the church at University Place.

October 1911, "L. Korsemeyer, donation German Day, voucher # 11185 $24.00," that evidently was a donation to the German Day Festival which they have here annually. In regard to those donation- which we are called upon to make, I have always tried as hard as I knew how to make it as small as I could get by with.

October 1911, "Lincoln Commercial Club dues, transfer voucher # 1334, $254.47," I have no means of knowing what that represents without looking up the voucher.

882 In November the three items, "transfer vouchers # 1343, and 1344 for $10.40; $50.00 and $26.00 respectively," I don't know what they are without making further examination of the records.

The next item, "Crawford Kennedy, Cafe, voucher # 11270, dinner to Harry Lindsay $25.00 and extended $20.00 and charged to gas," I remember that incident, there was a dinner given by men from all over the state to Harry Lindsay the Clerk of the Supreme Court and several of our fellows were invited to that dinner, I agreed to pay for their dinners and Crawford Kennedy took care of it, we didn't give the dinner to Harry Lindsay. Mr. Lindsay knew nothing of this charge, and I suppose they thought our men were paying for their own tickets; on that point, whenever an incident of that sort occurred I always felt that the company itself ought to pay for the men's tickets that attended, that meant such as were employees of the company, I never felt that we were paying them enough to warrent them spending the money out of their own pockets. No it was not a contribution made to a dinner gotten up by local men while he was clerk of the Supreme Court and we gave that much from our general expenses, as I remember we paid so much for each man that attended that dinner, I don't remember the price, but say it was $5.00, I attended, Crawford Kennedy, Max Begtol, and E. C. Strode attended, I think we paid for their tickets,—well I don't know as we paid for Mr. Strode's ticket,—I think we paid for Max Begtol's, but we didn't give any dinner to Harry Lindsay and didn't have anything to do with it.

December 1911, "H. L. Doherty & Co., expenses and services, W. H. Gardner, $33.23," that was probably for some work done by Mr. W. H. Gardner who is the head of the statistical department. The

statistics were made up at that time for Doherty & Co. and in time for this company, or for other companies, of course it was for some other companies, it wasn't all charged to us. These statistics
883 might be directly made of Henry L. Doherty & Co. for the direct benefit of the Lincoln Gas & Electric Light Company.

The next item D. G. & E. Co. expenses L. A. Ramsey and M. L. Derge, $40.00," I think that was a part of Mr. Ramsey's expenses coming here from Denver, we took him into the office, he had been an employee of the company; I can't think for the moment what Mr. Derge's connection with that item might be.

January 1907 "F. J. Rehleander rebates & allowances, voucher # 2616, G. & E. furnished to S. H. B., H. H., C. O. W., $67.80," that looks as if it was the amount of gas and electricity furnished to S. H. Burnham, Homer Honeywell, and C. O. Whedon, with Rehleander's name attached to them, I suppose he signed arbit-arily the rebate slips and put them through the cash drawer covering the amounts shown as being charged off for Burnham, Honeywell and Whedon. I expect Mr. Rehleander's name is the only name that would appear on the rebate and allowance account covering those items. To ascertain what the item represents it is necessary to go to the voucher, I would say that wherever these items appear in this account it is the same character of items.

February 1907, "H. G. Clements donation $50.00," I was superintendent in 1907 and had but little to do with the accounts, I take it that was a donation to the Fire Department; I think it was done because of the aid rendered the company in a fire we had at the plant, I remember at that time we did give the Department something for the beneficial work they preformed during the fire.

Whereever the word "donation" appears after any item in this incidental expense account it means that we contributed a certain amount to such person or organization, and that it was an expense incurred by not only ourselves but other business men in town, while we have received at times, stock certificates which we have not considered of being of any value for the expenditure except in that manner.

884 February, 1907, "Emerson, MacMillen Company, voucher #3051 S. C. Appleck and postage $10.17", I don't know what that is.

Wherever the item H. Honeywell incidental expenses appears I don't believe he was given a monthly allowance, I believe he charged in his expenses at whatever they were; My recollection is he wasn't given a stipulated amount but I think he was allowed all of his expenses, possibly just toward the end of his administration he was given a monthly allowance. Where there is no month connected with the item I would take it to represent the expenses he asked the company to pay at that time. As to the nature of those expenses, I don't know just what to say to that, they were the expenses he incurred around town by virtue of his being manager of the company. I presume similiar to the expenses incurred by me while manager; mine were various items for entertaining people, I don't know as I should say entertaining but extending hospitality

to people who came into the office and I invited them to lunch and I always paid for it out of my incidental expense account.

April, 1907, "B. C. Adams expenses to Chicago, $22.50", I went to Chicago to meet Mr. Scott, and conferred with him in regard to the purchase of additional equipment for both gas and electrical departments. I don't know what division was made of this item between the gas & electrical departments. Mr. Scott is and was the general manager of the Doherty Operating Company.

April, 1907, "transfer voucher #366, $125.00", I wouldn't know what that was without examining the voucher.

May, 1907, "H. Honeywell, expense voucher #3072 expenses for May $80.00, M. B. M. $25.00, O. D. H. $25.00, C. C. J. $25.00, A. T. Large $100.00, making a total of $255.00", I don't know and never knew what that was; I don't know whether the voucher shows it or not. I don't think I know any of the parties
885 whose initials appear there, I never heard of A. T. Large, I don't know as that means so much money spent at large, those were expenses that I wouldn't know anything about. Mr. Honeywell would probably know about that. That was at the time I was superintendent, I had nothing to do with this department of the company then.

Wherever the item Lindell Hotel expenses incurred occures in this account whether that represents the same sort of a- expense as the Savoy Hotel Cafe, I think at that time Mr. Honeywell charge- in his cafe expenses as they occurred; I don't know as he had any regular meetings of the department heads or anything of that sort. I wouldn't know, concerning the nature of expense which appear as Lindell Hotel expenses with an amount after it, I could only make a guess at it, that was before I had anything to do with the management of the company.

November, 1907, "H. Honeywell expenses, including voucher #3846 $100.00 total $125.00", I notice the last item was commission on Gardner & Greeley notes. That is separate from the first two items. I only know what the first two items were from what I gather from the reading. If it is the Greeley I think it is he was a man that worked for the company and had some money to invest, I don't know the nature of the transaction, I believe in 1907 we were selling $100,000.00 of one year or two year notes, and I believe those selling the notes were allowed 2% commission, and that commission charged in the operating expenses of the company, I presume.

November, 1907, "L. G. & E. L. Co., voucher #3883 commission paid to C. R. Wigart on two year notes $20.00", I would say that was a similar item to the last one.

March, 1908, "Doherty Operating Company expenses F. W. Freaueff voucher #5507 and 5508 $81.50", I presume that was for the expense of Mr. Freaueff in visiting this company, I don't know for what purposes, I don't know anything about those expenses prior to 1909 only through my general knowledge of the business, I can't answer anything prior to 1909 from personal knowledge.

886 Wherever the item "cigars" appears throughout the account the expense represented by that was either for Christmas presents to the employees of the company or those outside; I think you will find most of those items in January. It is customary to give our employees a Christmas present but it got so expensive that we discontinued that practice, we bought several boxes of cigars and passed them around to the employees in the office, plant and street department; that also accounts for some candy items where we purchased candy and passed it around the office among the girls. I would say that item also represented the purchase of cigars that were given away one at a time and smoked by the employees of the company during business hours.

March 1909, "E. A. Brownell, copy gas decision $5.00", that is probably in connection with this suit.

April 1909, "John W. Smith $120.40; bar $7.40; cigars $8.80". I think that was for someone of the company that came through here from New York, that was in the early part of my administration, I don't remember what that was for.

May 9, 1909 "H. C. Porter expenses to Omaha $29.96, and Harry Warner expenses to Omaha $16.00", I think that was for attending the Nebraska Electrical Association down there; if that was an electrical convention I wouldn't think that a proper charge to the gas account.

May 1909, "B. C. Adams expenses to Atlantic City, voucher #6311 $320.00", I think that was the expenses of myself and Mr. Porter attending the National Electric Light Association. Whether that would be a proper expense charged to gas, I wouldn't say, only the methods of the two departments are a good deal alike and we sought some new method for getting business in the electrical department, that might also apply to the gas department, that would be the only place we could justify charging a part of that expense to gas;

887 that is only a part of the total item, divided 20% to electric and 80% to gas.

May 1909, "B. C. Adams incidental expenses and expenses to Omaha $46.00 I gues- that was my regular $40.00 allowance plus $6.00 for my trip to Omaha probably for that electrical convention. or that might have been the Iowa District Gas Association Meeting, I think it would show on the voucher.

May 1909, "Country Club membership, Warner, Bradford, and Porter, $120.00", that is their initiation fee. I was a member at that time and no one else besides these gentlemen. That is a social organization, the boys wanted to belong and I told them the company would pay their initiation fee and they pay their own expenses, that was the only time that was ever done. It was during a time of particular hardship around here, we had considerable trouble with our plant in getting into the good graces of the "Vox Populi".

May 1909, "H. L. Doherty & Co., H. H. Scott voucher #6936. H. H. Scott three days $75.00, hotel expenses $15.00; railroad fare $25.00; telegrams $12.85; total $102.28;" I wouldn't be able to state what that was for now, I don't remember; probably in connection

with the operation of the property, he was a representative of the Doherty Operating Co.

May 1909, "H. L. Doherty commission placing notes, voucher #6946 $52.00", those were the two year notes for taking care of the extension of the mains.

June 1909, "Doherty Operating Co. telegrams, voucher #6939 $13.87", those are telegrams sent and paid for by the Doherty Operating Company to this company in connection to its operation, charged to this company and finally paid by us.

June 1909, "L. G. & E. L. Co. rebates voucher #6564", ($108.96 charged off gas at 134 So. 11th) I think that was because of the campaign here through the General Gas Light Company, they opened up a store at 134 So. 11th and we furnished the gas for
888 a demonstration of gas arc lamps.

July 1909, "E. C. Strode voucher #6513 charged to H. C. Porter $49.32", I don't know what that was, I will ascertain.

August 1909, "H. L. Doherty & Co. voucher #6945 commission on $20,000.00 notes, $40.00", I presume that is a similar commission to the other paid Doherty & Co. for selling the notes.

October 1909, "William Bradford, expense to Detroit, Voucher #7134 $58.80", I think that that was to attend the American Gas Institute Convention.

December 1, 1909, "C. W. Gleason loss of clothes at Fremont, $7.28", we sent him over to help that company out at one time and while at the plant somebody stole all of his clothes out of his room and when he came back he insisted that somebody should take care of it, we took care of it; it is properly charged as a Fremont item.

December 1909, "selling electricities subscription $4.80", I doubt if that should be charged 80% to gas and 20% to electricity.

January 1910, "Will H. Green painting club room floor $9.60", that was for painting the room occupied by our solicitors where they had their desks and morning meetings, that might be a new business item. At that time an effort was made to convert that into a club room for the use of the employees, we had magazines and papers for them there, wherever any item appears under the heading, "club room" it pertains to that same club; also wherever the expense of selling electricity appears it is the same item already mentioned. Also the item of the Electrical Review Publishing Company subscription $2.40 that is a similar charge.

March 1910, "Roy McKinney rent of piano $3.20", that was a piano used in the club.

March 1910, "Kennedy trip to St. Joe and return $20.00", that was made in connection with that strike that we had in the electric department I think, if so it should not be charged to gas, I
889 should have to see the voucher on that.

March 1910, "Hammond (Lyman) $8.00, also tickets signed by Backster for Clark $2.00", that probably should have been charged to the electrical department. I don't know whether that is true of all of these items aggregating $60.60 in voucher #7821.

April 1910, "Nebraska Electric Association dues 1909, $20.00 I

think that should be charged to the electric department in a matter of this sort.

April 1910 "Doherty Operating Company, expenses H. H. Scott for December $32.00", that was probably some work Mr. Scott did for this company, he came here has a representative of the Doherty Operating Company.

The item "G. R. Wolfe & Co. $1.40", that undoubtedly means cigars.

June 1910, "Country Club Bradford and Warner $56.00", that was their dues, Mr. Bradfort was superintendent of the company at that time.

"Transfer Voucher #934 B. C. Adams expenses to St. Louis, (Adams vouchers 8353 and 8404) $27.44", that was for my attendance at the National Electric Association at St. Louis, that only dealt with gas in a general way.

July 1910, "transfer voucher #950 Honeywell (Adams $30.00 appearing months of July 1910 to December 1910 cover charge in account #1936, etc., see voucher #5710 H. Honeywell, O. K.'d by H. L. D.) $30.00", my recollection of that item is it was an expense that stood on the books against Homer Honeywell which he had incurred as incidental expenses and I recommended that it be charged off.

July 1910 "National Electric Light Association dues, Adams Bradford & Warner $12.00", that had to do with gas only in a general way.

890 August 1910 "Glenn Marston expense $40.00", he was a man who made a very exhaustive study of municipal plants and their operation and came through here in August 1910 and made a study of Municipal Lighting and Water Plants of the City and reported to us, we were getting information as to how they operated with economies of operation, having to do with gas only in a general way, having nothing to do with the manufacturing department but does have to do with the management and operation in a general way.

May 1912, on page 19 of exhibit "J. E. Schuff expenses District Gas Association $239.10", that was in connection with holding the Iowa District Gas Association here, we didn't pay all the expenses incurred here at that time this was a contribution. As to whether the item included hotel bills or hall rent, I don't believe we paid any of the room rent. I wouldn't be surprised if that was a part of the expense of the prize fight they pulled off at the Beach for the benefit of the common people and the City Council.

The Petrosote Manufacturing Company is a Hypothetical Company under which we have been selling our tar as Petrosote, we found it easier to sell it as Petrosote than as tar, there is a common prejudice against tar which furnishes a large use as a preservative and we discovered we could sell more tar by not using our name, if we sold it under the name of the Lincoln Gas Company people would think at once that it was tar so we sold it under the name of the Petrosote Manufacturing Company and have built up a business that is now taking care of our,—well practically our entire out-put of tar, built

up under the name of the Petrosote Manufacturing Company. There is no such organization, only among our boys. No separate set of books is kept for that, all their accounts are entered in the Gas Company's books. That is just a business name and I make that explanation for using that name as a sale company be-
891 cause we produce such wonderful results selling it that way and deceiving no one, we have even sold that to the government for preserving their posts on their reservation around Valentine, we have explained to everyone just what the product was. It is just tar, but we can't sell anything under the name of just tar. Most people look upon tar as a coal gas tar very thick and hard, but really the tar we are selling is water gas tar, a very light oil and not heavy at all. It is used for dipping shingles, painting iron work, hog wallows, and hen coops. We sell it for $10.50 a barrel. If there are any profits the receipts all go into the gas receipts. There is no separate account kept with the Petrosote Manufacturing Company and the expenses of that department are shown in our tar residuals. We enter it in our books as tar sold not as Petrosote.

Numerous items entered each month for telegrams in the various accounts are not always for telegrams sent to or received from the New York office, the telegrams are sent for various purposes, to find out whether coal oil or coke shipments have or have not been made, where various materials may be en route to Lincoln and correspondence in that way has been carried on to a large extent with the manufacturers at various times. Wherever the name of Doherty & Co. or H. L. Doherty is used in connection with the telegrams it would be from them.

Exhibit "326" as charged in account #1507 for the year 1912 $19,696.64 under the heading "Promoting new business, gas", represents the amount of money used for what we call our new business expense for the year 1912. We have a similar item for the electrical department. I don't remember what that amounted to for 1912. The division of that expense was 80% to gas and 20% to electricity, the division has been arbitrary largely. Whether the gas depart-
ment has no competition and the electric department has, I
892 wouldn't say that, there is no other gas sold in Lincoln but the electric department comes in competition with the Traction Company in the commercial lighting field and for power, I think for that reason we have made a particular effort to sell gas, perhaps the larger portion of our expenses should have been charged to gas at various times, because our effort was directed in that line. I think that is proven by the fact that we have here about one customer, as I remember, for every 5.6 of population while the two electric companies together have but one customer to every 10 of population. A great many people who use gas do not use electricity in their houses for the reason that we have pushed that side of the business too.

We have on our books certain subdivisions of this account #1507 known as accounts #1819-*a*; 1819-*b*; 1819-*c*; 1819-*d*; 1819-*e*; 1819-*f*; 1819-*g*; 1819-*h*; and 1820 with certain letters for subdivisions. In 1819-*a* of exhibit "326" for April 1912 "Pay roll

$41.60", as to why there should be an item of pay roll under advertising which is subd-vision 1819-*a* would say, the only way a labor item could appear there was to pay some one for doing some advertising. I don't remember what that was. That item continued throughout this account would be to pay someone for doing probably newspaper advertising, to get up our advertisements for us, I don't know that is the item but it could occur in that way.

Subdivision 1819-*c* January 31, 1912 pay roll $295.01, that represents the bonus; and commissions paid to dealers on loss that occurred in selling ranges at less than cost. I take it that the items in this subdivision of this account ranging from $295.01 to $520.50 every month represent the bonus; paid to our men, I am not sure of that but our accountant could tell that better than I can. The item of December 31st 1912, in subdivision 1819-*c* of this account
$520.50 represents the same thing. In 1912 I think we had
893 seven solicitors in the new business department and others on the sales floor. Their time was divided, I think, 80% and 20%. We had a greater increase among the electric consumers than among the gas considerably. That does not indicate the greater portion of the time put on the electric business, it might indicate to the contrary, in trying to keep the gas consumers, very nearly all of those that came over to us as electric customers have been gas consumers previously, the company is in active competition with the Lincoln Light, Heat & Power Company in the lighting field, we made every effort to keep every customer of gas illumination and if he went to using electricity we then stood an even break to get him. Our men in the new business department are constantly competing with men from the Lincoln Traction Company in that field, in a good many instances we have pretty nearly controlled the power in all the electrical industries, we have had by far the greater proportion of the power users, and have*n* gotten them on long term contracts in many instances, in fact I myself have closed some of the biggest ones, in all of our big electric contracts we have not used our solicitors either myself or some other person not in the new business department has conducted the negotiation. The City Council has not established a rate for electricity and we have been at liberty to make a special rate on that commodity to a certain extent, and have done so to the large consumers rather than the small consumers. I wouldn't say that our solicitors have attempted to induce our customers to take our current rather than that our *our* competitors,—I wouldn't say they have done that way, we have made an effort to keep our own electric business and also get some from the Traction Company. I am simply referring to the division to refresh my judgment that we have put the biggest effort on the gas industry and I think our percentage of 80 and 20 would probably cover the division. The only active competition we have had in the past ten years has been in the
electric field and we have fought it most in the gas depart-
894 ment. We have lost customers from our gas department who have gone to electricity absolutely, I remember that R. O. Castle was one who used gas exclusively and our effort was spent to keep those men *for* using gas for illumination because they were

getting their gas for illumination and cooking cheaper than they could get electricity for. Our experience has been where a customer has gone to electricity, having been a user of gas he has increased his bill 50% in regard to the gas used when he uses electricity for illumination and gas for cooking; we have used that argument to fight the Traction Company. As a matter of fact we have increased our gas consumers and the large gas consumers have used more gas, and last year increased over the year before, I think our reports will show that. It showed that the last time I looked up our reports. It is not true that our sales of gas in 1912 increased per consumer over any previous year, I think the reverse is true. I think the sales per consumer have decreased, if they have increased it wasn't because of selling the resident users more gas, it is because of the larger business we have gotten down town which has cost us a lot of money to get in by way of solicitation.

January 1912, in account 1819-*a* "A. G. Osmer, rent of roof $4.00", that is for one of *the* those roofs for advertising purposes, for an electric sign, I doubt if the word "gas" appears on it.

In this account appears the names of practically all the newspapers published in the City of Lincoln both daily and weekly for varying amounts paid for advertising. The proportion of space used in these advertisement- between gas and electric departments, I think in 1912 there was a much larger percentage of space used for gas than for electricity, at one time we gave an order to advertise nothing in the electric department and advertise only the gas department, to what extent that was carried out I can't say off hand. I wouldn't say there was a great deal of advertising for the sale of appliances for both gas and electricity; I don't know just what proportion there would be of inches of advertising space to each but I do know we gave a
895 blanket order to advertise absolutely nothing but gas. That order was given about 1911. I don't know how long it was enforced.

We did a lot of advertising in 1912 whether the advertising charged into this account particularly for the months of November and December 1912 was in connection with this attempted compromise of this law suit, I would have to look up and see how the division was made and will do so. We published whole page and half page advertisements concerning this settlement in the daily newspapers and I guess also in the weekly newspapers.

Whether most of our advertisements are for the sale of appliances and not for our product, that is a technical*lity*, we may have advertised our appliances to get them installed so we could sell our product.

Exhibit "333" is a newspaper clipping from the Lincoln Herald reading, "Get a gas range. Visit our Modern office and sales room. Lincoln Gas & Electric Light Co., Bell 75 Auto B2575". This isn't a fair sample of most of our advertising; I haven't any objection at all to it but I presumed you meant that if this was an advertisement such as we ordinarily run and I wouldn't say that. As to what kind of an order the company gave this paper when it reserved the space. very often we furnished the copy and where we failed to do that they were told to use some previous copy furnished them. A man might

get a gas range without consulting the Herald. That might hold true in all papers as far as that goes.

Exhibit "333" offered and received in evidence.

I didn't say that gas ranges and appliances quite generally are sold by the hardware dealers in this city, I didn't say it in that way but they do sell them as well as we do, we sell them more than anyone else. I consider the gas range business part of the public service business. Whether the city could regulate the price of gas ranges is a matter outside of the sale of the gas itself. Whether we lost
896 over $7,000.00 on gas appliances in 1912 as shown in our report, and run that loss in the operating expenses; I can't answer that without qualification, I would put it this way; we have certain expenses in this company that we designate as new business that we would have in any event whether we had a new business department and that we would have even though we didn't sell gas ranges or any other gas appliances, so I wouldn't say that loss was incurred by virtue of our selling gas appliances. In our 1912 report is entered as one of the operating expenses an item headed "loss in gas appliances $7,000.00".

In subdivision 1819-c of this exhibit "Domestic Fuel Appliances and connections, salaries," and in the month of January 1912 "L. Westermann, car fare and meals $6.96", you will find that item right along there for a considerable period, it covers Mr. Westermann's car fare to and from University Place and his own meals out there, we found that amount consistent, and we would rather pay that expense than to pay it as salary, we sent him from this office to University Place and his expenses were increased and to make him satisfied we either had to raise his wages or pay his expenses. University Place is a suburb outside of Lincoln. This exhibit is our new business account charged up for operating expenses here in Lincoln. Any expense we had in University Place and Havelock in promoting new business, we charged as a part of our new business expenses here, provided they was in the new business line. That University Place and Havelock expense for new business can be ascertained by segregating Mr. Westermann's salary and the amount we paid solicitors during the time they solicited. We could only make an estimate to arrive at that in any other way, I don't believe we could tell exactly. We have had an electric business in Havelock a year or two. That does not come within this same department of the extension of the business there. It is carried as a separate company known as the Havelock Electric Light Company. The net results are reflected in Havelock, the expenses are distinct in every respect unless we have made some error in our accounting. We purchased the new company and held
897 stock in the old company in Havelock. That investment is separate and distinct, the items of expense are not in our items of expense here.

Subdivision #1819-*d* of this exhibit is entitled "Domestic fuel and appliances and connections—exhibition expenses," months proportion of rent and heat account; the proportion of our rent and heat charged to the new business department has been determined by the aera of floor space they occupied. At this minute I do not know the

relative size of space occupied by the new business and other departments; I have known of course; they have the most available space we have in the office and that has been taken into consideration. It is the greater share of the space too. This division has been based on the floor space proposition and as between the gas and electric departments .80% and 20% and charged to the new business department. Whether I think $140.00 a month is a proper amount to be charged to the new business department as rental we pay this in building, I think that is a fair division of the rental due to the fact that they take the front part of the office, have all the window space and a large amount of floor space. I wouldn't say that but for that department we could get along without the display windows. The most available part of our floor space is occupied by the new business department. Concerning whether we have the greater portion of it in area in use for that purpose yet have not charged one third of it to that department for rental while our rental is $450.00 a month I would say yes, but we have for that $450.00 the same basement area we have on the first floor, then we have the first floor and possibly something over one-third of the second floor of this building. Whether the greater portion of the basement is used for the storage of the new business department stock, you can call it that; it is our appliances stock and the basement is used largely for storing our appliances, also to a large extent by our fitting department, which takes out and puts in meters and brings them back and does the piping, etc.

898 Exhibit "334" is an advertisement appearing in the Daily News of December 18, 1912, it is a diagram showing the curve of volumtary reduction in gas rate from 1901 to 1905, shows the rate charged during that period and what the rate would have been had the compromise been accepted that was offered in 1908. The advertisement was made in connection with the effort to settle the litigation by popular election. Had it been accepted under the terms of the settlement, among other terms, it was provided that we would refund to the customers all the difference between $1.00 and $1.20 accurring since December 1, 1910, in consideration of their waiving the difference prior to that time. This law suti was the occasion for that "ad." being run at that time.

Exhibit "334" offered and received in evidence. I *I* think that advertisement was carried in other papers, it was a part of the publicity campaign conducted at that time.

Exhibit "335" is a photograph of the front part of the office of this company, that is the sales floor. I don't know what proportion is occupied by gas and what electric appliances; the larger portion is occupied by gas appliances I would say. That is a fair representation of the room but doesn't show the gas appliances in here by any means.

Exhibit "337" is a portion of the frontage on So. 14th St. of the gas office, and represents a part of the sales floor, that is the entrance to the building, and the two sections of the windows just north of the entrance on 14th.

Exhibit "336" is a p-rt of the frontage of the sales floor of the gas

office on So. 14th St. The gas department is given the most important space in the portion of the company's windows in this exhibit. Those are not gas fixtures in the front windows, those are electric, but those front windows are less than 12 feet in width
899 and don't make a desirable display space. The space shown at the left hand side, being immediately adjacent to both sides of our west front door isn't the most conspicuous space in all of our windows, it is the corner of the building, if the entrance didn't cut up the section of the window to the corner it would be the most desirable space, but being cut up I wouldn't say it was the most desirable or conspicuous from an advertising standpoint means it must attract the passer by, and I wouldn't say it would do that as well as some other part of our building. People may see the windows there but I doubt if they see as much there as the larger windows where the display can be better and more attractively arranged.

Exhibits "335", "336" and "337" offered and received in evidence.

I expect subdivision #1819-*f* of exhibit "326" of January 15, 1912 two items of rebates aggregating $21.65 represent rebates on appliances, I don't know without seeing the rebate slips.

January 15th, 1912, "Peoples Plumbing Co. rebate on heater $3.00", that is a commission for selling a gas water heater and paid the Peoples Plumbing Co.,

February 29, 1912, "Transfer voucher #1408, proportion of bad debts, Petty Journal $60.00", is the proportion of bad debts charged on the Petty Ledger, the new business account had credit for it and when we found we couldn't collect it is reasonable to suppose we should take it away from them again. That was for appliances sold, and wherever that item appears throughout this account it represents the same character of an item.

Concerning the expense charged to advertising in the effort to make a settlement of this suit in December 1912, particularly the publication called "Christmas Offering" of which I think none appears in this account nor in any gas account, except there might be some few items, but by far the bigger percentage was
900 charged to electric advertising because we carried electric advertising in the publication during all the time it was published and we sold an enormous number of electric appliances by virtue thereof. That publication was gotten out for the purpose of giving our arguments in favor of the gas settlement. It might be a subject for an argument as to why they were published there. That was edited by Mr. Maupin. His compensation was taken care of by virtue of my signing a note with him he owed someone money and wanted an endorsement and I endorsed the note that was all. I think *we* has paid the most of that back; we were at the point of shutting Mr. Maupin off from gas and electric service and I think we charged it off as bad debts and let it go at that; we either had to shut him off or get the compensation in some other way. We didn't charge anything of Mr. Maupin's bill off after that time. February 15th 1912, "charges for bad debts old accounts as per order B. C. Adams gas $21.75 electric $36.07, total $57.82"; I expect that is correct, that is about as I remember it. I didn't say that was a payment, we had

an urgent situation where we had to shut Maupin off or pursue some method to collect that back, I had been trying to collect the account for some time, and if we hadn't taken Mr. Maupin in to help us with that publication, we would have had to charge it to bad debts anyway. Whether this account that was charged off was charged in payment for his services in that matter, you can put it that way if you like, that is the way I put it up to Maupin, it was unavoidable in any event. I think that would have been a proper charge against the operating cost for making gas; I don't think we ever sued anyone here for debts of that sort, we never found it paid.

Whether we had a man on our pay roll and charge his account off, as bad debts, to operating expense; we didn't have him on our pay roll, I don't remember that we did.

901 March 1912 in account #1819-*a* "Maupin-Shoop Publishing Company, advertising $10.88", they ran a printing office and did some printing for us, they were not employees. We were selling gas for the gas company.

May 1912, "W. M. Maupin $1.82" it doesn't say how that was paid to him. June 1912 again "Will Maupin advertising $4.80", I think that was for the printing company. July 1912 "Will Maupin $5.60", I think that was all for the printing company. August 1912, "Will Maupin $2.88" that is the same. September 1912 "Will Maupin advertising $1.92", that is the same I think. December 1912 "Will M. Maupin $2.90" I think that was for the printing Company, Maupin & Shoop.

Whether we paid him money for this special advertising done in November and December 1912 from our electric department, I don't say that we paid him; my answer was that the amount he owed would unavoidably have been charged to bad debts, I charged it to bad debts at that time and did not sue him. That enters into the operating expenses and the deductions from gross earnings, which I think was legitimate; it would be an account that we hadn't been able to collect and had done everything in our power other than to sue.

November 30, 1908, "balance range, advertising charged to W. M. Maupin, voucher #5512 $17.00", that was what he owed on a range and was charged off to bad debts.

February 21, 1908, "W. M. Maupin $10.00", paid by Mr. Honeywell, that is in 1908, I know nothing about that or about 1907.

Whether we have any other accounts of that kind charged off as bad debts against parties who owed bills, that is the only account during the time I was manager; and I still feel if I hadn't charged it at that time we would have lost the account. We did not cut off his service, he continued to use it and started to pay for it.

902 Concerning exhibit "327" and the nature of the expenditures therein beginning with January 1913, "Sloan Huddell & Company, voucher #13720 on account $2650.00 services, amount charged in this account for this month $500.00"; we employed Mr. Huddle to advise us in this gas case. Sloan & Huddle is an engineering firm having an office at Madison, Wis., Mr. Huddle was the gas expert for the Wisconsin Railway Commission. The $2650.00 was for services rendered us by Mr. Huddle and his firm.

We advised with them in regard to certain methods of proceedure; we wanted to know something about how the Wisconsin Commission handled matters of this character, and we have information, or got information from them that we have taken advantage of in conducting our side of this case. It is for expenses incurred in the prosecution of this case.

In February appears the same item, "Sloan Huddle & Co., voucher #14018 services $1650.00"; it is the same firm and covers the expenditure for the same services. I think that is a separate item from this $2650.00, I can't say without looking over the account; it seems to me that $2650.00 was the total amount, but I may be mistaken.

The two items charged as paid to H. I. Lea are in connection with this suit.

In March "H. L. Doherty, voucher #14045, Nash, Cropper, and Brodnax salaries, $303.34"; Mr. Brodnax and the oth-r two gentlemen were employed to make the inventory of this property for the purpose of this suit.

"George Bros. letterheads- stationery, $11.70", I expect probably that might have been some letterheads we got for use during the campaign on this gas proposition.

In May appears the item "Culbertson & Waite appraising property $10.00", also the item "Green & Purbaugh" appraising property $25.00"; I think that and all the other items here in this account and in connection with this suit and charged in operating
903 expenses as special legal expenses for 1913.

We changed our classification about January 1, 1913.

Exhibit "321" January 1913 "B. C. Adams, expenses B. C. A. and E. C. S. $80.00", was the expenses of Mr. Strode and myself to New York in connection with the matter of this rate case.

"Transfer voucher #1676 expenses B. C. A. and E. C. S. to New York ($575.00) $92.00"; also expenses in connection with a trip to New York on this case.

February "H. L. Doherty & Co. expenses B. C. A. to New York $80.00", and "transfer voucher #1700 B. C. A. and E. C. S. expenses to New York $92.00"; were both expenses in connection with the trip to New York on this case.

The next item "L. G. & E. E. Co. contingent $28.65", I think was some expense contingent upon the operating expenses.

Wherever the item B. C. Adams & E. C. Strode appears in this exhibit it is the same item I testified to before and is for the same sort of an expenditure.

May 1913 "J. E. Schuff expenses to Fremont $9.60", I don't — that was business for the Fremont Gas & Electric Company, I don't know what it was for.

May 1913, "Expenses J. E. Schuff Burlington, Iowa, $58.00", that was for his attendance at the Iowa District Gas Association.

The next item, "C. Kennedy expenses to Burlington, Iowa, $70.00", was for the same purpose.

July 1913, "Fred Walt, railroad fare Rotary Club to Omaha $3.52", that was to attend a meeting there.

The remaining five items "B. C. Adams and E. C. Strode to New York $175.00) $28.00", represents expenses to New York on the dollar gas case.

Exhibit "322" is the general office expense account $1502-*a*. Concerning what the expenses set out there are for, the old classification says : "(a) Charge with all books and blanks for general office. unless otherwise specified, desk supplies, rubber stamps and
904 pads required for use in general office". I think that was the expense for moving into this building.

Exhibit "330" being a copy of the general office incidentaly expense account for 1913 the item "W. H. England donations $20.00", is a portion of a donation for the purpose of conducting Sunday meetings at the Oliver, and later at the Lyric Theater.

January 21, 1913, "Henry L. Doherty & Co. New York draft $6.00", was for procurring a draft to send interest money or make a deposit there. Where the items of dues, candy, cigars, and flowers, appear in this account, to a certain extent, are the same sort of expenditures designated in exhibit "323"; in this month of January most of these things were for Christmas in lieu of giving presents they are donations of that character.

January 31, 1913, "National Electric Light Association dues, voucher #14495 $36.00", was a portion of the company's dues in the National Association, and only in a general way concerned the manufacture of gas.

January 31, 1913, "Lincoln Gas & Electric Light Company contingent $28.94", I wouldn't know what that was without seeing the items.

February 21, 1913, "J. E. Schuff gas election voucher #14626 $10.50", an expense incurred by Mr. Schuff during the gas election of 1912, in an effort to settle this litigation.

The three items "Western Union Telegram Company voucher #14624 $11.33; Henry L. Doherty & Co. telegrams $7.55; and Postal Telegraph Company voucher #14639 $7.25", I don't know now what they are for, probably some were in connection with this effort to settle this suit, I don't know that most of them were, that was after the election.

The item "Elks Club Cafe, voucher #14566 $5.80", represents cafe services over there.

March 17th, "State Journal Co., R. W. Gilbert Journal & News, voucher #14780 $10.16", I guess that was the proportion of our daily subscription for the company to those papers; Gilbert
905 was probably paid as a Journal collector.

The item "rebates" in this account are the same sort of items as the "rebates" in exhibit "323". Where the items "contingent" appear they represent adjustments made of accounts or something of that sort; they might contain rebates covering free service, I wouldn't say just what was in those accounts.

June 30th 1913, "Elks Club Cafe, meals, voucher #15351 $7.04", those are for meals at the Elk's Club furnished employees of the company. The employees of the company are not necessarily members of the Elks Club.

July 28, 1913, "H. L. Doherty & Co. exchange on draft, $4.00 and $2.40"; that was to make a deposit in Doherty & Co.'s bank to the credit of this company, and was used for the purpose of conducting the business of the Lincoln Gas Company.

July 31, 1913, "Freaueff & Robinson, telegrams and stenographer, voucher #15508 $14.86, that covered an expense caused by the dollar gas case.

August 15th 1913, "Lindell Hotel, banquet, voucher #15595 $49.65"; I don't know what that is for, my supposition would be it was given in the spirit of gladness in seeing my departure, I don't know anything about those items after the first of August. Mr. Montgomery would know about that, that was about the date I left, I might say that an expense of that sort might in a way be criticised, at the same time after I left here my salary was done away with on the operating pay roll; whenever anyone else has left here some little thing has been done for the man leaving and a reduction has always been made in the expenses of the company through the fact that the new man taken on don't receive as much money or his position done away with, showing that it was an unnecessary bill at the time it existed. I don't know anything about the books after August first. Throughout this account for 1913 the recurring cafe bills at the Savoy Hotel each month, represents
906 the same item for the heads of the departments explained before.

Cross-examination continued by Mr. Morning:

Exhibit "338" is the general corporate expenses charged to operation for 1913. In other years we don't have just such an account, those items appear under other headings.

The first item January 25, 1913 "H. L. Doherty & Co., commission account payment 5% coupons, voucher #14473 $38.36", that is the usual commission paid to the fiscal agent for taking care of the payment of bond interest. Whether we charge interest itself to operation, the interest itself is taken out after we get our earnings from operation, we charge the expense of paying the interest to operation. That is merely a question of the division of the expenses, we are trying in our division to get at the operating results and we don't consider anything contingent upon the operation an expense, while the interest itself is constant, or an overhead charge, after we determine the net earnings from operation; I don't think we could classify an expense for paying interest as interest. Without going into all the items of that character it has been our custome to charge commissions and all expenses incident to the payment of coupons on bonds in payment of interest, also exchange on draft representing interest into operation.

I could not explain the items in this account under the words "transfer voucher" without seeing the vouchers. I think I could tell by seeing the vouchers.

January 31, 1913 "Lincoln Gas & Electric Light Co., rebate, voucher #14546 $39.70", I think that is a similar item to those before explained. It may represent a charge for an adjustment

or free gas, and the same is true of the next item, "$48.00 contingent."

907 Concerning why we enter some items as contingent and some as rebates, I don't know as there is any difference, rebates have to do with gas consumption itself and contingent has to do with cash discount for appliance bought and adjustment of appliance sales, but ordinarily would not contain an adjustment of gas bills, and also the contingent item might cover cash taken out of the cash draw-, street car fare and things of that character.

August 30th, 1913, "Voucher #15646, Empire Trust Company, trustee service 8/1/14 $40.00"; I think that represents the payment to them as trustee in the matter of our three year notes, I wouldn't be sure about that, either that or to pay the first mortgage bonds. Either the bonds or the $500,000.00 in notes to take up some of the bonds, *take* trust company has changed its name and I have rather lost track of them now. We don't charge the notes or interest to operation but charge the expenses contingent upon handling the notes.

November 28th, 1913, "Henry L. Doherty & Co. voucher #16070, register fees $30.00"; that is the usual fee paid to the fiscal agent as a registry fee for taking care of the stock transfers, it is a fixed annual charge per year for attending to the transfers of stock on the New York stock book. Whether we have a stock book here and at New York too, we have one at Columbus and one at New York where stock can be transferred; we have no stock transfer book here, just a record of the stock transferred.

Returning to the subject of rebates for free gas and electric service concerning Thomas H. Pratt, he never had any free service during the time I have been manager of the company. I know nothing about that. I do not know why his free service was stopped and others continued. I do not know of any case of free service of gas where no ledger account at all is kept of it where the service was given with the knowledge and consent of the company, no, we have had thefts. We have no gas services within my knowl-

908 edge, with no meter attached, no sir not where we are furnishing service in that way gratuitously on purpose, that would only be in the case of a theft; I might change that a little bit, we have furnished current to Church Fairs and things of that sort where they have had these outdoor suppers to just be connected up for a night or two, but no regular customers. I know of no other party or parties getting free gas besides, Whedon, Bignell the two Honeywell's and Pratt, and have no knowledge of any others. I knew why Mr. J. K. and Homer Honeywell received free gas I never knew why the others were put on the list, I don't know now, I never heard it explained I might have some general information but I don't know, as to Pratt I don't know about him at all and never formed or expressed an opinion about that.

Gas lost and unaccounted for is shown there, the expense of that gas is shown, it isn't necessary to include that in arriving at the total operating expenses. That is shown in the distribution depart-

ment expenses after all the distribution items are taken care of then the list of unaccounted for is shown as another separate item. Whether brought in there to the extent it is brought in it reduces our receipts by that much, I don't want to put it just that way, it doesn't affect our receipts one way or another neither does it affect our expenses. I don't want to say it affects the net receipts finally arrived at in our reports; the lost and unaccounted for gas only enters insofar as we have to manufacture it and get no money for it. Whether we charge it as a part of the cost of manufactureing gas, what I am trying to avoid is to say that while the lost and unaccounted for is shown in the reports, but as far as that is concerned, it is added to the expense shown because it is in. We show in our reports the total amount of gas manufactured or delivered to the mains, that is measured through the station meter, then we take the sum total of the readings of all the consumers' meter-, deduct
909 that from the amount shown by the station meter for the month's period, the difference is called "lost and unaccounted for gas". In entering the expenses of manufacturing the gas we enter the expense of manufacturing the total amount shown by the station meter in the first instance. As to what we do with the item of "gas lost and unaccounted for finally" we finally show it just as a matter of information on the reports as an expense in our manufacturing cost, that is done for the purpose of arriving at our distribution unit cost, but not for the purpose of arriving at our total expenses. It is handled in each instance by entering it in the total or manufacturing cost. This free gas furnished these parties is not a part of the "gas lost and unaccounted for", that is taken as if actually sold and collected for and then paid out again as so much money.

Whether or not this account headed "Allowances and rebates" includes anything besides rebates as if the company was called upon to make a contribution to a campaign, political or otherwise; we would not enter that expense in this account, only insofar as some small item might go through the cash drawer where one of our employees would get car tickets. That money so spent would be under contingent items, and no large amount is permitted to go through the cash drawer in that way; the contingent items take care of such things as express.

Whether I remember an item of expense incurred by the company at the time the city held an election to vote bonds to construct an electric plant and whether the company incurred an expense in an effort to defeat the bonds, that was years before I come to Lincoln, I don't know how they handled the expenses in those days in any respect, but they didn't have as complete a system as we have now.

Exhibit "338" being page 499 of incidental expense account, general corporate expenses charged to operation for 1913 received in evidence.

910 I do know when Mr. Bignell sold his stock in the company because I sold it, as to the total amount realized, I don't know it shows in the report, I think he had fifty shares.

Voucher dated May 21st 1910, #8092 reading "75 shares of stock of the Lincoln Gas & Electric Light Company bought from Mr. Bignell for Mr. William McConnell $1443.75", that is the item covering the sales of his stock and closed it out as far as our books were concerned, he sold all of his stock that was recorded on our books.

In exhibit "331," March 1904 "Emerson McMillen Company payment coupons, $12.50", the voucher shows the payment of $25.00 covering the payment of coupons, the amount we paid them for their services. I presume the item of April 30th 1904 $18.39 to the same parties would be divided equally between the two departments. I have a voucher here for $267.78 representing the expense of the audit made January 25th by Emerson McMillen Company through Mr. C. N. Jellife. Asked to explain the entry in executive salaries of $18.39, I don't see where that was entered in on this voucher. Emerson McMillen Company had an assistant secretary who preformed the same service as the secretary in Doherty & Co. office does now but I don't see how you would get $18.39 or twice that, all those expenses you mentioned are in connection with the payment of interest charges or an audit.

May 3rd, 1904, $16.50 representing onehalf of a monthly apportionment of a charge item of $115.50 distributed over several months reading Emerson McMillen Company for auditing books. I don't see that here. I have a voucher here covering an audit under date of April 30 1904 in the amount of $267.78 on the voucher #175, executive salaries was charged with $18.39 to gas and to electric $18.39, and $231.00 to special expenses and that amount was charged over seven months, that covers several items.

911 Voucher #431 June 30, 1904 is for $29.50 and the distribution is as follows: gas $12.50 and $2.25 in addition to that; to the electric department an equal amount. That was in payment of the June coupons for services of Emerson, McMillen Company, for handling that.

July 31, 1904 an item for $16.50 a monthly apportionment of the Emerson, McMillen Company item; I don't seem to have that item here under that date; I have a voucher for $120.00 distributed one half to gas and one half to electric departments, covering a check to Hanover National Bank of New York, transfer fees for one year, I suppose for transferring stock and divided between the two departments $60.00 to each. The transfer fee service for coupon payments and interest payments either to Doherty and Company or Emerson McMillen Company represents moneys paid by this company for handling coupon payments, transferring stock and auditing.

In 1905 voucher #1065 dated January 31, is a voucher drawn to the Trust Company of American for $37.50 in payment of their fee for registering stock for the year ending August 1904, one half charged to gas and one half to electricity, there is no other item on that.

February 28, 1905 "Voucher #1213 Chemical National Bank", that is a voucher drawn for $1014.97 to that bank covering an inter-

est payment on the first mortgage bonds plus the fee paid the bank for handling the payment, which fee was $24.90, and divided between the departments one half to gas and one half to electric. The interest payment was not charged to operation, just the cost of making the payment.

Concerning an item of $5.00 for special expenses occur-ing occasionally without any explanation, "transfer voucher 80-*a* special expense March 31 $5.00", I can't tell what that is without the voucher number.

The pay roll in the executive department at that time was entered $30.00 a month to gas, I take it it would be $60.00 between the two departments, that was before *by* time, it probably was for
912 paying the assistant secretary in New York.

August 31, 1905, "voucher #325 Paul R. Jones, secretary, directors' fees $25.00"; I find that item here for $50.00 receipted for by Paul R. Jones the receipts set out that it was paid out for directors' fees. He was not a director, he was secretary and drew the money and paid it over to them. That $50.00 was a portion half and half between the two departments.

Concerning about what the annual expenses are on an average for the last few years incurred by this company for auditing for the benefit of the New York office; well the audit has not been made any more for the New York office, than for the company, primarily for the company, I don't know what that would run but would say somewhere around $200.00 or $250.00, including the auditor's per diem and traveling expenses, but we have never paid his entire traveling expenses; some other company has paid a portion of it. That is, if he was going to Denver we would pay our proportion. The auditor is sent out by the Doherty people to make the rounds of their properties and he takes our company in on his trip and we stand our portion of it plus his per diem while he is here. I think they have something like 108 companies. I think we prepared an exhibit showing how much in addition to the auditing expenses, it would be per annum approximately for handling the interest payments on our bonds and notes in the form of commission, or exchange on drafts; I would rather not off hand approximate it as long as that is in here to show what it is.

Now taking the vouchers for 1907, "voucher #2618"; that is drawn to F. J. Rehleander for $176.76, the items are for stamps, express and such items as we ordinarily call contingent items advanced out of the cash drawer, and one item there of $50.00 was paid to the directors.

August 1907, "voucher #3924 Emersom, McMillen Company, fees, coupon, $169.78,"; that was the coupons due so their
913 invoice states, that was divided $112.99 to gas and $56.79 to electric; and here is another item, it also included their fee as transfer agents for the year ending in August. Whether according to that it would seem as though the coupons were entered in the operating expenses, I would say no, it reads "for the payment of coupons due December 1, 1906 $24.89; and for the payment of coupons due June 1, 1907 $24.89;" and $32.99 of that was charged

to gas and the balance to electric; it reads as if they paid the coupons and charged them in the expenses but still I don't know how we could make our books balance out on that. I wouldn't be sure whether that means simply for services in paying the interest or includes part of the interest, the information I have here looks as though it was an interest payment and not for services but on the other hand the fact that it was charged to expenses would indicate that it wasn't an interest payment. I don't know just how that was, that was before I had anything to do with this part of the work.

February 28, 1908, "voucher #4312"; this is a voucher drawn to the company for $157.28. I can't tell without quite a little arithmetic how that was apportioned between the two departments; it was all charged in that month for contingencies for February 1908. It was just a collection of small cash items paid out. Some of it went to stock it didn't all go to expenses. $1.10 went to stock.

The item of executive salaries called pay roll includes the presidents salary right along and afterwards the president and chairman of the board of directors and when the vice president got there he was put in as an executive receiving an executive salary. I think there was a constant item entered pay roll, that was the secretary perhaps. I don't mean the secretary at the New York end, there is an item for the New York end, but it has been a small item of $25.00. The pay roll item explained as the Bills Payable Ledger, was $30.00 in 1904 in 1907 $60.00, explaining the increase, one very good reason is that the general manager in very early
914 days received at one time less than $100.00 a month and finally got up to $100.00. The general manager might have been the president of the company in the early days before our having anything to do with the company. When J. K. Honeywell was general manager I guess Mr. Putnam was the president and later Mr. Thompson and others were interested. I don't know when the president of the company commenced to get a salary, I might add further that the secretary in the early days received hardly anything but later we increased his salary until Mr. Warner was getting $150.00 and then Mr. Phillips had gotten up to $125.00; our plan in these matters was to start a man in at a low salary and increase it as his work became more proficient and then when it got to a point where he demanded more salary to put him somewhere else and take on a cheaper man.

Now taking the vouchers for 1910, under date of February "voucher #8001 Doherty Operating Company salary H. H. Scott $48.00", I think that covered Mr. Scotts salary during the time he was here on consultation. He is general manager of the Doherty Operating Company, and was here in consultation in regard to the works equipment. It isn't his monthly salary it is simply the salary he received per day for the time he was here.

"Voucher #7998 Doherty Operating Company $30.00"; that voucher was $42.62 and covered $37.50 stock registrar fee; $1.20 insurance on bonds; $3.92 for telegrams; and was divided $34.09 to gas and the balance to electric. The amount I indicated $37.50 was for registrars fee exclusive of telegrams, that is for March 1910.

August 1910 voucher #8852 Emerson, McMillen Company transfer fees $144.00"; the total amount of that voucher was $224.99, including transfer fees for the year ending August 1, 1910 $180.00, which was divided $144.00 to gas and $36.00 to electric; and also interest charges on delayed remittances for coupons a portion for nine days in 1909, and another portion for
915 seven days in 1910, a total of $44.99. That is not a case where a portion of the interest actually went into operation, that item of $44.99 was the interest Emerson, McMillen & Co. charged us for not having our interest down there at the proper time; the interest wasn't delayed to the holders of the coupons but we didn't have it in Emerson, McMillen & Company's office soon enough. The point is, it was interest upon delayed interest, we didn't charge any part of the interest itself but the interest they charged us was for the delay and that went into operation, and included also the transfer fee for the transfer of the stock.

January 1911, "voucher #1073", I don't have that voucher here; that is drawn to the Chemical National Bank and the amount is $24.97 divided $16.64 to gas and the balance to electric. There is no explanation of the voucher, I presume it is for the payment of our interest, for services in payment of interest. That is another item. I don't see the other one.

For 1911, "voucher #9266 Emerson, McMillen Company for services $72.00"; that was a part of the total charge of $110.48 that was charged to gas and the items that made up that $110.48 were 56 cents for charges on check, and coupon fees $19.92; and transfer fees for six months $90.00 the fees were also for six months. February 28th a contingent item, "voucher #9463 $32.00"; that was made up of a large number of small items, there is an item shown for executive salaries $32.00 charged to gas out of a total of $118.36, I expect that was directors fees.

Voucher #10481 H. L. Doherty & Company commissions $74.00"; that is a portion of ¼ per cent bonus allowed on placing notes in the total amount of $92.50 the $74.00 being charged to gas and the balance to electric; those were the $500,000.00 three year
916 notes.

I mean by bonus they were allowed ¼ of one percent they got $92.50 as I take it from this voucher for handling some of them, not all of them.

September 1911, "Voucher #11180 H. L. Doherty & Co. transfer fee $80.00"; that is a fee as registrar in the amount of $37.50 to gas and the balance to electric.

November 1911 "voucher #11412 H. L. Doherty & Co. services $107.52"; that was a charge made by the Citizens Trust Company of Columbus and paid by Doherty & Co. and they were reimbursed by this company, as transfer agents and registrars of stock on the part of the Citizens Trust and Saving Bank.

January 21, 1912, "voucher #11774 H. L. Doherty & Co. commissions $38.35; that is their ¼ of one percent for paying the bond interest in the amount of $19,175.00,—and now that I see that,—I would rather think that the commission paid before in the amount

of ¼ of 1%, was for the same item rather than placing the notes; I think I was incorrect in my explanation before.

March 30, 1912 "H. L. Doherty & Co. commission and services $78.00"; I wouldn't know what that was; there are too many of those items for me to remember that.

June 1912 there is an entry here of $23.00 in the executive salary account, and explained in a note as closing out special account #1836 into the regular expenses "$345.00, expenses of Jones' audit to be closed out in twelve months ending May 31, 1913"; that was the cost of the audit last made. There were two auditors at that time, I wouldn't call that an average auditing expense, that was higher than usual and probably higher than it would be again.

In July 1912 the entry "executive salary account H. L. Doherty & Co. salary and commission $258.35", with a notation "voucher #12764 missing" I wouldn't know what that covered, I expect it was Mr. Doherty salary plus some commissions on some
917 coupon transactions.

August 1912, "voucher #13012 Windsor Trust Company services $40.00"; that was a portion of the total amount of $50.00 and charged to gas under a bill rendered by that company for services as trustee under indenture, dated August 1, 1911 for year ending August 1, 1913. The Windsor Trust Company is trustee for that issuance of the $500,000.00 notes, it was in connection with our bonds and notes.

Cross-examination continued by Mr. Foster:

In account #1501 entitled clerical salary, March 31, 1911, $18.80 to clerical salaries, with an item of $4.70 in the electric account #3225 from voucher #10006 from my present information I can not explain that.

Concerning vouchers #10131-10263-10639-11361-11499-11665-11825-11935 for $40.00 each issued in the same way; I know what that was; we took a man in here from Denver to do some work for us in our accounting department, he came there at $100.00 a month and stayed but a short time and in order not to disrupt our scheme of paying our clerks we put him in at $60.00 a month and paid the other $40.00 a month in another way, so that the bookkeepers themselves didn't know what it was for.

May 13th 1911, "Voucher #10241 Crawford Kennedy $150.00 special traveling expenses"; I don't know what that had to do with gas expenses; we have sent him out several times on trips for the purpose of creating a tar market; I wouldn't say whether that was one of the times or not, I wouldn't know.

July 31, 1911, "voucher #10696 A. H. Armstrong $1400.00 charged to Claude Meeker"; Mr. Armstrong sold his stock and we bought it direct for Chas. Meeker that is what the books show, that never went into expense.

918 October 31, 1911, "Voucher #11317 Frueauff & Robinson 573.95", services in reapplication Railway Commission to issue notes etc; I imagine that was their charge to us for their

investigation of how we had to go at that matter and drawing the papers; that had only to do with the issue of the $500,000.00 three-year notes, and was charged in the operating expenses.

June 30 1913, "transfer voucher #1794 closing out $1028.13 general manager's expenses to Homer Honeywell on General Ledger as recommended by auditor"; that occurring in the operating expenses month by month was an item that was being carried by the company at the time Mr. Honeywell resigned and we carried it against him, that is he would put his receipt or give his receipt, to the cashier for the expense money and leave it there until he accounted for it or paid the cash out of his pocket, well he never accounted for th-t amount, he possibly could in detail but that never was done and I finally recommended to the auditor that the entire amount be charged off and that has been done; I always thought that it was legitimate expenses which he incurred and ought to be taken care of at once but I never felt that I had direct authority to do it until I had authority from New York. I had no idea what the money was paid for. It was expense money as I understood it at the time I came here. I don't know whether he spent it in politics or how, I think it was money he spent from time to time and neglected to account for. In addition to the actual money for expenses that he did report. That amount of money has stood there on our books as being charged to Homer Honeywell and I finally charged it off into this year-s operation. I assumed it was a litigimate expenditure and I think I am right. I wouldn't want to say it was money he had taken out of the drawer and left a slip for all of that, that money stood against Homer Honeywell at the time over and above the amount referred to in the expenses.

March 30, 1908, "voucher #3342 $250.00 Homer Honeywell with no explanation," that was before my term as manager.

919 August 7th, 1908, a similar charge made under voucher #4966 for $250.00, I know nothing about it, that was before my time as manager.

April 27th 1909, "voucher #6244 Lincoln Gas & Electric Light Company is a slip dated August 28, 1907, received from Lincoln Gas & Electric Light Company $325.00 for cash. Signed Homer Honeywell and charged to operating expenses; I don't know what that is for.

August 31, 1912, "transfer voucher #1540 check issued to Strode $31.42 Strode's expenses in irrigation matter and paid through the New York office", those items in connection with irrigation matters were at times incorrectly charged to us and were later charged to the proper sources; I know in our expenses at times these items appear before they were corrected. That irrigation matter was this Nebraska Power matter, and Mr. Strode under a misunderstanding of how to make his charges charged a lot at first of the irrigation expenses to this office which in fact should be charged to New York and later changed his accounting system.

August 31, 1912, "transfer voucher #1554"; indicating the closing of an enormous bunch of repair accounts carried forward from the old coal gas days and charging them into operating

expenses, over $1500.00 went into operating expenses in 1912 when we were not making coal gas; our reason was for a considerable time we didn't make provision for bench renewals, that is where we repair the benches which cost a given amount to do it, we charge that off so much a month during the time we think the filling will last. That is a suspence account. After we stopped making coal gas we stopped making that charge off, I decided that was a mistake; as long as we had the benches there we ought to make some provision for taking care of that expense, even though we were making water gas, and then we commenced to charge off a certain amount to cover those renewals.

920 In so far as we did that in 1912, it would make that year's expenses abnormal, if my theory was correct it should have gone in in years prior to that, and in view of the fact it was not in there those expenses would be abnormally low, provided we extended those over a sufficiently long period of time. It is customary where we are making a repair or a renewal to attempt to spread the expense over the life of the article renewed, over the benches 2 or 3 years, sometimes we get more than that but it is usually the expense of operation; if we made a charge off for one bench in the course of one year that would be too much in my opinion. It would depend on how many benches we were charging off whether $1500, or a little over $100, a month in 1912 would be abnormally high. Even though we charged the correct amount and brought it forward from the year where it should have been charged to 1912, it would make the operating expenses for 1912 abnormally high to that extent and the other year abnormally low by reason of the fact the charge wasn't made then.

July 31, 1912, "transfer voucher #1515, coke shortage $647.82" closed out in monthly installments of $211.92 in operating expenses; that was to take care of a shortage in coke upon a correct inventory being made, we had carried more than we had in stock. If we had paid for a given amount of coke and couldn't account for all of it in the way of operating expenses when the coke had given out, we would have to make some provision for it. When we buy a large shipment of coke we do not charge it into the expense account in the first instance, we charge it right into stock, and assume that so much is used per month and run that month's estimated amount into the month's coke expense, upon discovering a coke shortage we charge that into operating expenses at a subsequent time, for the reason that evidently in taking our coke out of the pile we have taken more than we thought for our water gas machines.

921 Our monthly charges didn't charge off enough and those months where we under estimated, it would be abnormally low and to equalize it we carried that forward into subsequent months.

July 31, 1912, "transfer voucher #1517 S. E. Miscellaneous earnings $304.56" closing out miscellaneous earnings adjustment in 12 months; I can't say what that was, that "S. & E". don't mean anything to me.

January 31, 1910 "transfer voucher #852 expense Armstrong

to New York $150." closing out in account #1503 incidental expenses $20. per month to gas and $5. to electric; Mr. Armstrong went East on this gas suit it probably should have all been charged to gas.

July 30, 1910, "Transfer voucher #915, H. Honeywell $250." with an explanatory notation thereon, I don't know right at this minute what that was.

November 30, 1910, "transfer voucher #1022, incidental expense account, travelling expenses $45.48"; That is too far back, I don't know what that is.

Also on the same voucher "Legal expenses $26.60" per month to gas to close out E. C. Strode item $100. I don't know what that is, it is too far back for me.

The item of flood expense in 1910 spread over a number of months making a total of $250. was in connection with the high water that came down through the plant some time prior to that time and we charged it off during several years. That item is $250. a month to repair the damages caused by the flood. These valuable lots were covered by the flood but they are higher than that now, we filled them in and the water has been diverted since then, too.

January 1911, dollar gas agreement $126.62"; I think that probably covered our expenses in trying to arrive at an agreement through compromise with individuals. I testified to that yesterday.

February 1911, cost of bond dollar gas case $219.33"; I think that is where we apportioned the premium on that
922 large bond in this case.

May 31, 1913, "Transfer voucher #1180, gas sign on Burlington building $2000." entered in operating expense at $83.33 per month for two years. The new business department was charged with the cost of erecting that sign in the first instance; we sold the sign to Thomas Cusack & Company; and then that item referred to there was corrected and not charged as an expense, the 1914 new business expense would be abnormally low by the amount credited. I don't remember what we got for the sign. It was charged into new business expenses over a period of two years; during that period we received flat rates per month from our customers, and as we figured the sign would be paid for in that time so that with the charge to income they would equalize each other at the end of that period, we sold it and are now crediting new business for it. It doesn't make any difference whether it went in here or not the charge in there and the amount we credited new business was enough to pay for the sign in that period. As to how we expected to get new gas business through an electric sign;—we took a certain part of the revenue and put in our electric sales and appliances revenue and credited the new business expense, gas and electric both, then charged gas and electric both with the expense of the sign in a period that would equalize the expense and the credit. I am sure of that, I wouldn't say to the dollar, but on the plan I am right, then we sold it at a profit. The total $2000. for the sign is charged to new business expenses, and was apportioned 80% to gas and 20% to electric. The gas gets the money back through

the income we received from selling the space on that sign, we rented it out. When we got the receipts the plan was to apportion them in the same way. We took an arbitrary amount from our electric customers on the sign and put that in our revenue, it went into our flat rate. It got into our gas and electric depart-
923 ments both as a credit to new business. We received flat rates for that current, at so much per sign to those using it; we didn't sell it by the Killowatt. Figuring the amount of current we sold and assigned a rate to it, and put that in our electric revenue, not necessarily as a profit but as a credit to the cost of erecting that sign. We figured the sign would be worthless in two years and would have to be discarded. The benefits received by gas would be found in the credits to the new business department. New business gets credits, when we sell a meter for more than it cost that credit is given to the department and new business is given the benefit of the difference between what it cost and what it sold for. If I went through the books I think I could find how much we got out of that sign, I would be glad to do it.

June 30, 1911, "Transfer voucher #1190 $1659.96, advanced to Clerk of Supreme Court in dollar gas case when it was appealed, and was worked into operating expenses at $138.33 per month from June 1911 to May 31, 1912"; that cost was all finally taxed to the City when the case was reversed, but as yet we haven't received anything from the City, when we do that account will be credited back with it. At the present time we have advanced that much money that will come back and operating expenses for that period is abnormal, but one thing that should be allowed and considered is the interest on it when we consider the operating expenses.

June 30, 1911, is an item of $100. per month for new business referring to Gentry account, appearing for a number of months in that account. Explaining that item we had Mrs. Hiller come here and give a gas demonstration of the use of gas and gas stoves, she lectured at the University Temple, and that was the expense attached to her demonstration. It was to show the public how to use gas economically, I suppose a large percentage of our people don't know how to use a gas broiler; our effort was to get them to use everything economically that can be used.

924 June 30, 1911, "transfer voucher #1212, expenses W. S. Hunter, traveling Denver to Lincoln; I don't remember Mr. Hunter just now. T. O. Kennedy was a superintendent here at one time.

June 30, 1911, "traveling expenses to Iowa Gas Association $62.50" I imagine that represents 80% of that expense.

June 30, 1911, "traveling expenses B. C. Adams to Denver $42.75" I think that is the same item I have testified to before.

September 30, 1911, "$440. traveling expense Shuff and Adams"; that I believe was for a managers meeting at New York, just a convention of the Doherty Companies. I think we got value received for that $440. it doesn't take very much to save $440. in operating expenses; I think that is true of all the conventions we have ever attended.

October 30, 1911, "transfer voucher #1323, Frueauff & Robinson $573.95 services in connection with the $500,000. note sale", I think Mr. Foster covered that, it was entered in operating expenses $76.53 per month to gas and $38.26 to electric, and was their expenses in connection with that matter. The notes were issued primarily to take up some bonds about to mature. Items of that sort are considered contingent on keeping the property a going concern explains our reason for entering that into operating expenses. It is an inconceivable proposition to think of a company with money and not compelled to borrow any; I think the community should pay for getting that protected to furnish gas to the customers, I look upon that as one of the expenses.

September 1912, "traveling expenses Strode and Adams to New York $250."; I think I covered all those items.

Two vouchers, one #6513, July 3, 1909, E. C. Strode $75. I don't remember just what that was used for.

Mr. Strode: There are two or three of those and the record may show that $4300. of vouchers of that character may be charged
925 up as expenses in the Lincoln Gas Case, and not charged as operating expenses for the consumers to pay.

Cross-examination resumed by Mr. Morning:

I think $20. a day is the per diem paid by the company to the auditors sent here from New York to audit the books of the company, for the time spent on our work. I don't know that that includes time spent on the road; it would include any time put in on our work, that might be work performed on the road or in the New York office. The balance of the bill is actual expenses here plus railroad fare.

Redirect examination by Mr. Strode:

An examination of the books by the auditor is not a mere formal matter, it is a serious transaction absolutely; it is done for the purpose of checking up our system of accounting, to see that we properly account for money received and expensed, also to see that items of expense in the cost of producing gas and getting it to the customers is charged to the proper accounts.

Concerning criticism of expenditures for meals at the Savoy Hotel, incurred regularly every week; my notion of that was this: in order to get the best results out of our operating departments, we of necessity would have to have harmony among the various department heads; when working along during business hours we got into difficulties in the departments, through mis-understandings; it occurred to me if I could get the boys together on more of a social basis than business, we could thresh it out and work out our difficulty in sort of a kindly way and get along well together and that proved to be a very successful plan. These meetings were held every Monday noon.

926 That was to consider the affairs of the company as we had our luncheon there together, the different departments bring-

ing up and discussing matters concerning their departments with other departments, oftentimes forcibly and threshed out.

Concerning the expenditures for charitable purposes, Commercial Club and other organizations, my opinion is they are expenses incurred by all companies of this character, and also by all business concerns doing business in a town of this size. We cannot avoid making subscriptions and donations, the only thing is to make them reasonable, and still maintain their position in the community occupied by other business concerns.

Concerning the expenses for sending representatives of the company to attend meetings, conventions and organizations of gas companies, and in going to the New York office; I think they are reasonable expenses and we received value for the money so expended; the gas associations have been a wonderful factor in developing the gas industries. It is absolutely necessary to keep in touch with the development of the gas industry, to come in contact with the men who actively engage in the business, hear their notions expressed and discussed. There has been constant changes in the manufacture and distribution of gas in the last ten years, and those matters are considered by the people engaged in the business. In a general way the company has very largely profited as a result of these conventions in the improvement of service and methods of manufacturing and distributing gas.

In my cross-examination I indicated some items that might be taken out of the incidental expenses, that could be taken out of the portion of the earnings that go to the investors, rather than to be taken out of the public or consumers, those might be considered as proper items to be carried as an expense of the company and taken out of that portion of the earnings that goes to the investors; it is my opinion that the investor has some right to some of the earnings coming to him because he is an investor in the
926½ property, and that some expenses which might not properly
— incurred by the company in the interest of the public service, might properly be incurred, nevertheless, if borne by the investor in the company.

Recross-examination by Mr. Morning:

In a sense my attitude in regard to spending the money criticized here locally, contributions to colleges, charities, memberships in clubs, is that those were paid to maintain our standing in the community as being a public service institution and paying our share of what is commonly done by other business men. Not altogether to maintain favorable public sentiment towards the company, that was an element, of course, at the same time it is inconceivable that a company of this character could get along without making those contributions and maintain a business aspect in the community. The contributions were largely made to institutions and movements that would do the company good in the way of favorable public sentiment, and would also do the city itself a lot of good; we haven't only been interested in our own growth from day to day but the

growth of the city from year to year and making Lincoln a place that people cared to come to and getting them to come here.

Whether we have been interested in keeping down agitation of rate reduction, creating public sentiment among influential portions of the community, such as newspapers, churches, business clubs, and liberal with those particular institutions because made up of those influential portions of the community, and at the same time brought this suit to maintain a high gas rate in spite of the public sentiment among the consumers: I would not answer the question as you infer I should or as you put it at all. We have not been liberal in the first place, we have merely been reasonable in my opinion,

927 and we have not made an effort here to maintain a high gas rate, neither have we made an effort to create public sentiment in favor of a high gas rate; we have tried to create a knowledge here among the people of Lincoln as to the actual facts that existed in connection with the business of our company, and as has been brought out in the testimony here. From time to time we have, upon various occasions, made efforts to compromise this case, and when we have made those efforts we have tried to get to the public the facts as we saw them. I do not believe we could be accused of having made an effort here to maintain a high gas rate or to get people to accept it.

Whether our liberality, or desire to show a public spirit or create public sentiment would be better expressed in an economical management of the company and a reduction in the gas rate so that people who are least able to bear the expense would not have to bear the burden,—I would say we have made every effort in the world here, Mr. Morning,—and it is now a matter of common knowledge,—to get a reasonable method of making rate reductions, or to get a reasonable rate. Hardly to such a rate as our company denominate "reasonable". We have made concessions in proposed agreements that we thought were absolutely unreasonable, as far as we were concerned. That is the question I would like to talk about and I would be glad to answer any of your questions. I know you are trying to make the point that we have been lavish here, apparently, in expenditures, such as donations, membership dues, for heads of departments, contributions to Y. M. C. A., and like institutions, as you indicate, but on the other hand I think we have been absolutely reasonable in these expenditures, have never at any time been lavish; have done less by far, than many of the institutions that have existed here for years and years, with well established reputations and large business.

Concerning our weekly feeds resulting in Cafe bills, and

928 whether we could not have held such meetings in the company's office instead of incurring the Cafe expense of $30. or $35. each month,—would say we have also had meetings in the office here from time to time; every month we went over the reports, but we can't always get at the thing just as we want to just in that way, and I think you will bear me out in this, that in the history of this company for years back, there has never been any internal dissention in it; I can point to other companies in town where they have

had any amount of internal *idssention*, which has caused difficulty with the public service corporation itself, between it and the public, I believe we have been very successful in avoiding that, and I think our plan has brought it about. I have in mind a company where that internal strife was something horroble, but that difficulty has about been wiped out by adopting a plan something such as we have here. The method of doing our business here has been discussed by the Board of Directors and has been approved from time to time, in fact commended. The local member- of the Board of Directors have special interest in the results; they are citizens here interested in the growth of the community and the success of its institutions.

Whether they were mere nominal directors and had no more than nominal holdings in the company,—Mr. Raymond was quite a heavy stockholder, and other directors at one time and another have had considerably holdings in the company. I haven't anything to say as to what the policy of the company should be now at all, whether it is the purpose of the company to maintain that about as in the past; I am in no way connected with it. I know nothing about a disposition to change the policy. I am not connected with the company in any way. I don't know whether the gentlemen getting rebates or free gas are going to be retained on the free list. I am not an officer and have nothing to do with the company. I don't know as a matter of fact whether they are on the free list now.

929 Redirect examination by Mr. Strode.

Whether these expenses carried into the incidental expense account are reasonable as compared with other companies,—compared with other companies in which I have had experience they are particularly low.

Recross-examination by Mr. Morning:

My experience has not been confined to the Doherty companies. I have had experience with various companies in one way and another around the country, but not so very extensive.

Witness excused.

930 GEORGE A. MONTGOMERY, being first duly sworn, testified on behalf of the plaintiff as follows, pages 1923 to 1931, Vol. II, original record:

Direct examination by Mr. Strode:

I am at present manager of the Gas company. I was formerly superintendent. At the request of the city I had exhibit 88 prepared. It shows the cost of steam used in the gas department as furnished by the electric department. For instance, in January of 1912. In the winter months 20 lb. of coal per thousand ft. of gas made is

charged to the gas department and credited to the electric department. During the summer 15 lb. of coal per thousand ft. of gas is charged and credited. The 20 and 15 lb. apportionment was determined from actual tests before I came here. On the engines and in some instances where motors were used temporarily the kilowatt-hour consumption on those motors was converted into the equivalent of pounds of coal. After you have found the total tonnage the cost per ton is derived from the total steam expense in the electric department. In the 20 and 15 lb. charged to the gas department is figured all of the expense in the generation of steam. To find out what the total steam cost in the electric department is, include all the elements and divide that by the total coal used and then apportion to the gas department its share of the expense of using 20 lb. of coal.

Cross-examination by Mr. Foster:

In the month of January, 1912 we have $860 credited to the electric department and charged to the gas department, apportioned as follows: $350 for generating water gas, $100 for booster, and $410 for exhausters. The basis for the charge to the gas department for steam used in generating gas is pretty much the same over the entire country. The summer months 60% of the total steam charged to the gas department and credited to the electric department is on account of steam for water gas generation and during the winter months 50% is for water gas generation. In the month of
931 January, about 45 lb. of steam per thousand cubic ft. of gas made was charged to the gas department and credited to the electric department.

Cross-examination continued by Mr. Morning:

There is a charge made against the gas department for electric current used. That appears in the operating expenses. It is measured by a meter. The gas department is treated as a regular consumer of the electric department.

Redirect examination by Mr. Strode:

It is on a cost basis. The steam charge is, as I tried to explain, just the cost of the steam including all of the elements.

Recross-examination by Mr. Morning:

In figuring the cost of the steam the coal is entered at its cost price at the time.

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932 GEORGE A. MONTGOMERY, being recalled for further examination, testified as follows, pages 1979 to 1983, Vol. II, original record:

Cross-examination by Mr. Morning:

The items of Sundry Labor in account 1115 represent labor items that don't go into gas-making labor and purifying labor, which are handled in 1106 and 1111. These items of sundry labor in 1115 are the general work around the yards. A portion of the man's time running the booster and exhauster and a portion of the time in unloading coke and oil, and then any small repairs around the plant go into this account. Line 1106 under the head of Gas-making Labor, covers all labor from the coke or coal bin or pile into the generator house and into the outlet seal boxes. This includes water gas making and all assistance for tinkering and removing the ashes and the necessary attention to apparatus, tanks, meter, motors, pumps, blowers, engines, and also cleaning out the seals and water gas making boxes. Between item 1106, gas making labor, and the labor under item 1111, purifying labor, we have the work in handling the gas beyond the seal. It goes to the relief holder and from there the exhauster pulls the gas through the condenser and scrubber and on out into the purifying boxes and you have one man looking after that exhauster all the time and we try to apportion his time and he is doing some other work part of the time. He gets $2 a day. About two-thirds of his time is devoted to this work. The labor necessary after the gas leaves the purifying house is that of the tending the booster. The booster is run for a while in the morning, at noon, and again in the evening. That item is now charged to distribution as the gas is then leaving the storage. Up to 1912 it was charged to sundry labor in 1115. Item 1115 represents labor also in keeping things generally speaking in good shape around the plant and there is always some little thing that comes up and needs attention and that means that his time will be charged to Sundry
933 Labor account. Item 1113 is General Works Repairs, and pertains only to the buildings and not to the apparatus.

934 GEORGE A. MONTGOMERY, being recalled for further cross-examination, testified as follows, pages 1984 to 1987, Vol. II, original record:

Cross-examination by Mr. Morning:

The men employed whose time is charged to account 1115 are, on the exhauster, a man by the name of Yawney, the man on the booster, Frank Martinsen, and the man who cleans up round the buildings every day, Joe Gagel. Then there is a man called Connors on at night, and J. F. Yawney, a son of the other Yawney. The latter is the general repair man around the plant and part of his compensation goes into this item. The amount depends upon

what he is doing. If he works on the buildings it goes into 1113. If he works a week on the blower of the water gas set that time would be charged to the gas making account. The time-keeper at the plant keeps track of this time and makes the apportionment to the different accounts. The total amount of his time charged to these different accounts should agree with his pay-check. Also the regular pay-roll would elucidate this one account. It gives the names of the employees at the gas works and the amount of their check. That amount is checked off and it is distributed over this classification so that a portion of that time would be charged to one account and another to another, depending upon what the man was doing during the period covered by the pay-roll. The time-cards are sent into the office and the pay-roll is made from them. The time-cards are the primary evidence upon which the account is built up.

935 GEORGE A. MONTGOMERY, witness for the plaintiff, being recalled for further cross-examination, testified as follows: Pages 3234 to 3241 original record.

Cross examination by Mr. Foster:

There have been no special agreements made for the price of gas to be charged in the city of Lincoln since I have been manager and I do not know of any such agreements now in force which were made prior to the time I became manager. If there were any I would know about them. I do not know anything about refunds made to V. Timmitch located at 822 O street. I would have to look it up. I have never heard of numerous refunds for over-reading gas meters at other places. I know of some instances where deducting meters have been installed. That is not generally a practice but in some buildings where it is impossible to serve a consumer on the second or third floor, without putting his gas through the main meter in the basement, then a meter is put in and the consumption on the meter is deducted from the main service meter in the basement and it shows up in the form of a deduction or credit. Voucher No. 5[illegible]3 to the Lincoln Coffee & Spice Mills, dated August 3, 1908 is a statement on the gas bill of that date for $14.05. That is all I can tell you about it. If there are any bookkeepers here now who were here at that time they would probably know. Possibly Mr. Adams, Mr. Phillips or Mr. Shuff would know. I can give no further explanation than what appears on Voucher 5285 of September 4, 1908 for $10. statement of gas used at 8th and Q streets signed by Lincoln Coffee and Spice Mills and same is true of voucher No. 5364 dated October 5, 1908 $10.57 to the same concern. Unless the words "Account R and S rates gas" on Voucher 2839 means readiness to serve, which is about the same thing as a minimum charge, I am unable to explain it. Unless the notation "Doherty rate gas" on Voucher 2982 April 30, 1907 on the receipt of the Lincoln Coffee & Spice mills for a rebate of $9.27 means that it was the regular Doherty rate. I am unable to explain it.

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936 The Doherty rate is based not only upon the consumption of gas and the demand, but for instance, if you have a large gas consumer who used 50,000 feet of gas in an hour and for only one hour in the day, he would have an excessive demand charge, that is, the demand within this short space of time and for the other 23 hours he is not using gas at all. Now another consumer that would use the same amount of gas during the 24 hours uniformly distributed throughout the day, say for 18 hours, his demand on your mains would be nothing like as great as the fellow who takes it all in one chunk; yet the total consumption of gas is the same, so the Doherty rate was first used to take care of that situation and the more the consumer uses the rate automatically adjusts itself, decreasing per thousand feet used, but whether this Doherty rate was in effect and supplied to this customer I can not state. The Doherty rate over the straight meter rate takes care of an excessive demand over a short period and that man would not be entitled to the same consideration as the fellow who has the same consumption spread out over several hours. I know nothing about the consumption of gas by the Lincoln Coffee & Spice Mills except that they are a general consumer. From the nature of their business I would imagine they make a steady use of gas throughout the business hours of the day and the same is true of Timmitch. He is the ice cream cone man.

937 GEORGE A. MONTGOMERY, a witness for the plaintiff, being recalled for further cross-examination, testified as follows; Pages 3304 to 3316 original record.

Cross-examination by Mr. Foster:

I understand that the firm of Sloan, Huddle & Company were employed by our company to do some work in connection with this case in the way of a valuation, but I do not know what the nature of the work which they did was, except that it was relating to the work of the Wisconsin Commission. I do not have the report and have never seen one, and I don't know just what was paid them. Exhibit 382 is a statement of account of V. Timmitch taken from the consumers' ledger, showing the consumption of gas, the total gas amount in dollars and cents and the rebates in dollars and cents and the net rate per thousand. The net rates per thousand charged Timmitch were 89.8 cents, 90 cents, 92.7 cents, 80.5 cents, 81.20, 81.5 cents, 74.3 cents, 81 cents, 89.5 cents covering a period from March 6, 1911 to August 5, 1911. That was a Doherty rate. On the Lincoln Hotel account they were given no rating at all. Appliances were put into the Lincoln Hotel as an experiment, with the understanding that if they could get as good results cooking their meats, etc., with this gas apparatus, as they were previously getting with their coal range, etc., that they would then enter into a contract for gas and keep the appliances. This was tried out for these five months and at the expiration the appliances were discarded because they claimed they could do better with the old coal range. Now this rate from May 1st to June 1st they consumed

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19,600 cubic feet, the gross amount in money was $23.50 and there was a rebate of $7.44. From June 1st to July 1st they consumed exactly the same amount of gas, but the rebate was $6.84, so there is evidently no record of just what the rate was, except that I suppose it was an experiment in putting the appliances in there. The net rate per thousand for the first month was 82 cents, the second 80½ cents, the next 71 cents and the next 61 cents, beginning with May 1, 1911 down to September 30, 1911.

938 The Lincoln Hotel service was discontinued then, but the service for Timmitch has been continued down to the present time at the same rate. The Lincoln Hotel pays the regular rate. Exhibit 383 is a statement of the account of the Lincoln Coffee & Spice Mills from November 26, 1906 to May 1, 1911 showing the consumption of gas in cubic feet, the total amount of money in dollars and cents and the rebates in dollars and cents and the net rate per thousand cubic feet. I will have it extended down to date. About the removal of the rebate slips in the Lincoln Coffee & Spice Mills account from the regular files, I inquired into this. If you will notice the voucher we have here, it is stamped with a rubber stamp, Lincoln Coffee & Spice Mills and signed by the manager and secretary of that company. I remember that those slips were sent down to their office and they were stamped with a stamp in their office and brought back here and I suppose it was carelessness about not sticking them in with the vouchers. They tell me that sometimes these slips are not returned until after the voucher is made up, although the amount of the rebate is included in rebate voucher for rebates and allowances. The consumer signs that rebate slip showing that he has gotten credit for it and then all of the rebate slips for each month should be pinned together and attached to the voucher as you saw those yesterday, but these going down to their office and not coming back at once is the only reason I can account for their being out of place. There was quite a bunch of rebate slips from this particular account lying loose last night all stamped and signed by Simpson, the manager. Exhibit 382 and 383 offered in evidence. Exhibit 384 is a telegram to Mr. B. C. Adams from Henry L. Doherty & Co. under date of January 4, 1910. I don't know anything about the meaning of the telegram nor what it referred to. I have been with the company here in active work since last March. I was on the company's pay roll from February 1912, but I was away until last March tied up on some litigation in Montgomery, Ala., in connection with the Doherty property there. I made five trips down there and my stays varied from two weeks to two months and I also had to go to New York in connection with that litigation. I was drawing $200.00

939 a month during that time from this company. Since I came to Lincoln the officers of this company have been the same all the time, with the exception I have taken Mr. Adams' place. Exhibit 385 is a night letter to Doherty Operating Company, 60 Wall Street, New York City, under date of June 23, 1910, from the Lincoln Gas & Electric Light Company, per B. C. Adams. Exhibit 388 is a copy of a letter addressed to Henry L. Doherty, 60

Wall Street, New York City, signed by the General Manager, whoever he was, under date of May 4th, 1909. I do not know whether it was the general manager of this company or not. After reading the letter I would say that it was signed by the manager of the Lincoln Gas & Electric Light Co. and was a part of files of that company. Exhibit 387 is a letter addressed to the Lincoln Gas & Electric Light Company signed by the Doherty Operating Company by Lewis S. Musil, dated March 11, 1910. Exhibit 386 is a letter addressed to the Doherty Operating Company, New York, signed by the general manager of the Lincoln Gas & Electric Light Company, dated May 18, 1910. Exhibit 389 is a letter addressed to Frank W. Freauff, New York, signed by the general manager under date of July 2, 1910. As far as I know these are all part of the records and files of the Lincoln Gas & Electric Light Company. In Exhibit 389 the Frank W. Freauff referred to is the same man that was then Vice President and now President of the company.

940 GEORGE A. MONTGOMERY, recalled for further direct examination, testified on behalf of the plaintiff as follows: Pages 4051 to 4059 original record.

Direct examination by Mr. Strode:

Exhibit 424 is the report of the gas department for the year ending December, 1913, showing the manufacturing cost, distribution cost, etc., with the amount of revenue. It is from the records of the company and is correct. Exhibit 424 offered and received in evidence.

Cross-examination by Mr. Foster:

This was completed in my office about the 6th day of January, 1914. The report is under a different classification but contains practically the same data as the reports for the former years. It is a new loose leaf form so that it can all be written in with typewriter. The other was in book form. The classification numbers are different, but are in form and the difference- appear for themselves. I do not know anything about the nature of the service rendered by Sloan, Huddle & Company and I have seen no report on correspondence of that work in the files. I will be glad to make a search to see whether there is any correspondence relating to it. I know that there is an item of expense in the 1913 account, of money paid to them, but I don't know what we got for it, I wasn't there at the time.

941 R. E. PHILLIPS, being first duly sworn, testified on behalf of the plaintiff as follows. Pages 880 to 911 original record.

Direct examination by Mr. Strode:

I am, and have been since February 1, 1911, Secretary and Treasurer of the Lincoln Gas & Electric Light Company. In my office is kept a record of all of the transactions of the company. These make

up the monthly reports which are sent to the New York office. We keep a summary of the receipts and disbursements of the company. I have been with the company since 1907 on different work. For two months immediately prior to 1911 I was general bookkeeper. I worked on the ledgers of the company for two and a half or three years. Those ledgers contained the accounts of the individual customer on which the meter readings are entered each month, and from which the bills are made and sent to the customer. From those records we kept the total of the bills for each month. We have four bookkeepers, each in charge of a division. I have with me the records of my department showing the receipts and disbursements of money by the company, beginning with January 1908 down to January 1, 1913. We have two books, the gas manufacturing book and the financial and comparative reports. The latter is a report of the receipts and disbursements. The gas manufacturing report shows the total gas sales for the year 1908 and the total operation expenses. It explains each one of the departments that make up the total operating expenses. There is no record there of the amount paid out in interest or the amount set aside for depreciation. It shows both the amount of gas manufactured and sold, number of customers and cost of manufacturing the gas. The items of cost are classified in these records by the month. The financial report deals with both gas and electric departments. A balance sheet is made up at the end of each month and also at the end of the year. It shows how the money was expended and the net receipts.

On the first page of the manufacturing book, beginning January 1, 1908, under the heading "Gross earnings" is shown all of
942 the gas sold, taken from meter readings, during the month, for all purposes, embracing domestic, fuel, industrial fuel power and street lamp. Gas is not now used for street light. In this particular place the amount sold is in dollars. It shows the amount charged which is not necessarily the amount received. Some of the customers may not pay their bills, and there may be some adjustments. The total amount charged for January, 1908, was $21,281.49, charged at the rate of $1.20 per thousand. The next column on the right shows increase or decrease over same months of previous year. There was an increase over January 1907 of $1,406.13. The next column shows the amount per thousand that we had charged on the books of the company for gas that sold in that particular month, and is compared with the same month of the preceding year. The first column includes neither rent nor contingencies of that kind. We do not really get $1.20 per thousand for the gas. This second column shows the amount per thousand actually received. In January 1908, the receipts per thousand were $1.19. In January of the previous year they were $1.1934.

The next subdivision "meter charges on minimum bills", shows the amount received where the amount of gas used does not exceed 300 feet. The minimum charge is twenty-five cents per month and this column represents that item. The next column, "forfeited discounts", represents the discounts which the customers have for-

feited. The rate is $1.20 if paid by the 6th of each month. An additional amount is required after that, and this column is this additional amount. As a rule some excuse is offered and the customers are allowed the discount, even though paid after the sixth. The next line shows the total of all of these items. They are all charge items. The next column shows the uncollectable accounts during the month. In this instance it is $250.00. This is an average figure taking it month by month. The minimum charge for gas totals $51.05. The forfeited discount was $270.08. The total of these three items is $21,602.62. The amount credited after
943 deducting the uncollectable is $21,352.62.

The next line is under the heading, "operating expenses". The pages following in this report show in detail the items which make up this item. Under the headings of manufacturing department, distribution department, collection department, and general department. The total manufacturing cost for January 1908 was $8,008.63. This is made up of the items, plant account and output expense. The distribution cost for the month was $2,015.24. That is made up of plant, consumers and meters. The cost of collection for the same month was $711.75 divided between consumers and meters. The general expense for this month $1,477.31 which covers executive salaries, general office expenses, office rent and local expenses, such as taxes, etc. The details are shown in this report. The total of these four items is shown in a summary on the first page. This expense is apportioned back upon a basis of so much per thousand feet for the gas sold. The expense for each department is shown at so much per thousand feet, also the expense per customer and per meter. It shows the distribution and collection and per meter.

Under the summary, "Sales population", the first column shows the gas sales in cubic feet for the current month and next column the same month of the previous year. The next two columns show the meters in use during the same two months. The next two columns show the average sales per meter in cubic feet for the same two months, and the next two columns the average sales per capita cubic feet.

The next, under the heading "Consumers", shows the total number of consumers by the month that number added and number taken away during the month, and giving the total at the close and a comparison with the number at the first of the year.

The next summary, "Consumers data", shows in cubic feet for both years the average sale per consumer. This is all finally combined in an annual report. The details of each of these summaries follows in the report for the current months.

On the following page of the report is given the different
944 items that go to make up the manufacturing cost for coal gas for that month up to the time the gas is put into the holders. That is divided into the cost of the coal carbonized, the enricher, deducting the credit for residuals as coke, tar, ammonia, and getting the net cost of the coal gas manufacturing materials, and then follows the cost of the retort house labor, bench repairs,

retort house, expense. Then follows the total cost of generating the coal gas. Then follows the cost of the steam that was used, the cost of purifying the coal gas, the labor expense and repairs and cost of purifying the coal gas materials, and general works, building repairs for the coal gas and the general works apparatus repairs for coal gas; then comes the sundry labor for coal gas, then follows general works, expense of supplies for coal gas, general supervision for coal gas, district holder stations for coal gas; then showing the total of the cost of purification and storage, and finally showing the total cost gas in the holder for the month. This does not include any charge on account of depreciation. It includes nothing but the items given. It does not include overhead expense and general expense, such as salaries of the executive officers, and legal expenses, and matters that are not directly connected with the manufacturing of gas. Then follows the coal gas statistics. This shows in cubic feet the coal gas that was made during the month, and for the same month of the previous year. The next line shows the coal used, and the next shows the coal in tons which was carbonized. The next line shows the yields per pound of coal. The next line shows the cost of the coal per ton. The next line shows the average number of retorts in use. The next line shows the average charge retorts. The next line shows the average charge per retort for twenty-four hours. The next line shows the average make per man charged in twenty-four hours. The next line shows the coke made per ton for the coal carbonized. The next line shows the amount of coke used for bench fuel. The next line shows the amount of coal used for bench fuel. The next line shows
945 the receipts per ton for the coke coal. The next line shows the receipts per ton for the coal carbonized. The next line shows the receipts for tar per ton of coal carbonized. The next line shows the receipts for tar per gallon sold. The next line filled in shows the candle power.

The next page of the monthly report gives in detail the cost of manufacturing water gas and also the water gas statistics for the current month, and for the same month of the previous year. The items included in this account are steam for generating water gas, generator fuel and enricher, and then follows the total cost of the water gas making material, then there is a credit for the water gas tar residue, and the net cost of the water gas manufacturing material; then there is a statement of the cost of the gas making labor repairs and water gas generating apparatus, water gas house expense and then the total cost of generating water gas. Then the cost of steam and labor purifying water gas, expense in repairs purifying water gas material. Generator works repairs to buildings, general apparatus repairs, sundry labor, work expense and supplies, general supervision district holder, work expense and supplies, general supervision district holder station, and then follows the total cost of purification and storage and finally the total cost of water gas in the holder for the month. One page shows the total cost of the manufacture of coal gas in the holder and the items going to make up that cost and the other page shows the total cost of the manufacture

of water gas in the holder and the items going to make up that cost. These items are assembled from the accounts payable journal. The items of expense during the month are posted to this journal under these subdivisions. They are entered on the journal from the invoices sent from the firms of which we buy the material or supplied from the pay roll, which are made up from the time cards sent in by the men who do the work, and from the requisitions on the material used from our stock. Each of the items in this monthly report can be checked back through the journal back to the
946 original vouchers for material and labor. The vouchers and invoices are in the records of the company and the reports can be verified. I fill out these reports of the cost of water gas and the cost of coal gas for the different months. These reports have to be accurate to enable us to get a balance of our books. At the bottom of the page are some statistics showing the B. T. U. of the mixed gas in the holder. They are based on daily tests made by the foreman at the gas plant. He uses a calorimeter. On the next page is shown the manufacturing cost of the mixed gas giving the total cost of all gas made during the month and the total amount of gas on hand and made during that month. The first part is merely a summary of the two previous pages. As to the gas account in cubic feet, the first line shows the gas on hand in the holder the first of the month, both for this year and the preceding year, and shows the increase or decrease and the per cent. The second line shows the coal gas that was made during the month and the third line the water gas that was made during the month. The next line shows the gas purchased during the month; the next line shows the total gas made and purchased during the month. The next line shows the total of the gas made during the month and the gas on hand at the first of the month. The next line shows the gas on hand at the close of the month. The next line shows the gas delivered to the mains during the month, and the next line shows the gas sold during the month. The next line shows the gas used by the company, and the next line shows the total of the last two. And the last line shows the gas unaccounted for. The gas unaccounted for is the difference between the gas placed in the holder and the amount sold and used by the company, but does not include the gas which is sold and not paid for. The unaccounted for gas is by loss of leakage, by loss through theft and condensation. On the next page is the record of the distribution department. It shows the items charged for the distribution of the gas. They are taken from the accounts payable journal, the same as the manufacturing cost. The items in this section are street main maintenance,
947 service maintenance, street department expense, pumping gas, meter expense, meter department expense, setting and removing meters and gratuitous work. The next line shows the total of the items enumerated. The next line shows the amount of gas in dollars and cents that was lost and unaccounted for. This is added to the distribution department expense as it has been previously deducted from the manufacturing department expense.

The item "Gratituous Work" covers work done by fitters and complaint men in looking after trouble and leaks and heavy bills on the customers premises. We have men to adjust gas ranges so that they will work properly, and that is done without expense to the owners of the range unless some great amount of repair work is necessary. The next department shows the data of the distribution department in the meter account. This section shows in detail the number of meters by sizes which the company owned the first of the month. Any that we purchased during the month and the total owned by the company at the close. It also shows the number condemned and destroyed, and gives the correct total at the close of the month. The next line shows the number of meters in use by sizes. The total and the number in stock, and the total in use and in stock, which must agree with the total owned. Another line shows the total in use during the year and another line the increase or decrease. This data comes from the distribution department which keeps a close check on the meters as they are bought, condemned, set up for the customer or removed. We have two sets of meter books; one is the card system by meter number and the other is the ledger system. They are both kept up to date, and must check up at the end of each month. The next page shows the cost of the collection department of the gas branch, showing in detail the cost of reading the meters, collect, clerical salaries, collection office expense, rent of collection office, delivering bills, cost of outside collections and finally showing the total collection expenses of the month. Outside collections include
the salary and wages paid to the outside collectors. The col-
948 lectors in the office are referred to as clerical help. The next section shows the collection department data, the cost of reading meters; the first column showing the total number of meters read during the month, the next showing the total number of hours and the next the average time of reading each meter. The next column shows the number of meters read per hour, and the next column shows the cost of reading each meter. The next column shows the number of meters that were not read the first time, but got the second reading, on account of customers not being at home or for some reason the readers not being able to get in the house. In the next column shows the number of hours it took to read the meters the second time, and the last column shows the cost of reading each of these meters. The next section shows the clerical salaries that were paid out during the month, and the next column shows the cost per customer of clerical salaries. The next column shows the cost per meter. The next column, the number of clerks and the next the average pay of these clerks. The next section shows the expense of delivering the bills. The next column shows the number of bills delivered by mail and by company's employees and the number of bills called for at the office. The next column shows the labor cost of these various items. The next column shows the expense. The next column shows the total labor and expense and the last column shows the total amount of expense and labor per bill by mail, by company's employees and those called for at the office, and the total. The next section shows the collections.

The first column shows the number of bills collected at the office by mail, at the office by tellers and the number deposited in the banks and the total at the office. The next number of bills collected by the company's salaried collectors, and then the total number of bills collected. The next column shows the amount of enumerated items; showing in the first line the total private gas bills, and the next line the balance outstanding at the close of the month. The next line shows the per cent of the total number of bills collected.

The next the per cent of the total amounts collected. The
949 next column shows the cost of collecting in each of the classes enumerated. The arrears for the current month is shown in detail in the next section, showing the amount charged to arrears, the amounts collected on previous arrears, and the total collection of each months arrears and finally giving the balance outstanding in arrears at the close of each month.

R. E. PHILLIPS, being recalled for further direct examination, testified as follows: Pages 920 to 954 original record.

Direct examination by Mr. Strode:

On the following page under the title "Executive Department Journal Expense" is a section showing the total expense for the current month and the same month of the previous year, with the unit figure of cost per thousand sold on the following items: Executive salaries, General clerical salaries, General Office expense, Incidental expense, Rent of Executive office, Local expense promoting new business and taxes, and then a total of the General expense. In the following section is given an analysis of the expense account of the new business department, which makes up a part of the total in the section above. The items in this account are advertising in newspapers, circulars and distribution bonuses, commissions, exhibition expenses, salaries and wages and miscellaneous expense, cost of appliances sold and appliance expense. The total cost of appliances less the amount received for appliance during the month, and showing the loss or profit on those sold. Next the expense of piping connections seggregated between the item of labor and miscellaneous expense, giving the net cost of expense of appliances sold connected during the month, and next the total cost of all the expense incurred in the new business department for the month is given. The last column shows the cost per customer for each one of these various items. The next section shows the appliances introduced and connected. The number of new ranges,

the number of old ranges connected, the number of hot plates
950 connected, the number of water heaters connected, the number of heaters and grates, and miscellaneous items connected and also the number of feet of piping used for the connections of these various appliances, and giving in unit the number of feet of pipe per appliance, and the cost of pipe and fittings for appliances and the cost of labor in connecting those appliances and the total cost of connecting appliances and the total cost of connecting per foot of pipe. In another section is given the illuminating

data such as houses piped by the company; houses piped by contract, gas arcs connected, and the number of miscellaneous illuminating appliances connected during the month. There is also a section for industrial fuel and power on the same line. The data which follows is of a more statistical nature and deals with the pay roll, special expense account, service pipe laid, mains laid and details of gas sales. The following page shows the gas sales, showing in the first column of cubit feet the gross sales, the next column the amount in money and then the same items for the same month of the previous years, and the increase or decrease in cubic feet and in per cent. The next line shows the amount that has been rebated on account of overreading or fast meters, and the following lines gives the total of net sales. On the last page is shown the low pressure street mains in feet and in miles according to size showing the amount of mains by sizes in use the first of the year, the amount laid each month and finally the total amount in use at the close of the month. This record with reference to the mains is in each monthly report back to 1902. Under the subdivision "Cost of Street Mains" is shown the cost by sizes of the mains laid during the month, divided between the labor and the material and then the total cost. On the next page is shown the number of service pipes laid during the month; the number in use the first of the month and the number in use at the close of the month. That is carried through each month back to 1903. The next subdivision is a statement of the cost of installing services divided between the labor and material cost, and showing the total cost.

951 The next section shows the number of appliances connected the close of the month, the number added during the month, the number taken out during the month, the number connected at the close of the month and divided between ranges and specifying the various kinds of appliances. The next page deals with special expense accounts showing the amount of money charged to these accounts during the month, and the item and the department into which they are to go. These items all come from the accounts payable journal and are shown in each month's monthly report. On the next page under the heading "Steam Account" is shown the amount of steam used during the month in the manufacture of gas and the items chargeable to the various departments, and finally the total value of the steam used in the manufacture of gas. The gas subdivision "Barn Account" shows the expense charged to the barn, what the items are. This section is taken from the account payable journal and goes into the various operating accounts. Under the "Rent Account" is carried a detailed statement of the amount expended for rent. Approximately 80% of the rent is charged to the gas department, the apportionment being made on the number of consumers. The "Barn Expense" is apportioned in the same way. The next page shows the pay roll data; the details showing the make up of the pay roll is shown. It includes the pay roll of every department of the gas branch.

These reports from month to month are accurate. I have here the monthly report, month by month, from January 1, 1908, to

January 1, 1913, for the manufacturing expense of the gas department. Annual reports are made under my supervision from the data that came in the monthly report. The identity of the items and such division in the monthly report is maintained and followed out in the annual report. The annual report for the years 1908, 1909, 1910, 1911 and 1912 are as nearly accurate as it is possible to make them. They are checked against the monthly report and they have to balance before they are sent in. Exhibit 26 is the annual report for the year 1908 for the gas department. Exhibit 26 is offered and received in evidence.

952 Exhibit 27 is the annual report for the year 1909 for the gas department. It was made up in the same way and under the same conditions as Exhibit 26. Exhibit 27 is offered and received in evidence.

Exhibit 28 is the annual report for the year 1910, for the gas department. Exhibit 28 is offered and received in evidence.

Exhibit 29 is the annual report for the year 1911, for the gas department. Exhibit 29 is offered and received in evidence.

Exhibit 30 is the annual report for the year 1912, for the gas department. Exhibit 30 is offered and received in evidence.

Cross-examination by Mr. Foster:

I am unable to say what is included in item 1017 in Exhibit 26. It is probably labor and material put into buildings at the general works, chargeable to the coal gas department. The details of this item are not shown in the monthly report for 1908, but I think it shows the various items that go to make up that figure under a similar heading. The details will be found in the accounts payable journal. The account number is 1017. I am unable to tell what the character of the items are without looking them up. I know it does not contain what might be considered permanent improvements, because the books are audited once a year by an auditor, and if he finds anything that would be considered of a permanent nature, he would take them out.

Item number 1018, "General Works, Apparatus Repairs Coal Gas", includes the total amount that has been charged through the various months of the year to this particular account, general works, apparatus and repairs. In order to say what it covers we would have to have the details, which are found in the accounts payable journal. Nothing pertaining to the electric department would be put into this account. The man who is on the job and oversees the repairs charges the expense to the proper account. In this account,

953 item 1018, there is never any item, part of which is charged to the gas department and part to the electric department, as that only includes items of expenses and repairs on the buildings at the plant, which is purely gas. There are no other buildings at the plant, which are used jointly by both departments. The expense of repairing work would be charged to this account. The boiler house is used jointly, but the electric department is charged with keeping it up and the gas department pays for its portion by being charged for the steam which it uses each month.

Item 1021, general supervision coal gas, $800.99 for the year 1908, is made up of the wages of the foreman of the gas plant and whatever help he has at the plant in supervising the manufacturing. Item number 1100, "Steam for generating water gas", is transferred from the electric department, where the boilers are situated. The steam used by the gas department is measured by a meter, and it is charged for the steam used. The figures $2,421.07 were steam in item 1110, and comes from the accounts payable journal. That represents the amount of steam taken from the electricity plant during the month. This steam is used for the purification and storage of gas. The amount is obtained by the foreman at the plant by meter readings and tests. I think the foreman ascertains the amount of steam used by taking the amount necessary for an average run of gas, and then figures the total monthly output and compares that with the meter and the foreman of each plant makes the apportionment. The figures go into the accounts payable journal on this account, and are taken from the transfer vouchers made at the end of each month. This is shown in detail on page 20 of the report, line 1110. There has been some additional expense charged directly into this account. The amounts charged to the electric department, will be found in the electric department's report. The foreman makes the divisions at the end of each month.

954 The figures in Exhibit 26, come primarily from the foreman's report at the end of each month. Item number 1111 covers the labor incident to purifying the gas, and expense of repairs to purifying house and apparatus. Any repairs of a general nature would be included in item 1113, "General works repairs and buildings". Item 1115 covers sundry labor around gas works incident to the purification and storage of the gas, which is not itemized into other accounts of this department. Item 1117, includes the salaries and wages paid to the foreman of the plant and those who have supervision over the manufacture of the gas. We have one foreman in the water gas department and pay him $110.00 per month. Some of the general superintendent's salary goes into this account. Some of his time is also included into item 1021, supervision of coal gas. Part of the overhead expense, known as general supervision, is also apportioned to the electric department. I think it is divided half and half. It is split up into different accounts. I make the apportionment. Part of his salary is also charged to the distribution department.

Item number 1116, works, expense and supplies, $2,109.35 covers the gas and electricity used at the plant for lighting and heating purposes, the water used for general purposes, stationery, telephone and the incidental expense of superintendence, laboratory apparatus and supplies. It is easy to tell where expenses of this kind are used, and it is charged direct to that department.

Item 1257, represents cost of the gas lost and unaccounted for and cost of the gas used by the company. We find the amount of gas lost or unaccounted for by meter readings at the holders and multiply that by the cost per thousand cubic feet in the holder. This was figured at forty and eighty-nine hundredths per thousand.

It is shown on the first page of the financial report, in column one, line 3 page 4. Item 1300 covers labor and material used in maintaining the mains, such as replacing mains or fixing leaks The detail is found in the accounts payable journal, under the same number.

In item 1302, the sum $940.39 "Charge Consumers", represents the amount that has been charged to the street department
955 expense in the accounts payable journal, and is brought about by the fact that we have consumers on the mains. It is the amount charged that is incident to keeping up the mains and services incurred through the use of gas by consumers. It does not mean that it is charged to the individual consumers, but is simply the amounts that are charged to the flat account, and is the amount of money which would be expended if there were no consumers on that main. The other items in this account are chargeable to the fact that there are consumers on the main. The items in account 1302, are expense for repairing street department tools, materials for such tools, including gas tanks, water hose, labor, etc. and expense incurred in pumping drips.

Part of the expense of superintendency, part of barn expense and expense of superintendent's horse repairs to the buggy and harness, taking street pressure and part of the salary of the superintendent of distribution and the wages of the foreman and men in this department. It is an operating expense. No part of it is for new service pipes or mains. Nor is any of it for relaying of any old service pipes. I can not tell the particulars making up this sum, without referring to the accounts payable journal. The account covers replacing of tools used in this department, but those tools would be charged to the construction account. The construction account appears in the financial report.

Item 1405, outside collection, $856.52, represents the amount paid to collectors during 1908, outside of our office. The collectors draw from $50.00 to $65.00 a month. They collect also for the electric department and their salaries are apportioned 80% to the gas department and 20% to the electric department. That is the relation which the gas consumers of the company bear to the total number of gas and electric consumers. It has no reference to the income of the two departments. The gross earnings of the gas department during 1908 were $234,347.51. And of the electric department $129,283.69. Item number 1402, collection, office expense,
956 covers incidental expenses of collection, office stationery, telephone and sundry supplies.

R. E. PHILLIPS, recalled for further direct examination, testified as follows: Pages 1684 to 1740 original record.

Direct examination by Mr. Strode:

Exhibit 101 is a statement made by me from 1902, to 1912 inclusive, of the number of gas consumers and the number of electric, served by the Lincoln Gas & Electric Light Company. It also shows the percent of the total of each, and shows the increase

from 1902 to 1912. It was compiled by me from the records of the company. Exhibit 101 is offered and received in evidence.

The Traction Company also has an electric department, and they have about the same number of consumers that we have. Prior to 1902 the number of electric consumers was smaller, although we have no record showing the number previous to that year.

Recross-examination by Mr. Morning:

Exhibit 101 includes all consumers on the company's line, including Havelock, University Place and the State Farm. The figures show the consumers connected at the close of the year. We sell electric current to Havelock to light the public streets. It is sold to a local company at wholesale rate. That is not included in the statement. University Place buys from the Traction Company. We sell gas direct to the consumers in Havelock. I have general charge and supervision of the bookkeeping department. I have a record of the revenues the company secures from the sale of its bonds and notes. I will prepare and produce a statement showing the revenues of the company as received under the present management from the sale of its stock, bonds and security and money borrowed on promissory notes with the date of the different transactions, and will show how the money was spent. The present bonded debt of the company is $1,129,600.00. That does not include
957 the $500,000.00 of notes recently sold. There are $40,000.00 additional notes in local hands, held by banks of the city. Two of them were just renewed on August 17th and 9th of this year. They were originally given in the latter part of 1911. We were in pretty hard straights at that time and needed money for construction work, and to pay interest on bonds. We put in a new water gas set at the plant and we were extending quite a few mains and lines at that time. We secured the money from the First National Bank, the Central National and the Nebraska State Bank. Officers of each of these banks testified here on behalf of the company. That $20,000.00 is the same item that is referred to on page four of Exhibit B of Mr. Lea's report bills payable. These notes and the $500,000.00 notes sold in New York represent the amount of capital independent of the sale of bonds. The $500,000.00 notes were sold at 97c. on the dollar and the money was used to retire $333,000.00 of matured outstanding bonds and $120,000.00 of notes that the company had outstanding at the time. A small deposit was left with Doherty and Company in New York City. When these bonds were paid the stock was left outstanding as partial collateral security for the $500,000.00 notes. These bonds are counted in as part of the bonded debt, and the $333,000.00 is shown on the other side of the sheet as an asset.

We keep a separate account which covers additional equipment or items of a nature which would increase the value of the property. Nothing of a replacement nature or bettering expense or maintenance expense is charged in this account. The manager and myself

determine whether or not an expenditure should be charged to the construction account or to the operating expenses. All new extensions are charged to the construction. All replacements are charged to maintenance and they would go into the monthly report as an operating expense. If we were to put in a new water gas set and discard entirely the old set, the original cost of the old set would be deducted from the cost of the new set, and the difference charged to construction. We have purchased two new water gas sets
958 in recent years. If the old water gas sets were not discarded, and were still in condition to be used, the new water gas set would be charged entirely to construction. I do not think we have charged off any part of the old water gas sets. In case of a replacement such as boilers, the cost of the boilers complete would be charged into a special account and closed out through the monthly operating expense of the company as a maintenance of the plant. If the new part replaced exceeds the cost of the old, the difference is charged into the construction account. If a piece of apparatus originally costing $10,000.00 was discarded and replaced by a piece costing $15,000.00, we would charge $5,000.00 to additional equipment, and $10,000.00 to maintenance and expense. The $10,000.00 would be carried through and charged off through the monthly report in small amounts during the probable life of the new machine. This has been the practice of the company so far as I know since the present management took charge. If the amount is small it is charged off in one month as a current operating expense.

Items not exceeding $100.00 to $300.00 are charged off as current operating expense. When they exceed this sum, or where it is so large that it would make an abnormal inroad on our receipts, we apportion the cost of replacement from the probable life of the article replaced. An old article is carried on our books as being of good value until it is discarded entirely. We are carrying the old coal gas apparatus at a valuation of $80,000.00, while we have not used it for four years. All expenditures have to go either into the operating expense or construction account. As far as I am able to say the plant is now in good condition. The amounts we have paid out under the present management have been sufficient to maintain the value of the plant and keep the investment unimpaired. That is the method employed by the company, to take care of the depreciation. We do not set aside any part of the gross receipts to take care of depreciation. In the final report there is a depreciation charge of $1000.00 per month for both the gas and electric
959 department, but it is know shown in the gas reports and it has not been taken out of the figures here. We do have a depreciation fund, we have the account but not the money. We keep the account so that in case we ever pay dividends this amount will be deducted from the earnings before they are declared. None of the reconstruction work has ever been charged against this account. Instead of setting aside the actual money and creating a fund, we have been expending the revenues of the company as we need them

to keep up the plant. The item of reconstruction is the same as a replacement and enters into the operating expense. We have a depreciation account of $1000.00 per month, but we have never had the money. We have not been charging reconstruction and replacement to this account. We have not been charging anything against it. The depreciation account has never been included in our net earning and has never been taken from the gross earning, and has not been used as an operating expense in the gas department. Possibly it was adopted on the presumption of creating a fund during the period of years to reconstruct the plant when it went to pieces by deterioration, but as a matter of fact the company has been taking care of the replacement and reconstruction as it went along, charging it to operating expenses. In the showing of net earnings here, we have not taken into account at all the reconstruction reserve account. The reconstruction reserve account does not appear in our accounts anywhere in the case, it was just carried in the financial reports after we had worked out the net earnings of the gas department. It amounts to about $92,000.00 today. It does not represent any property. We carry fire insurance on all our properties up to their full value. I will produce a statement of the insurance on all of our property. The purchase of the Peck's Grove lots was started before I became Secretary. I do not know what the Company paid for those lots. I will get a statement from our books and give it to you of the cost of those lots. The amount of working capital shown in subdivision five in the banks, December 31, 1912, was the amount ordinarily on deposit in those banks. We
960 have on deposit with Dougherty & Company something more than $27,445.89 at the present time. At the First National Bank there may not be as much there now. At the Central National there is probably on deposit at the present time half of the amount shown in Mr. Lee's report. We have probably now about $3000.00 on deposit with the Nebraska State Bank. We have to carry these amounts on deposit in order to pay our current expenses, bills and pay rolls. Our pay roll averages close to $9,000.00 per month. In addition, we have to pay for coal, coke, freight pipe and oil. In December 1912, our current expenses were approximately for the gas department $17,000.00. Mr. Lee has shown in his report for working capital $71,150.49. This sum is necessary for the gas and electric department. We pay interest four times a year on our bonded debt, June 1st, December 1st and our $500,000.00 notes February 1st and August 1st. We draw 6% on the Henry L. Dougherty & Company account. The bank accounts are all check accounts. They represent moneys accumulated and taken from our current receipts and money borrowed. We had, on December 31st, enough to pay off the $40,000.00 notes, but had we paid them, the next time the interest became due, we would have had to borrow it. The interest we draw from Dougherty & Company is shown as a non-operating income, in addition to the income derived from gas. It is in every one of these reports. I will show it in the statement you asked me to produce of revenue derived from sources other than

operating the gas plant. We carry casualty insurance in all departments outside the office. I do not know what rate is paid. I will ascertain the rate. I am unable to say whether or not the income from interest has been shown here as an operating income. We pay $450.00 per month rent for our offices at 14th. & O Streets, and do not sublet any part of it. Mr. Montgomery's salary is apportioned 80% to the gas and 20% to the electric department. The Superintendent's salary, the salary of the general manager, of the book keepers who keep both accounts, the superintendent of distribution, the store room men, and the purchasing agent and
961 stenographers are all apportioned the same way between the two departments. The expense of the barn, hay and feed, is also apportioned between the two departments and taxes. Insurance is not apportioned. The barn expense is apportioned 80% to gas and 20% to electric, because we have 10 horses and all but two of them are used in the gas department. I believe taxes are apportioned one-third to electricity and two-thirds to gas. The determination of the other items depends upon the manner in which they are used. The items of expense in the office in the keeping of records are based upon the number of customers: 80% to gas and 20% to electricity. Just now 75% and 25% would be nearer for the clerical force. I will produce a statement of the gross receipts of the electric department for 1912. I can produce a statement showing the separate construction account of each department, gas and electricity. I have in my charge the original books and records of the company that installed this plant back to 1875 practically complete. I will produce the records if there are any showing the amounts paid for preliminary investigation and preparing articles of incorporation and expenses of that character incident to establishing the plant. Money spent for repairs or renewals is kept in what we call the operation and maintenance expense account. The items of coke, oil, labor and various repairs for the apparatus enter into this account and replacements. You could pick out of this account the items spent for repairs and replacements. Account Number 2183 does contain all the items of money spent for repairs and replacements and renewals, but I do not know whether there is anything else there or not. The account is devised for the specific purpose of showing the items of repairs and maintenance, but that is not all. It does not mean repairs and maintenance of everything in the plant. We do put in there the account of repairs and maintenance on the particular branches of the plant enumerated in the blank. Other items of repairs and maintenance are not segregated from the operating expenses. I have under my control the records of the meetings of the Board of Directors for both this corporation
962 and its predecessor. I can place these books at the disposal of the City's representatives for examination at my office. At the time the present company took over the company, a new set of books was opened and the valuation was placed upon the property and entered in those books. I do not recall what the valuation was; the books were here at one time. I will examine my records and files to ascertain whether or not there was an appraisal and

produce it if there was. Part of the furniture, when it was purchased was charged to current expenses and part to construction. I can only tell what portion by knowing whether or not there was a replacement or a new piece added. $12,391.00 has been charged to construction; that represents as nearly as we are able to determine, the exact amount we have invested in office furniture and fixtures and charged to construction at the time of this appraisal. None of it was treated as replacement. It was paid for from our current earning, and replacements charged to current operating expenses. Those charged to the construction account were also paid probably out of the current receipts.

Redirect examination by Mr. Strode:

The issuance of the $500,000.00 of notes and the collateral security of $333,000.00 of bonds were presented to the Railway commission. It specified the conditions under which the notes were to be put out and how much they were to be sold for and what was to be done with the money and we have reported to the commission of the disposal of the notes and the amount of money arising therefrom. The Railway Commission required that the bonds be put up as collateral for the notes. It was almost impossible to put out a bond issue at that time, and the notes were issued in hopes that the bond condition would get better. If a coal gas set was taken out and disposed of and a new water gas set was substituted to take its place, the new water gas set would all be charged to construction. However, when we replace a piece of equipment with a similar piece, we charge against the cost of the new equipment the original cost of
963 the old one. If two lengths in a gas main in a block were taken out and a new one put in that would be charged to maintenance. It would not appear in the construction account. If a new main were constructed that would appear in the construction account. We have had a place in our books for dividends, but we have never paid any. There has never been any funds in the dividend account. It is customary to have a place in the books for a dividend account.

Recross-examination by Mr. Morning:

I will go through our records from 1902 to date and make a list of the important items of this plant which have replaced old items and where we have deducted the cost of the old and the cost of the new, and will show where it appears in the record. I do not know whether the predecessor paid any dividends or not. The present company has been paying interest on substantially $1,500,000.00 of bonded debt. Most of the surplus has been put into construction. We have been paying from 5% to 6% on bonds.

Redirect examination by Mr. Strode:

The bonds are on the combined property of the gas and electric light company and interest payments have been made out of the combined receipts.

Recross-examination by Mr. Morning:

I do not know whether or not the bonded indebtedness was increased at or immediately prior to the change in management.

964 Redirect examination by Mr. Strode:

Prior to the time that this company bought it in 1901, I think the gas rate was $1.75 and $1.50. They changed it every two or three years and in 1905 or 1906 it was changed from $1.50 to -1.20 per thousand by this company. If any dividends were paid prior to 1901, it was during the time they were getting a rate of $1.75.

Recross-examination by Mr. Foster:

There is no interest being paid on the underlying $333,000.00 of bonds in the $500,000.00 note issue. The reductions made prior to the $1.00 Gas Ordinance was voluntary on the part of the company.

Redirect examination by Mr. Strode:

Between 1901 and 1906 the company has furnished gas below the requirements in the ordinance voluntarily.

R. E. PHILLIPS, being recalled for further cross-examination, testified as follows: Pages 1939 to 1984, original record.

Recross-examination by Mr. Foster:

In Exhibit 30 under the subdivision Coal Stock, of the item under 2300, $800.00 was charged off on account of shortage. At the close of April, 1909, our report shows that we had 777.83 tons of gas coal on hand amounting to $4,303.73. At that time we stopped making coal gas. This coal was sold to the company's employees, some to the electric plant and there is still a little on hand. That $800.00 was charged off in 1912 and 1913. It was charged into the manufacturing cost of water gas and I believe went in as steam expense.

965 Cross-examination by Mr. Morning:

The $800.00 charged off was approximately $400.00 a year, 1912 and 1913. It was not used in the manufacture of gas that year, but when we were making coal gas it was used and not charged off. For the years 1912 and 1913 it would disturb to that extent the true cost of manufactured gas and to the same extent it would disturb the cost of coal gas in prior years. It did increase the cost of water gas for 1912 and 1913; it should be eliminated for these years to get the actual cost, but it should be added to the prior years.

Redirect examination by Mr. Strode:

From 1906 to 1909 they were manufacturing coal gas. The ordinance in question took effect in 1907. The $800.00 could not

be charged off in 1907 and 1908 and up to 1909 because the error had not been discovered.

Recross-examination by Mr. Foster:

Prior to 1909, I think the company had always manufactured coal gas. At the time we ceased making coal gas, this item threw our books out of balance. I do not know when the variance between the book and the actual stock on hand took place, nor does anyone else.

Redirect examination by Mr. Strode:

The 113.6 tons would likely be discovered once a year when the coal stock gets to a low point. Sometimes our stock got down to a very low amount. We use- to take an inventory twice a year, rather than once a month, as now.

Direct examination by Mr. Strode:

Amendment to Occupation Tax Ordinance identified as Exhibit 144. Tax schedule for 1906 identified as 145. Tax schedule for 1907 identified as Exhibit 146. Tax schedule for 1908 identified as Exhibit 147. Tax schedule for 1909 identified as Exhibit 148. Tax schedule for 1910 identified as Exhibit 149. Exhibits 144 to 149 inclusive forwarded and *and* received in evidence,
966 Exhibit 150 identified as insurance data requested by the city. Exhibit 151 identified as report filed with the State Railway Commission. Exhibit 152 identified as the total purchase price of Peck's Grove property. Exhibit 153 identified as statement showing non-operating revenue from 1907 to 1912 inclusive. Exhibit 154 identified showing gas customers outside of Lincoln. Exhibit 155 identified as statement showing last time six foot six inch water gas set was operated. I have not yet all of the data requested by counsel for the city, but what I have completed I have here. Exhibit 150 is insurance paid by the Lincoln Gas & Electric Light Company, and cyclone insurance from March, 1908, to 1914. However, there are a couple or three policies for three or five-year policies. They cover the property of both the Electric and Gas department. The insurance can be segregated to the different departments. On the Fire Insurance that covers the barns, sheds, wagons, harness, feed, etc., and we charge 80% to the gas and the 20% to the Electric department. The insurance on the holder is all charged to the gas department. The insurance on the buildings at 33rd and X Sts. is all charged to the gas department. The insurance on the roadster is chargeable 80% to the gas and 20% to the electric department. $211.68 is the amount chargeable to the gas department. It represents 10% of the total insurance paid on fire, all of the insurance on the gas holder and 20% of the insurance on the Waverly Roadster and 80% of the premium on the furniture, fixtures and stock accounts. Exhibit 151 was prepared at the request of the city. It is a statement of the report filed with the State Rail-

way Commission on February 7, 1913, showing how the $500,000.00 received from the sale of the notes was disposed of. Exhibit 152 was prepared at the request of the city. It shows the dates of the purchase of the different lots in Peck's Grove and the amount paid for each set of lots. Exhibit 153 was prepared at the request of the city and shows the non-operating revenue received by the
967 company from 1907 to 1912 inclusive taken from the records of the company. Exhibit 154 was prepared at the request of the city, and shows the number of gas consumers outside of Lincoln, January 1, 1913. Also the number of electric consumers for the same time and place. It also shows the gross electric sales for the years 1911 and 1912, and shows the expense of the election on December 28, 1912. It was taken from the records of the company. Exhibit 155 was prepared at the request of the city and shows when one old Springer six foot six inch water gas set was last operated. It was taken from the plant reports. These exhibits show what the records contain. The other statements requested are in course of preparation.

Cross-examination by Mr. Morning:

Exhibit 152 gives a history of the Peck's Grove real estate purchase. Lots 1 to 6 inclusive in Block 2 includes the house for which we paid $3,000.00. The balance of the lots were vacant lots. Lots 7 to 15 inclusive cost $1,000.00. Lots 1 to 6 inclusive in Block 7, cost $1,750.00. Lots 7 to 15 in Block 7 cost $1,500.00, making a total of $7,750.00. Exhibit 154 shows that the gas election of December 28, 1912, cost $1,559.24, on which we have a rebate coming of something like $100.00. What advertising was done for this election went into our regular advertising expense. This item of $1,559.24 did not go into our operating expense for 1912. It is being closed out this year.

Cross-examination by Mr. Foster:

I prepared Exhibit 151. I secured the figures from the report made to the Railway Commission. This shows the correct disposition of the money. The report first filed with the Railway Commission shows that interest was paid in the sum of $9,990.00. This was incorrect. The second line on the exhibit represents the report as made to the Railway Commission. That second line represents notes that were outstanding and were taken up August, 1911. We did not report to the Commission any part of this $500,000.00
968 was used for improvements and betterments. The petition of the company asking for leave to sell these notes represented that they were to pay for improvements. I do not know what the improvements were.

Cross-examination by Mr. Morning:

Our books will show what we did with this money. We had from time to time borrowed money, $500.00 or $1000.00 at a time

from Doherty & Company and when we sold the notes we owed them $108,000.00 and we had permission from the Railway Commission to take up all accounts or notes payable. I will add a statement of the notes showing dates, amounts and when paid. Exhibit 156, identified, is the manufacturing report for the first six months of this year and is offered in evidence. Exhibit 26 shows the operating results for the gas department for 1908. It shows the sales and operating expenses in the sale. It does not show all of the disbursements. The last month we made coal gas was April 1909. The report of 1908 shows the separate cost of manufacturing coal gas and water gas. The first item in the cost of the manufacture of water gas is shown on line 1100. In all of these reports each item has the same key number. Item 1104 water gas tar residue, represents the amount received and put into stock for tar during the period of operation, and this amount is deducted from the total operating expense. It is treated as a credit. In 1911 we manufactured 244,251,700 cubic feet of water gas. In 1912 we manufactured 258,205,600 cubic feet of water gas. The increase was 13,953,900 cubic feet. The tar residue in money in 1911 was $4028.44. In 1912 it was $3319.72. There was a mistake made in previous years in charging up the amount of tar to the per thousand cubic feet of water gas manufactured, and as the tar was put into a well there was no way of measuring and this discrepancy was not found until some time in 1912. We were crediting too much tar per thousand cubic feet. When it was possible to take an actual inventory we found the shortage. Mr. Montgomery has testified to that and explained it, and it has also been corrected in Mr. Lea's report.

969 I am unable to explain why the tar residue was almost twice in 1908 what it was in 1907. I had nothing to do with the reports then and do not know how it was handled. The amount of the tar residue each year is determined by test which has been made to show the number of gallons of tar made by the manufacture of 100,000 cubic feet of gas. We sell the tar residue in barrel lots and in five and ten gallon cans. In 1912 it was selling for $3.00 per half barrel, and $5.00 a full barrel. The entry under line 1104, $319.72 represents very nearly the amount actually received in 1912 for the tar. Against the price received of $5.00 and $3.00 we have to charge expense in handling, drayage expense, expense of barrels, advertising, etc. During 1911, it was figured at the rate of 60c. a gallon per thousand cubic feet of gas manufactured, and then in 1912 it was found that approximately only .076 of a gallon of tar is made per thousand cubic feet, and on this basis we made the correction for 1911. It was figured differently during the previous years, and to all appearances all right, because the inventory was not off. In 1910, we used .6 of one gallon per thousand cubic feet of gas manufactured as a basis. The same figure was used in 1909. In 1907 it was 35/100 of a gallon for every thousand cubic feet of gas. The average for 1912 was 45/100 per gallon per thousand cubic feet of gas made and in making the correction we used .076.

Redirect examination by Mr. Strode:

During certain periods of time, I was credited on the books of the company at the rate of .6 of a gallon per thousand cubic feet. For part of 1912 it was entered at the rate of .076 and the average for the year .45 cents. By actual test in 1912 we found we were only making .076 gallons per thousand cubic feet. That was due to the fact that we were using a much lighter oil than we had been since some time in 1911. .45 was not the average the tar manufactured per thousand cubic feet of gas during 1912, but was the average amount between .6 and .076 credited on the books of the company.

970 Cross-examination by Mr. Morning:

The actual amount was determined by a test made at the plant. We started to use the lighter oil in 1911. When we found there was a discrepancy, and that we did not have as much as we claimed, we made an actual test, and charged back a portion of the amount and from that time on we have been charging it into the tar stock at the rate of .076 gallon per thousand cubic feet of gas manufactured. This oil was the gas oil company's oil. The distributing point is Chicago. The price fluctuates. We are now paying close to 5c. Two years ago it was 2½c. The heavier oil had been purchased from the Standard Oil Company. Our contract expired and they tried to hold us up and we found we could get the lighter oil much cheaper from the Gas Oil Company.

Line 1107 refers to repairs to water gas generating apparatus, in 1907 it was $1,045.53. The water gas generating apparatus represents the two gas machines and generators. To this account is charged the labor and material for such items as re-lining the generators, repairing the carburetor, and super-heater, repairing the clinker door and oil sprayers. I am unable to give you the details without referring to the books down stairs. I am unable to say what the steam shown in line 1110 is used for. Item 1111, purifying labor, includes expenses, repairs and materials as well as labor, and it may easily fluctuate from year to year by reason of excessive expenses. In 1114, general apparatus repairs for 1911, $5,000.26, I am unable to tell what that sum represents without referring to the record which shows in detail what the repairs were. This account 1114, general apparatus repairs includes repairs, the labor and material and expense of the general apparatus which is beyond the seal boxes in the water gas plant. Account 1107, repairs to the water gas generating apparatus, refers only to the generator, carburetor, and super-heater, and not to repairs beyond. I am unable to tell you how much you spend each year for general apparatus alone and how much for other apparatus. Line 1115, sundry labors, includes

971 the labor that pertains directly to the manufacture of water gas, and is not chargeable to repair accounts, nor to gas making, boiler room, purifying house or general supervision. Account 1106, gas making labor refers to labor used in the generator house from the coke or coal sheds. It includes the water gas

maker's salary and his assistants, who have charge of the clinkers and removal of ashes. The necessary attention to tanks, pumps and blowers, and those who clean out the seal in the wash boxes. Item 1111 is purifying labor, and it includes expense and labor in the purifying house. Account 1115 covers what is left by these accounts. I am unable to tell what it represents in any particular case, without looking up the accounts payable journal.

R. E. PHILLIPS, recalled for further cross-examination. Pages 2073 to 2091, original record.

Cross-examination by Mr. Morning:

Exhibit 165 is the interest which has been paid to manufacturers during the period of 1907 to 1912 inclusive, on notes given to them in settlement of our accounts with them. It is interest on bills payable. I have prepared a statement showing the replacement of units from 1907 to January 1, 1912. It does not include any partial replacement of any items. During that period there were only three credits to the construction account, where the whole unit has been replaced, and in one of them the purifying boxes, the replacement was made prior to 1907 and the old boxes were sold in 1908. A partial replacement is handled on our books as maintenance and repairs, and the construction account would not be effected. Absolute replacement and repairs do not affect the construction account. Where the units or items are replaced with an entirely new piece, the construction account is affected to the extent that the cost of new item exceeds the original cost of the old item. If a gas meter is junked, the construction account is credited with the cost price of the meter, and it is charged to meter maintenance. The new meters purchased are charged directly to the construction
972 account, and then as they are used to replace others, they are credited to that account and charged to meter maintenance. In case of a sale of meters, the construction account would be credited with the amount. In case of a sale of a second hand item, we would take the original cost from the construction account. Exhibit 166 is a statement of replacements as above defined, from 1907 to 1912. Items junked are displaced by items of the same character, and credited to the construction account at the actual cost, as nearly as that can be ascertained. The first item on Exhibit 166, shows under date January 1, 1908, a sale of purifying boxes to a concern at Grand Rapids, Michigan, for $500.00 and means that the construction account was credited with this sum. Several years previous new boxes had been put in and the old boxes had not been disposed of until this time. That entry represents what we got for the boxes, not what they originally cost. That was done instead of crediting the original cost because these boxes were displaced long before the present management had taken charge of the company, and the new boxes were there when the inventory was made and these old ones were considered as mere junk value. If the old boxes were in the construction account at the original cost, then there was left in that account the difference between that cost

and what we received for them. The second item of February 28, 1912 of $2,340.40 represents the amount paid for the complete installation of our office furniture, in the new offices. Only $1840.00 of this item was charged to construction and the balance was charged to expense and represents the estimated value of the old fixtures which were discarded. The old fixtures were stored. Some of them have been disposed of. The $500.00 is what we estimated, had already been charged into construction on account of the old fixtures. We did not attempt to get at the original actual cost. It was what we thought had been charged to construction. If the construction account had been charged with more — $500.00, the excess stilll remains there.

On the other item, March 25, 1912, we paid the Otis Elevator Company $525.00, $475.00 was charged to construction and
973 $50.00 was charged to operating expense. We estimated that that was what the old lift, a very crude affair, would cost. We credited construction with $50.00 and charged it to operating expense. Each of the last two items were charged to both gas and electric. Eighty per cent to gas and twenty per cent to electric. Statements of repairs and maintenance are identified as Exhibit 167. It shows by years the cost of the repairs and maintenance of the item enumerated, the total cost of labor and material being segregated, covering the period from 1903 to 1912 inclusive. It covers everything done in the way of repairs where the whole unit had not been replaced and charged to construction. The items pertain to the gas department alone, except as otherwise indicated, such as harness, wagons and barn repairs. In 1906 items barn $8.20, harness $125.54, wagon $179.06, appear on the exhibit 80% charged to gas. On the books of the company I find that we charged two-thirds of these items to gas and one-third to electricity. The exhibit on these items does not represent the division actually at the time. The same division was made in 1907. In the summer of 1908 the division of these items was very nearly 80% to gas and 20% to electricity. And this division has been continued practically down to the present time. The division of the barn expense has always been made upon the number of horses used by each department. The change in the division would indicate that in 1908 the gas department was using more horses than in 1906 and 1907. It does not indicate that there had been a general change in the division of expense. Exhibit 165, 166 and 167 are offered and received in evidence by the defendant, without objection. As to statement requested, showing the total of revenue received by the company from 1907 to 1912, by the sale of stocks, bonds and notes, I find there is but one item and that is a sale of the $500,000.00 three year collateral notes, which was introduced at the time the request was made. Of course there were small notes to local banks at different times, the proceeds from which we used in our current operating expenses.

974 R. E. PHILLIPS, recalled for further cross-examination. Pages 2099 to 2120 original record.

Cross-examination by Mr. Morning:

In 1904 the only executive salaries paid by the company were to H. L. Doherty, $125.00 per month to gas department and A. L. Eglington, $12.50 per month. The same amounts were charged to the electric department showing an equal division of the salaries of these two men. They are both residents of New York. These same salaries were paid and this same division maintained up to the month of April, 1908, when they were prorated 80% to the gas department and 20% to the electric department, but the salaries were not increased. From January, 1904, to January, 1910, there were just two persons in the New York office drawing executive salaries and they are the ones above specified. In February, 1910, A. H. Armstrong was added to the executive department as local President and a salary of $166.66, 80% per month was apportioned to the gas department and 20% to the electric. Mr. Frank W. Frueauff, was also added as Vice President of the Company, $160.00 per month was charged to the gas department and $20.00 to the electric. Mr. Doherty was chairman of the Board of Directors. Mr. Armstrong continued to draw this salary up to April, 1911, when he resigned for political reasons. Mr. Frueauff took his office and Mr. B. C. Adams took Mr. Frueauff's office, without additional salary as he was already manager. In addition there was charged to this account those men in the New York office, who did special work, such as auditing and engineering. An audit was made once each year to enable us to run the business economically. I will make a search of the letter file for any correspondence relative to putting Mr. Armstrong and Mr. Frueauff on the executive salary list. The Board of Directors meets once a year at the local office and as many other times as called. I will see what the records of the Board of Directors shows with respect to the placing of these men on the executive salary list. Mr. Armstrong was a stock holder while he was an officer. When he resigned he sold his stock.

975 Mr. Fraueuff is and was a member of Henry L. Doherty Company. Items designated, "Pay roll in the Executive salary account" includes salaries paid to local officers by pay checks. The other salaries being paid by vouchers. I am unable to tell who the employees are without looking up the pay roll book. Without looking it up I would say they were the general manager, secretary and treasurer. Other employees are entered in other accounts. In 1904 there were no items entered in this account under the heading pay roll. The first entry comes in 1905, of $50.00. This item was continued until August, when it was increased to $75.00 which was then continued to 1906. That represents salary paid to local men by pay roll check. That would include just the executive department. In December, 1907, it was $104.18 for the gas department. In December, 1908, it was $166.68. In December, 1909, it was $250.00. In December, 1910, and 1911 it was $320.00. In December, 1912, it was $340.00. In May, 1908, this particular item was apportioned,

two-thirds to gas and one-third to electric. After that time it was 80% to gas and 20% to electric. Prior to April, 1908, the division was 50% to each department. Prior to May, 1908, the regular salaries of the legal departments were divided 50% to each plant. After that the division was 80% to gas and 20% electric. Prior to May, 1908, taxes were divided one-third to electric and two-thirds to gas. And that division has been continued up to the present time. At the time this change in division was made, the gas department consumers had increased so fast that it was necessary to make a re-adjustment of the apportionment of expense. The gas department had been running ahead for a number of years. The situation was probably discovered by the auditor. I never saw any correspondence relative to it, but I will look through our files and produce the correspondence if I can find it.

976 R. E. PHILLIPS, being recalled for further cross examination, testified as follows: Pages 2242 to 2260, original record.

Cross-examination by Mr. Morning:

The item in March 1904 of the executive salaries account of $12.50 paid to Emmerson McMillian & Company represents the commission of these people for handling the coupons on bonds. Interest on bonds is not charged to operating, but the cost of paying the interest is. I am unable to explain the item of $18.39 paid to these people in April, and charged to the interest account, without looking up the original voucher. I will get the vouchers and explain this, and the items for May and June. On June 30 they were again paid coupon fee $12.50 for handling coupons and it was charged into this account. The item of July 31, $60.00 paid to these same people was probably the fee charged for registration of stock transfers. There is a stock register kept in the New York office. There is a stock register also kept here. The item paid to the Chemical National Bank of $12.49 represents the expense of handling coupons. It is the cost of paying the interest on bonds and probably is an operating expense. I am unable to explain item of September 30th, transfer voucher 36*a* for $21.50 without looking it up. That seems to appear there every month for several months. It probably is some item that is too large to run into one month's operating expenses, so it was pro-rated over several months. Item of Dec. 30th for $12.45 to Emmerson McMillian & Company is for handling coupons on bonds as previously explained. Item of January 31, 1905 to Trust Company of America for $18.75 is for the registration of stock. The next item, transfer voucher 66, proportioned incidental expenses is probably some large item chargeable to executive salaries, which has been pro-rated over a certain stated time. Item of February 38, transfer voucher 73 is for $3.00 but should be for $5.00 and is for the same. Item of same date to Chemical National Bank for $12.45 is for services in paying interest on bonds. Item of March 31, transfer voucher number 80*a* for $5.00 is the same item as above carried along.

977 Item of August 31, 1906 to Trust Company of America, $18.75 must have been for registering stock in New York.

Item of $12.49 Chemical National Bank, on the same date, represents services for paying interest coupons. Item of September 1906 Emmerson McMillian Company, is for registration of stock in New York and the item of $7.59 on the same date is for transfer of stock. Transfer voucher number 264 for $13.64 is for surety bonds on executive officers. It appears in the subsequent month. Item of $12.50 December 1906 to the Trust Company of America, is for services in connection with the payments and cremating of bonds. I am unable to explain what item of $25.00 to S. J. Rehlander, January 1907 cash contingent is for, without looking it up. He was cashier of the company at the time. I am unable to explain item of March 1907 to Homer Honeywell, salary $36.46. In March 1907 the executive salaries were increased to $89.50. I do not know what caused the increase. In April, transfer voucher 354 for $13.63 is the portion of the bond for executive officers. I am unable to explain items of $25.00 and $36.46 in transfer voucher 366 without looking them up. The executive pay roll goes up to $104.18 which I am unable to explain. Item of May 1907 Harry Warner, $20.00 director's fee, means that he paid the directors $20.00 and he was repaid and the sum charged to executive salary account. That is the proportion charged to the gas department, and is one-half of the total amount paid. The pay roll for this month is $104.18 and continues in that sum through the balance of the entire year. In August 1907 item of $112.99 to Emmerson McMillian Company must have been for the same services as for the items previously explained, to that company. Item of February 28, 1908 to Chemical National Bank, is for handling the interest coupons on bonds. I am unable to explain item of the same date, $25.00 to Lincoln Gas & Electric Light Company contingent. I can explain it by looking up the voucher. In April 1908 the pay roll goes up to $135.43. In May it went up to $166.68.

978 Item of $44.78 appearing in May, June, July, August, September, October and November and $43.36 in December, represents the sub-division. The executive salaries pay roll for March 31, 1905 was $35.00. On December 31, 1912 it was $340.00. The increase is caused by the additional men added to the pay roll and by the higher salaries paid those already there. At the last mentioned date, there were two men, I do not know how many there were on the first mentioned date. In April 1905 transfer voucher 89 special expense $5.00 is the same item carried through. The pay roll was $30.00 down to August 1905. June 30, transfer voucher 104 special $5.00 is the same item carried through. Also transfer voucher 104 for $12.00. They must all represent the same thing, and that is the expense of the yearly audit. That is the only item I can think of that would be properly chargeable to executive salaries. That Auditor is on a regular salary and audits the various companies operated by the New York office. The money is paid directly to Doherty & Company, and they pay the Auditor. He makes one trip to the West and audits all of their companies, and the expense is divided. He is generally here from one to two weeks. I will get the total audit expenses per annum from 1907 to 1912. On July 31, 1905 we lose the $5.00 item, and we have transfer voucher 111*a* for $12.00

which represents the same expense as the $5.00 item. Item of August 31, Emmerson McMillian Company $5.00 transfer fee is for services in keeping the stock register as previously explained, and item of $12.49 to Chemical National Bank is for coupon fees. Transfer voucher 120*a* for $17.00 is the $12.00 and $5.00 combined and is probably in connection with an audit of the books. I am unable to say what the item of $25.00 to Paul R. Jones, was for, without looking it up. The item of $17.00 runs through the months of September to December of 1905 inclusive and January and February of 1906. Commencing with January 1906 the executive salary pay roll is $75.00 and runs through all of that year. The item for April 1906 transfer voucher 196*a* surety $5.00 is for premium on surety bonds carried in the local office and probably explains the $5.00 item
979 that we have been going over so often. It is, I think, handled the same that the auditor's expense is handled. The premium is paid once a year and then it is pro-rated over that of some larger item, the nature of which I am unable to state, without looking it up. In June 1908 item of $30.00 to Emmerson McMillian Company and Trust Company of America, is for services of these concerns similar to those already explained. I can not tell the exact nature without the voucher. Item of August 1908 to Emmerson McMillian & Company for $135.82 is for their services as transfer agents. Item of November 1908 Doherty & Company, expense and item for Jones, $131.60 I suppose represents the expense of his audit for that year.

980 G. H. SHABERG, being first duly sworn testified on behalf of the defendant as follows: Pages 3241 to 3248, original record.

Direct examination by Mr. Foster:

I am voucher Clerk for the Lincoln Gas & Electric Light Co. and have occupied that position since April 1913. I have been with the company about nine years. The rebate voucher slips for December 1913, $10.47, November 1913 $10.31, September 13, $4.59, August 1913, $7.36, July $6.92, June $8.12, May $14.85, April $10.00, are rebate slips paid the Lincoln Coffee & Spice Mills. If they run back to January 1912 they would all be for the Lincoln Coffee & Spice Mills. The purpose of these rebates was simply to figure them at the Doherty rate. A party using the amount of gas they were using, it would not be possible for them to do it on a $1.20 rate. The more you buy the cheaper rate you would expect to get. I can not tell you just how that rate is figured. It was less than $1.20. V. Timmitch had the same general arrangement. The Lincoln Hotel has no such rate at the present time. I do not know of any former rate. I do not believe there are any other consumers who have this rate. I would not know of any vouchers prior to April 1, 1913. We have no consumers that I know of, other than those mentioned, who pay a different price for gas used for fuel than they do for gas used for light. The system of installing two meters was abandoned some eight or nine years ago. Since I have worked with the company I do not know of any instance where they have installed gas service free. The dollar sign in the consumers' ledger in front of a large number of

names of consumers, indicates that those people had signed a waiver, waiving their rights under the gas ordinance for dollar gas. We were trying to get a compromise and take this case out of Court and we used that method of keeping track of the people who had waived.

981 It was simply a record of negotiations of our effort to compromise. There is no claim on the part of the company that the waiver signed by any of these parties is now effective. Their waiver was conditioned upon our getting enough to put it through.

GEORGE H. SHAEBERG, recalled for further direct examination, testified on behalf of the defendant as follows: Pages 3344 to 3348, original record.

Direct examination by Mr. Morning:

Voucher No. 10,696 is a payment of $1,400.00 which the company made to Mr. Armstrong. Mr. Armstrong in turn paid it to Claude Meeker. Meeker afterwards paid it to the gas company. It does not represent an expenditure at all. When it was repaid it came through on our receipts for the month. It was never charged as an operating expense. He is a broker in Columbus, Ohio. I do not know why it was paid and then he paid it back to us. Voucher 10,872 to Dr. J. S. Leonhardt for $19.85, itemized, 73 feet services $18.25 fuel run $1.60 with the notation "Allowed, no charge, B. C. A.", from the reading of it, would indicate that it was a complimentary or free service. I do not know why it was done but it is an unusual thing. It is not carried on extensively. I am unable to explain Voucher No. 11,218 to M. V. Beghtol for $252.00. It is charged to E. C. Strode, Oct. 26, 1911. I know nothing about it. The Ed Bignell account of $538.55 was charged off to bad debts; why I don't know. I would consider it a bad debt. I don't believe he could be made to pay it. Exhibit 390 offered and received in evidence.

982 HOMER HONEYWELL, being first duly sworn testified on behalf of the defendant as follows: Pages 3316 to 3342 original record.

Direct examination by Mr. Foster:

Voucher No. 4956 dated August 7, 1908, of the Lincoln Gas & Electric Light Co. for $250.00 signed by myself, was for general manager's incidental expenses. I can't give the detailed items now, because it is so long ago it has passed from my mind. I suppose that it is for the incidental expenses appearing in the incidental expense account under the entry sometimes as general manager's incidental expenses, and sometimes as expenses, varying in amounts from $25.00 to $50.00 and running all through that account and I think it constitutes the same kind of expenditures, but that has been too long ago and I haven't been in active touch with the details of the business since that time. Voucher No. 6244 dated April 27, 1909, for $325.00 signed by J. C. Oppenheimer, to which is attached a

receipt signed by me for $325.00 cash I can not explain what that money was spent for. I suppose that is another voucher made up from the incidental expenses of the general manager. These incidental expenses would be caused by a number of things, entertaining visiting gas men, prospective bond buyers, stockholders that came here to look over the property; probably some donations to charity; church fair tickets and things of that kind. The notation cash C. Y. over my name, I don't know what it indicates. I didn't sign that. I do not know whom the initial "E" appearing there refers to, probably some clerk. It has been too long since I have had anything to do with it. The purpose of these vouchers is to explain what the money was spent for, but the time has been so long that I can't do it now. I would be willing to swear that that money covered by this last voucher was not spent in the city election that spring. We did not take any part in that. We didn't contribute anything to anybody's campaign nor to any movement involved in the campaign while I was manager. I cannot state what the notation from
983 Lincoln Gas & Electric Light Company, $100.00 for "M. L. M. Adams, comp." and signed Honeywell, dated January 30, 1905, appearing in voucher 1214 dated February 25, 1905, means. It is too far back. I suppose it is composed of a number of small items taken out and put into a ledger. I do not know what the words "Adams, comp." means. It is too far back. I have no idea and I would not want to guess. There has been some memo. put on while I was leafing through the vouchers. I do not know whose initials L. M. N. are nor do I know whose initials M. S. M. are, but they are in my hand writing. I do not know what the purpose was of putting the initials there. Voucher No. 5710 dated January 15, 1909, for $225.00 signed by myself and marked O. K. H. L. D. was after I had left the company. I suppose that represents incidental expenses of the manager. They collected my tickets and this voucher was made up after I left the company and was O. K.'d by Mr. Dougherty. The details I can't give you. Voucher No. 4342 for $250.00 dated March 30, 1908, is probably another voucher covering incidental expenses of the management, the details of which I can't remember at this time. I left the company January 1, 1909. The item in Exhibit 323 January 1907 city Y. M. C. A. subscription $50.00 means that we probably gave the Y. M. C. A. $50.00 at that time. The item of $12.50 to the National Electric Light Association I suppose is the company's dues to that association. The next item Homer Honeywell, December and January, expenses, $50.00, was incidental expenses of manager and is probably the same class of items as covered by the vouchers just gone over. The next item O. Rector, candy $4.20, I imagine represents that we gave the young ladies working in the office a Christmas present. Wherever those same items appear throughout the Exhibit, they were made, I should judge, for the same sort of expenses during my term. The item in February 1907 L. G. and E. L. Co., contingent, ball tickets $7.50 represents some sort of ball tickets that we bought and paid that amount for them. It would be a donation to some cause or institu-

tion. I do not know what vouchers 3051 the same month, Emmerson McMillian Co. S. O. Appleck and postage $10.17, is for, nor
984 do I know what the item to the Lindell Hotel in March, $75.00 is for. The company at that time did not take their employees out to dinner about once a week, but they had meetings of the heads of the departments at lunch every Monday noon, and we would sit around the table and talk over the propositions that were coming up and we used to try each month, for some time, to get every employee of the company out to a dinner, thereby thinking we could get the best out of the employees. It was done for the good of the company. At those meetings we had the employees of both departments. I can not tell you what division of the expense was made and I would not be able to say whether that item was for dinner or was for some engineer that we had here from New York. We frequently had engineers from New York. They were helping us out in trying to cut down the cost of running the company and to run the property in a more efficient manner. Some of these engineers might have been connected with Doherty & Company and some McMillian & Company, who were at that time interested in the property. The item of April 1907 Lincoln Commercial Club, membership $10.00 was evidently for putting someone into the club at that time. The company made a practice of paying memberships. The next item H. Honeywell, expense $49.80, I do not know what it was for. Neither can I tell the fourth or fifth items, $10.85 and $25.00. They might have been incidental expenses or they might have been business trips I had taken for the company. It is too far back to remember. The Iowa District Gas Association item of $6.00 represents the dues of this company. The next item the Lincoln Gas & Electric Company, contingent services Ben Kiffin, $2.00, Notary Fee 50¢, Stuff, lunch and Billiards, Commercial Club, .85¢, Woodman Ball ticket, 25¢ total $3.60 I am unable to explain. I don't know what Kiffin's services were, I don't know what the Notary fee was, I don't know just what the lunch and billiards 85¢ would be, Stuff was not the name of one of our employees. The next item $22.50 B. C. Adams, expenses to Chicago, we probably
985 paid Adams' expenses to Chicago for some purpose or other connected with the company's business. If he had gone for Doherty & Co. there would have been charged to them this amount. Wherever the item Lincoln Commercial Club appears throughout this Exhibit, I think it is for membership fees and dues for various employees. I can not tell whether the item Lindell Hotel $3.25 in June 1907 and $35.62 in July 1907 was the expense of taking employees out to dinner or for what purposes. We usually had our dinners at the Lincoln Hotel and the people stopping here generally stopped at the Lindell. The item of 3072, May 1907, H. Honeywell, expenses $80.00 I do not know what that is for. I do not know what the next item is: M. B. M. $25.00 and I do not know who O. D. H. is in the next item; nor C. C. J. $25.00 in the next item, nor A. T. Large $100.00. It is impossible to remember those things so far back. That money was not spent at large in the spring campaign. The O. D. H. does not refer to O. D. Herrick, I am very

certain. I can not explain these items at all. Wherever the item Y. M. C. A. subscription, appears, that means money donated to Y. M. C. A. I do not know anybody by the name of A. T. Large and I don't believe ever did. I wouldn't say that it means "at large" rather than a man's name. I have no impression on it. If I wanted $25.00 or some such an amount for some object, I would get the cashier to give it to me and he would put a ticket in there. If I bought ball tickets I would get the tickets and if anybody wanted to use them all right, if I donated it to the poor or Y. M. C. A. they probably gave us a receipt. These items of $100.00 or the like might have been a number of small items and when they got to $100.00 a voucher of them was made. The form of vouchers, the way they appear here with several small items entered and credited and carried off into the proper colum-s, indicates to me that I did not get $225.00 cash at one time. It would look as though I got $80.00 at one time, $25.00 at another, $25.00 at another, $25.00 at another and $100.00 at another. In July the item of $12.50 donation to Lewis Gregory, represents what we probably gave him for some worthy cause in some
986 matter of charity that he was looking after. He didn't get that personally. It wasn't for anything connected with the gas business. It was probably true that most of the items entered in this account as a matter of fact had nothing to do with the manufacture of gas. The donation to Mr. Gregory was not made to help out the gas company in the public mind. It was probably made to help out some Russian family. They are expenses that most business houses would be subjected to. They were not made so much to avoid the ill will of persons refused as it was to extend a helping hand. The item in November 1907, Commission paid to C. R. Wigert on two years notes, $20.00, as I remember about that time we tried to float $200,000.00 in notes and we gave a commission for selling them. They could not be sold at par so we paid a commission. I don't know what it was charged to. If it is in incidental expenses, account 1503, it probably was charged to operating expenses. In March 1907 the item of expense Doherty Operating Company, expenses F. W. Freauff, voucher 5507 and 5508 amounting to $81.50 covers Mr. Freauff expenses. We probably had him here for some purpose and paid his expenses. He was connected with the Doherty Operating Company and at that time I think was Vice President of this company. I do not know what the item in May, T. P. Kennard, vouchers No. 4518 $16.00 was for. The next item H. C. Porter, expenses to Omaha for commercial department $24.00, was probably his expenses to Omaha. He was manager of our new business department and was sent there evidently on some business for the company. The next item Denver Gas & Electric Co. expenses F. W. Freauff $32.50 is probably at the time that we had Mr. Freauff here to assist by his services and paid his expenses. In the same month the item of Doherty expenses $31.60 is the same thing. In June 1908 the item H. Honeywell expenses to Omaha and Chicago, $75.00 indicates that I went to Omaha and then to Chicago to look after coal contracts. That is about the time that we made our coal contracts as a rule. Transfer voucher 557 $31.60

in June 1908 to Doherty, expenses, is probably an expense of the same sort connected with the charge for the preceding month.

987 The item of $40.00 in July, 1908, Homer Honeywell, subscription to Acme Amusement Company, represents the $40.00 of stock that was bought in that company, and is an asset of the gas company. They have had a couple of dividends. It is *is* a corporation operating three theaters here in town. The next item of $52.00 expenses F. W. Freauff Denver Gas & Electric Co. is the same sort of item I presume, as we had before. In August as indicated by the item F. W. Brown donation to Bryan fund $5.00, I suppose we gave Doc Brown a donation and I guess it was for gas making purposes. I presume the next item in September, 1908, E. Y. Grupe donation $20.00 was a donation to Grace Methodist Church of East Lincoln. He was very active in that Church. The next two items American Gas Institute dues $10.00 and Iowa District Gas Asso. dues $6.00, were the same sort of expenses as the others. The next item Doherty Operating Company, voucher No. 6937 Marston time and expenses $99.98 represents the expenses of an engineer we had here from Doherty Operating Co. to try to straighten us out. The name is familiar but I don't know the particular branch of the service he was in. He was a gas man of course, but I don't know whether water gas, coal gas, or what. I suppose the items covered by voucher 5286 Lindell Hotel Cafe. $12.15, $4.08, $17.32, $2.64 ball tickets 80¢ magazine subscriptions $40.00, total $37.40 was some entertainment over at the Lindell, either weekly meetings or visitors. Wherever the word donations appears, it represents or purports to represent some donation to a charitable institution. I cannot explain the next item voucher 606, $13.00 sundries, meter box $40.00 in October, nor can I explain the last item to W. C. Jenkins agent, subscription National Home Magazine $120.00. I don't know what it is supposed to represent. I don't know what transfer voucher No. 621-*d* Sundries, meter box, rent, $40.00 in November means. In December the item of $7.32 to the Savoy Hotel, indicates that we took someone to lunch there. I can't tell you how many there were. In December we sent H. C. Porter to Chicago to some convention and the item of $60.10 is his expenses. The next item to H. L. Doherty $31.30 repre-

988 sents Mr. Doherty's expenses while he was here. I do not know what the items "Edd Young, cigars, Adams, $7.50 Porter $4.00, Honeywell $4.00, total $12.40" covered by voucher 5930 were for. The item Lincoln Commercial Club cigars and lunch for Warner, Adams, voucher No. 5844 $7.20 is just what it purports to be I imagine. There was probably more than one lunch. The next item Lincoln Gas & Electric Light Co. contingent, Christmas gift for Rose, $2.00 B. C. A. Inc. $2.00, Glenn Marston $40.00 total $44.00. The $40.00 was some more expense of Mr. Marston that wasn't covered in the other voucher. The next item Kelly's cigars, Voucher 5836, for W. S. Whitten, $1.60 Mr. Cascaden $1.60, I think is for cigars given to those men. I left the company December 31, 1908. I do not know what the items of some $1,200.00 standing in my name and charged off the books about January 1,

1913, were for. I suppose they were vouchers and incidental expenses of management which had not been charged to the months as they should have been, and they were evidently in addition to the various items charged in this account which we have just gone over. It might be that they had been charged to me on the books for incidental expenses, that I had paid out during my management and were charged off in the early part of 1913 to balance the account, it having been carried on the books up to that time against me. I cannot explain why the account against Ed Bignell of $538.55 under date of May 27, 1908, was charged off as a bad debt. The reasonable excuse for Mr. Bignell being on the free list and getting gas and electricity free during the time disclosed here by the evidence, was that at different times Mr. Bignell had been able to help us out in the operating end of this property, a number of times and ways, for instance, I remember one time when fair time came on and we were short of steam in the plant and Mr. Bignell loaned us a Burlington engine to furnish steam. It stood on the side track. For favors of that kind in getting steam to us I think he was allowed free gas. The steam was used for manufacturing purposes. There was something wrong with the plant or we didn't have capacity enough or a boiler was out. I remember that
989 one time distinctly. There may have been more times than that. The steam that was used was divided between the gas and electric departments. I don't know how it was divided up, however. Also if we would get short of coal or anything of that kind, Mr. Bignell would get the coal moved for us. We also had a substantial electrical contract with the Burlington, but I don't know whether that went through Mr. Bignell's hands or not. We finally lost the lighting of the Burlington station to the traction company, but I think the matter of the contract was handled through Mr. Calvert. I do not know what was the cause of putting Thomas H. Pratt on the free list while I was manager. I didn't remember anything about it till I read it in the paper. The items covered by voucher No. 6000 October 28, 1905, Thomas H. Pratt gas $10.68 F. M. Prout fan $11.25, H. M. Eaton range $24.00 appear in the rebate account. As I remember Gen. Prout had a hot office in the Capital and we loaned him a fan and it was charged to him and when he returned it we credited it back. I do not remember about Mr. Eaton's range. Mr. Prout was Attorney General at that time and Eaton was Deputy Land Commissioner. Until reading the paper last night, I did not know there was a single consumer that was getting gas at less than $1.20 while I was manager. I don't think anybody authorized the reduction in the gas rates and I think whoever was the manager of the new business department slipped it over at that time. I don't know who authorized the placing of Mr. Bignell's name on the rebate list. I suppose I ought to know but it is too far back to remember. I have been out of contact with the company for five years. I wasn't putting someone on the free list or reducing rates every day. The entry on the rebate voucher for gas range delivered to H. F. Rose I do not remember anything very definite about it, but it is probable that we

gave him a gas range. It was pretty close to the time that he sold his house to Mr. Gooch. We gave most of the churches a gas range if they would use them for their suppers and there may have been isolated cases where somebody got one, but it wasn't a common
990 occurrence. We gave that range to Mr. Ruse as he was the attorney for the company and we thought he had rendered good services at a very small pay. I do not remember when Mr. S. H. Burnham was put on the free list but he had been able to render valuable services to the gas company in a financial way by his counsel. He was a member of the Board of Directors and got his director's fees just the same as the rest, but he was in a position where we could go to him on financial matters. The Board of Directors had nothing to do with the details of the management. They would come in and elect officers and look over the business. We consulted them in regard to certain methods of procedure at times and the wisdom of doing things at a certain time, but the real management was in the New York office.

991 FRANK W. FRUEAUFF, being first duly sworn, testified on behalf of the plaintiff as follows, pages 1007 to 1096, Vol. 1, original record:

Direct examination by Mr. Rose:

I was a witness in this case in 1907. Since then up till 1911 I was vice-president of the Lincoln Gas and Electric Light Co. and since that time I have been president. I am a member of the firm of Henry L. Doherty & Co., whose business is the operation, ownership, and financing of gas, electric, and street railway properties. We operate companies for ourselves and for others who have invested with us. We do the banking for these companies and float their securities. We operate about 108 different properties covering from 150 to 175 towns in the United States and Canada. A large part of my work has to do with the financing of these enterprises, and with the purchasing department and the accounting system. The accounting system used here by the company is our uniform system that we worked out several years ago and have modified it from year to year and used it in this plant and the other properties. Once or twice a year the managers of the different companies meet and suggestions are made and modifications and improvements worked out. We also run a school in which we teach engineers to be superintendents, managers, accountants, secretaries, and we are trying constantly to develop men to operate public utility companies. The interest of Doherty & Co. in the Lincoln plant is a minority interest but its interest, with the interest of clients and investors whom it represents, gives it a control of the company. The stock of this company is not owned by any of the Doherty holding companies because we have never felt that the Lincoln company was a fit proposition for a holding company. We could not recommend it as a purchase for
992 a holding company and we simply had to carry it as an individual investment. Since I have been here I have been endeavoring to educate the men of this company and to get competent

men here. We have from time to time financed the maturing obligations of the company and have endorsed their paper repeatedly, and have become their bankers. We arranged for the sale of the $500,000 worth of three-year notes to A. B. Leach & Co. We used the prestige of our firm to float these notes. We received no compensation whatever except our salaries. I visited the plant from six to eight times a year and I am in constant communication with the manager and in touch with its affairs. I have kept in touch with the organization and working force of the company and have considered it very efficient. I receive $2,400 a year as president. I think this is a reasonable compensation and feel that I earn it. Mr. Doherty is chairman of the Board of Directors. He has a very high reputation as a gas engineer and the reason our firm has enjoyed the success it has is due to his knowledge of the business. He has always loaned the facilities of his firm to the interests of this company. I think he receives $3,000 a year. I consider that a very reasonable salary for a man of his ability for the services he has rendered the company. I think it is a reasonable, necessary and proper expenditure and properly chargeable to the operating expenses of the company. These salaries are for the services rendered both the gas and electric departments. As to the apportionment of these salaries between the two departments, that is a very hard matter to determine for the reason that in recent years the greatest effort we have made has been due to the condition in the gas department, and at the same time we have kept in touch with the affairs of the electric department. My idea is that they should be divided according to
993 the relative size of the two departments. By considering the relative amounts of time which has been devoted to the gas department as compared with the electric department the proportion would be 20 to 1. At the time the employment was first made the salaries were divided half and half, but I am unable to say what the division is now. The expenses of our trips out here in connection with the company are paid out of our salaries. We are paying Mr. Adams, our general manager here, $3,600 per year. We regard him very highly, and fully qualified for the position, and his management has shown a great improvement in the character of the service. He has more than that, maintained as friendly relations with the public as possible and has given a good account of his management and kept the expenses as low as possible. Our company has a central purchasing or contracting department by which we are able to purchase supplies for the various companies which we operate at prices from 20 to 30 per cent better than the individual plant can obtain them because of the sizes of the purchases. We always give the company using the material the benefit of the advantage in price. No charge of any kind is made for this service outside of our salaries. The benefits received by the company from this policy more than counter-balances the sums received by Mr. Doherty and myself in the way of salaries. The amount paid Mr. Adams as general manager is a reasonable sum and necessary to secure a man to look after the property. Mr. Adams is a technical graduate of the University of Wisconsin, I believe, and he has had experience in other plants

before coming to Lincoln. He worked in a subordinate capacity here before he was entrusted with the responsibility of general manager. I am acquainted in a general way with the wages paid to the employees of the different departments here. We have found it from our experience that it tends toward economy and good
994 service to have trained men and specialists at the head of each department, and in my opinion the sums expended for this purpose in the local plant are reasonable and necessary. I would consider it a mistake to attempt to avoid this expense. We might be able to get cheaper men who would give poorer service. One of our greatest problems in the early days with this property was to bring it up to an efficient condition. It was in a very bad state. I have a pretty fair knowledge of the Lincoln gas plant and its equipment and properties. I have reviewed the inventories of the plant for some years and I am accustomed to dealing in these properties on a commercial basis. Our business is to acquire and later on operate a property and we sometimes build properties. I have a pretty good idea of the fair and reasonable cost of equipment of artificial gas plants, and have an intimate knowledge of the expense required in addition to the inventory valuations for the development of business, and of the patronage of such companies. The latter is one of the biggest items that we have in mind in the operation of a company. One of the elements we have to consider when we start to build a new enterprise is the cost of developing the business. In dealings in this country in gas utilities the developed business of the utility is regarded as having a definite valuation the same as the physical valuation of a property. The value of the mere physical property without the development of business would be hazardous property. It commands a definite price in this country as an operating part and I would take it into consideration in examining the property. In purchasing a property I think you could better afford to buy a business already developed than to attempt to *to* out and — create it with a newly constructed plant. In considering the replacement value you could not develop the business of a new plant
995 on that value sufficiently to put the invested capital on a fair earning basis without contributing some capital to the special purpose of developing its business. The mere fact that the mains and works were worth so much would not mean the total value because there must be a business to make the mains and works productive. If a new plant were constructed here in Lincoln the investment could not be put upon a fair revenue basis as a new plant without devoting some capital and contributions to your development of public patronage and a paying business. At the time the plant was first constructed and ready to engage in business there would not be any operating revenues from which you would be able to defray the cost of acquiring the business necessary to make it a profitable plant, as the revenue at that time would not be sufficient to take care of the ordinary running expenses. The cost of developing the business ought to be defrayed from the primary capital contributions as it is one of the elements. That makes the value and in order to develop the business the money would have to come from the capital. There

is no other source for it. This value is generally termed going value or going-concern value. That represents the difference in value between the dead plant and the live plant with enough business hooked on to it to make it profitable. We have a modified instance of this in this company. Two or three years ago we were induced to build into University Place. We extended our gas main and put in the service and equipped that district to have a gas supply. Up to this time the income from the consumers there has been considerably less than the investment justifies and we are trying to get that from a point of intro-ductive investment to a productive investment. In order to do that it is necessary to canvass and solicit and to present
the attractive features and to carry on a campaign of educa-
996 tion and that is what we have done here. The cost and expenses and outlay go beyond the amount of business done, and the business don't come in as fas- as the outlay, and until the operating revenues are an established fact our capital to carry on this campaign must be advanced, and it cannot be charged to operating revenues until they are in existence. It helps to make the dead investment alive and productive but you could never defray the cost if you were to charge it to operative revenue before it was realized. I have in mind another instance. I am interested in a food product. We have put about one hundred thousand dollars into building a plant to manufacture it near Chicago and we are now able to turn out all of the product that the market will need for a long time to come but we have no market. We are now conducting an extensive advertising campaign and have salesmen visiting the jobbers all over the country and we are familiarizing the people with our product, and we figure that by the time the proposition is on a going basis we will have in the making of the market four times the amount we have put into the plant, and we figure that our investment is the money that we have put in to make it a paying business. In some newspaper businesses as much as ten times the cost of the physical property is represented in the ability of the concern to dispose of the product of the physical property, and that value cannot come from, but must precede the operating revenues and must be provided for in the financial plan by primary capital contributions. When I testified before I gave my opinion as to the entire value of the gas plant here and I have kept in touch with the growth and development of the plant since that time, and I am now acquainted with the present fair commercial value of the Lincoln property with its business developed to the point which it has now attained. In my opinion $1,-
400,000 to $1,500,000 is the fair and reasonable commercial
997 or market value of all of the properties employed by this company in the gas utility in the city of Lincoln, which includes the stores and supplies and funds ordinarily and necessarily kept by the company to conduct this business and also includes the developed business of the company at this time. I know what rate of return is necessary to attract capital to gas utilities in the city of Lincoln and other like communities. In order to attract capital under normal conditions to gas utilities in the city of Lincoln which are subjected to the risks of business, a return of something better than 8% would

have to be offered to the investor and in addition there should have been earned something in addition to that to be set aside apart from the known reserve for depreciation for the unexpected. To pay out all of the net earnings of a gas concern for any year in the payment of dividends cannot be safely done as it would create an element of hazard which would destroy the credit of the enterprise. There are fluctuations up and down from year to year. In 1912 the earnings of our gas department were less than they were in 1911, due to the fact that the cost of gas making was about 5¢ per thousand more, and had we divided up everything we made in 1911 the showing of 1912 with less earnings would have crippled the standing of the company. It is peculiar to public utilities that the selling price is fixed while the cost of operation and up-keep varies from year to year. The labor and materials may go up but the price to the consumer is the same and the company assumes the liability of that fluctuation. In a matter so common as taxation a gas utility cannot count of meeting the same burdens from one year to another. Our experience here has shown that. We have had so-called occupation taxes levied which means much more of outlay. I know of no department of any gas company where the same expenditure can be counted on from year to year.

998 Cross-examination by Mr. Morning:

Henry L. Doherty & Co. is a partnership composed of Mr. Doherty, C. T. Brown, and myself. We have about 30 or 40 thousand dollars of the bonds of the company. The present bonded indebtedness of the company is about $1,500,000. We make our headquarters in New York City, and have no headquarters here except at the local office. I come here sometimes to attend the directors' meetings and sometimes in consultation with the officers about the policy and improvements of the company. Our company operates altogether about 30 gas plants or gas departments. In most of them I am either a director or other official. From some we draw salaries and some we do not. I do not draw a salary from more than three or four. Mr. Doherty also holds an office in many companies. I am unable to say from memory from how many he draws a salary. My total salary from the companies I do draw salaries from amounts to about $15,000 or $18,000, and I devote my services to all of the companies in consideration of those salaries. I am a practical gas man. My entire business experience has been in the gas business. I do not believe I would be able to qualify for the technical work of a general superintendent but I could advise him on some portions of his business. I preside at the directors' meetings when I am here and Mr. Doherty is not. The salary of $3,000 paid to Mr. Doherty is not paid to him to serve as chairman of the Board of Directors at their meetings. It is paid him for serving in an executive capacity and for examining and negotiating loans and securing contracts. We usually finance the loans through our company. As compensation I get nothing but my salary. Our company does that gratuitously. If we buy bonds we get interest on our money. The

$500,000 of notes sold in the last two years by Doherty & Co. to A. B. Leach & Co. were sold at 97, and we got nothing whatever out of it, and as a part of that transaction we advanced some bonds that we owned as security for the notes. All of my salary is earned because of the assistance I give to the company in financing it. Mr. Adams, I think, would have the qualifications necessary to act as chairman of the Board of Directors or as president of the company as to the local duties. In addition to the local duties it is necessary that the company have some one with ability to furnish capital and to purchase the supplies. I think the company here should pay for the expense of Eastern financial agents who finance the company and furnish capital and I believe that expense is a proper element to be considered in making a local rate in this city. There is a total paid of $9,000 in executive salaries. If Mr. Doherty lived here he would have the qualifications to perform the duties of president of the company, chairman of the Board of Directors and general superintendent, as he is a practical gas engineer. But he would not have the capacity to do the financeering that he does now because he would not be in a position to do it. He would not have the standing in the financial world if he confined his efforts to this one property, that he now has where he devotes his energies to a number of properties. He could not, as local president, secure the prices for materials and savings that we now secure, and neither could he secure the talent for the different districts under his charge as a local man without having other organizations to draw on. We are conducting at Denver a training school and each year we take on 30 university graduates and give them the practical knowledge that their college course cannot give, and when a man is needed at Lincoln or at some other plant one of these trained men is sent to do the work. We also conduct a school at Denver for training men in the development of business. Mr. Doherty, I think, in this property could not do these things which he is now doing with a group of properties. It could not be done without a very large added increase to the expenses of the local company. It is now done at the expense of Henry L. Doherty & Co. We consider it good management and economy in the operation of the plants. The president of the company could perform all of the duties of the chairman of the Board of Directors at the directors' meetings. In many instances the financing of this company could be done by one member of Doherty & Co. as well as two, but the salary of one would amount to as much as the combined salary of two, so far as the benefits derived are concerned. The company maintains an office in New York City for the payment of coupons. That is in our office. I am sure the company pays no rent for the New York office. In most cases a percentage fee is charged for the payment of coupons or the transfer of stock. I am unable to say whether that custom is maintained with reference to this company, but I will look it up. I make no charge against this company for any service in addition to my salary. Nor do I charge anything for my services in connection with this litigation. The prior hearing I might have charged my

traveling expenses if I was not at that time a salaried officer. At that time I was vice-president but did not draw a salary, and my recollection is that all I received for my services in connection with the prior litigation was my traveling expenses. In the purchase of gas ranges, electric incandescent lamps, fans, motors, water heaters, and such things, by reason of our having control of the large number of companies we are able to get better prices for supplies for the separate companies than they could get for themselves. We can also do this with gas pipe where we can buy from one foundry and distribute it to the different plants in that district. We were able to do this one or two times in connection with the purchase of pipe for both Denver and Lincoln, I think, prior to the last trial. We have also been able to do that in some instances in the purchase of coal, coke, and oil. Doherty & Co. does that in all
1001 cases where it is found that better prices can be secured. Doherty & Co. purchases for the Lincoln Company, gas sets, electric lamps, fans, sundries and some gas supplies, and sometimes we buy gas pipe for it. Other times we tell them the prices we are able to secure for them and they order on that information. Our purchasing depends upon whether we are able to get a large enough volume of orders from the different plants to get a special price. In case of the purchase of a portion of gas pipe by the local company the local company would take it up with our purchasing department and they would find out what was the best price obtainable for the material needed and frequently they are able to secure better prices and the local company gets the benefit of it. At the time the 500,000 foot holder was purchased for the Lincoln company we also acted for another plant and placed the order for two holders and thereby got some concession in price. This has also been true of coal and oil in some cases. Doherty & Co. are holders principally of stocks in the various companies and oftentimes own notes for money loaned. We also sell securities in gas company and public service corporations. The income of Doherty & Co. is largely on the stocks that it owns. Our holdings are both direct and by means of holding companies. We sometimes also own small amounts as individuals but the firm ownership is practically all that we have. No profit whatever is made by Doherty & Co. on the various purchases which it negotiates for the different companies. In the case of the purchase of meters the purchase is subject to a quantity discount at the end of each year. When that discount is paid to us it is divided up among the companies in the proportion they have bought. I don't think of any instance in which Doherty & Co. is in any way interested in any of the firms or corporations with which the contracts for the different supplies are made.
1002 There is one instance where we own and run a small plant in Brooklyn manufacturing a special gas burner, and sometimes we order a few of those things but that is not a paying proposition and we are not getting any profit out of it. That is another company that we are trying to get on a going value basis. Under general conditions I consider the gas business a safe business and usually less subject to hazard than industrials and also electric and

steam railroads. Exhibit 17 is a table put out by our company by which we intended to show that fact. It is based upon a study of the data that we were able to get on the various lines of business over a period of about ten years, taken from the country at large and confined to the companies we were interested in. I consider it reasonably correct having regard for the average conditions in the various groups. Exhibit 18 is a document put out by Doherty & Co. advertising especially gas and electric securities of the company. In that we made a special point of advertising the gas business under general conditions as being one less liable to hazard and usually business risks than any other line of business. Even in the gas business you would have to push for business or you would not be successful. The absence of wood or coal for fuel anywhere near the city of Lincoln not only makes gas a desirable fuel but also a very expensive thing to supply it. If there were no gas company in Lincoln and no means of obtaining gas there would be some existing demand for it before the company was launched. We built from Lincoln to University Place, a distance of three or four miles through an unsettled territory and are not now getting what we think we ought to. We thought it would be cheaper to build this way than to erect a new gas plant at University Place. It would take from two to ten years after the establishment of a gas plant in Lincoln for the revenue of the sales of gas to pay the operating expenses. It is not probable that
1003 the demand would be so great that we would be unable to lay the mains fast enough. We have not found that to be a fact in University Place. I see no distinction between University Place and Lincoln on this proposition. Our business here is largely serving residences. We charge in University Place $1.25 per thousand. In building up a new business capital would have to be advanced to make up the deficit in operating expenses. We would not be able to charge a rate which would pay expenses because the public could not afford to pay it. We try to get it adjusted on a paying basis as soon as possible. The highest rate this company has ever charged, to my recollection, is about $1.50. That was at the time of the reorganization along in 1892. A portion of the expenses necessary to build up the business might be paid out of the earnings if there were any available but as a matter of fact at the outset there are no available earnings. As far as possible the income would be used to defray the expenses and the rest of it would have to come from capital. Since 1901, at the time the McMillan syndicate took over the property, the expenses of operating the business and of getting new business has, as far as possible, been charged to operating expenses, and has been paid out of earnings which should have been allowed to accumulate by reserve or by moneys borrowed for the company and put into the business by the sale of some of its stock. The expense of soliciting has always been charged to operating expenses and we also allow salaries. It has always been that there was enough income to pay current expenses. All of those expenses are entered here as part of the operating expenses and deducted from the gross earnings before we arrive at what the company considers a fair return. I have drawn a salary since 1911. Prior to that time I drew no

salary. Mr. Doherty, I think, has drawn a salary since 1903 or 1904. He was formerly president while Mr. McMillan was
1004 chairman of the Board. I will ascertain whether or not Mr. McMillan drew a salary. The food product I referred to is what is known as a national onion salt. It is a quanity new to the trade and we have to create a demand for it. I think that is also true of gas as our University Place experience indicates. Gas is pretty well known but when we go to a house-holder we find his knowledge is limited. We sometimes get him to install a gas stove in his kitchen which he uses for two or three months in the summer time and it is sometimes five years before they will use gas for cooking. It is a problem to get them to see the comparative value of gas as a fuel and it takes time and effort. I estimate the going value of the Lincoln property at from $300,000 to $350,000. The balance of my estimate is the value of the physical properties. I figure from 70 to 80 thousand as working capital, which includes materials on hand and cash in banks. It is ordinarily necessary to have from 30 to 40 thousand on hand. The amount of cash in bank on January 1st, 1913, of $55,920.39 is very much more than it has averaged for any recent period. On December 31st, 1912, the company had on deposit with Doherty & Co. in New York City, $27,445.89. They carry a balance with us to meet coupons when presented and to meet obligations. We pay them six per cent interest on their deposits. We try to divide our banking business in the communities in all banking institutions. We never try to do all our business with any one. In a month or two all of this cash on hand will be put into some extension or enlargement. I think this is the first time we have had that much cash on hand. The money on deposit with Doherty & Co. cannot be any portion of the proceeds of the sale of the $500,000 of notes in 1911. That was all used to clean up the floating in-
1005 debtedness. The policy of the companies is to leave their funds in the local offices. However, all of the companies do carry a deposit with Doherty & Co. primarily for paying dividends and coupons. We charge them six per cent for the money we advance and pay them six per cent for the amount they deposit with us. Most of the properties are owing us, and the Lincoln property has until quite recently. The earnings of the gas department in 1912 were about $9,000 less than in 1911. I am unable to say whether the expense of this litigation has gone into that period or not. It will have to be charged off. The competition from coal companies is greater here than in many places. I think the records will show in the price fluctuation there has been a rise in the cost of gas-making materials during the life of this property while there has been a decrease in the selling price of gas. There has been an increase in the sales of gas but also an increase in the cost of bringing about those sales.

Redirect examination by Mr. Rose:

The bonded debt of $1,500,000 is the outstanding debt of the company representing both departments. If the $500,000 of notes were

paid the outstanding indebtedness of the company would be between $700,000 and $800,000. The exact figures would be about $760,000. Mr. Doherty is consulting engineer of the company on all matters and it receives the benefit of his engineering skill and experience. He designed the spray used on the gas machine. Very frequently independent companies hire independent engineers and operating companies as managers and employ them on special engineering matters and employ special auditors. It is a good thing to get the advice of others who have had experience in like matters. J. G. White & Co. is an engineering and operating company operating all over the world. They accept employment as consulting engineers and general managers of individual plants in the United States
1006 and Canada. There are also Stone & Webster, Westinghouse, Carr & Co., and H. M. Billsby & Co. These companies and Doherty & Co. are the principal ones in that business and we do no outside engineering for others. It is my understanding that the people owning this company prior to Doherty & Co. being connected with it actually solicited and placed the property under the general management of Emerson, McMillan & Co. The services rendered by Mr. Doherty and myself were of the nature of the services of a skilled consulting engineering company and largely without additional cost to the company and correspond with the services which might be furnished by an outside engineering concern. Prior to Doherty & Co. taking over the matter, Emerson, McMillan & Co. has always acted as their company's transfer agents and always charged for the services. The charge for that service is practically unavoidable if your securities are to be put through the New York market. The charge is done to defray the expense of making the transfer. We worked out the cost once and have always charged that since. We have never made the practice of buying properties and selling them at a profit. We make it our business to purchase properties and develop them. We are not speculators. In exhibit 17 showing the increased rate of earnings applicable to these utilities there is no separate grouping of gas properties. The compilation was from the data of both gas and electric properties, the larger part of the increase came from the electric depart- as there are more new uses and possibilities for electricity at the present time. Both departments show gains but the electric department has grown faster. There are more uses for electricity for lighting and power purposes than there are for gas. Exhibit 18 is prospectus on city service companies. The Lincoln property has no connection with the city service company. The Lincoln property does not compare with the properties embraced in the city service companies. I would consider it a bad property
1007 as compared with those properties. We would never undertake to exploit by an honest prospectus the performance of the Lincoln company from a revenue standpoint. There is nothing that we can point to as a recommendation to an investor. I am unable to see any difference in the value of the Lincoln plant or any other utility whether it is valued for the purpose of selling or fixing the rate for assessment for taxes. Utility companies have but one basis of value for all purposes. Our company advocates that there can be but one

value for all purposes and, in my opinion, that is the only standard that you can have.

Recross-examination by Mr. Morning:

The $500,000 worth of notes recently issued were for the purpose of taking up $333,000 worth of bonds and the floating indebtedness. After this was taken up I do not know whether or not there was a surplus. Mr. Adams can tell you that. Interest is being paid at the rate of 5% on the bonds and 6% on the notes. So far as our records go the interest paid was not apportioned. We accumulate so much from each department and make a deduction from the accumulation. I would say that the electric business is much more profitable than the gas business but exhibit 17 and 18 don't emphasize that point. They emphasize the growth. We have competition in the electric business in Lincoln. When we first started in we did a commercial business and also street lighting, then the city came in and did their own street lighting and we lost that income. Then the street railway company has an electric department and are competitors with us for commercial and power business. We are constantly competing with them for the business. I think our net earnings for the year 1912 in the electric department were $35,000 or $36,000. These were applicable to depreciation and returns on capital. I have made no particular effort to place a value upon our electric plant but my general impression is
1008 that it is worth somewhere between $600,000 and $800,000.

I do not thing we would be earning more than 1% on that valuation after making a reasonable allowance for depreciation. We deduct from between 5% and 7% of the gross earnings for depreciation. Our office is a sort of clearing house for information for the various companies. I think it is very desirable that a gas plant, after it has been constructed and it is in operation, to keep in its employment a consulting engineer for you are constantly investing new money. Each year there are improvements to be made, additions, and enlargements to be added, and money spent for engineering services and advice. A practical gas man like Mr. Adams would have a great deal of knowledge along these lines but in this business two heads are better than one and suggestions are secured through our method from outside sources which may save errors which Mr. Adams might not see. When we constructed the East Lincoln holder a great deal of engineering advice was required to determine whether it would be more efficient to construct it in East Lincoln or to put it at the gas works. These are very complicated problems in the gas business. My impression is that that problem was solved by our experience in Denver where the same thing was done. Mr. Adams could get that information in a general way but he would not get it as definitely as he could if part of the organization were working toward that end. Individual companies employ operating or engineering companies to exercise much the same control over their plants that Doherty & Co. does over this company. New York City at the time its affairs were made public

had a number of consulting engineers on its pay-roll to do this very work. Chicago has done the same thing. The gas company at Galveston, Tex., pays a consulting engineer an annual retainer rather than a particular fee. Smaller plants also do the same thing. Money spent in this way is thought to be money well spent in every public utility property. The problem of enlargement
1009 and growth is continually before it. In a great many instances gas plants over the entire country are controlled by a company such as ours, by ownership of stock. That has been frequently the only possible way of financing the needs of those companies. An institution that has its money already don't need the assistance financially but it might need the services from an engineering or advisory standpoint. The transfer service mentioned takes place when a holder disposes of his stock. The transfer office receives the stock of that man, takes up his certificate, and issues a new one in the name of the buyer, and registers that on the record to show that he is the holder of record. This work is not ordinarily done by the secretary of the corporation and is done outside as a protection against over-issue. Mr. Phillips, a local man, is secretary of the company. The practice is for the president and secretary to sign the stock in blank and turn it over to the transfer office to issue as needed. The transfer fees of Doherty & Co. from the local company here amounts to ten or fifteen dollars a month. It is the same charge that was formerly made by McMillan & Co.

Cross-examination continued by Mr. Foster:

I saw the inventory that was made some years ago in the first case and I have made some study of inventories made since. I remember seeing Mr. Lea's last complete inventory and report. I have seen some of the data gathered in the office. For the last three or four years the quality of the company's product has been about the same. The fluctuation of our expenses is in the operating department. Our general expenses have not fluctuated greatly but we have had some unusual expenses once or twice. Our general expenses have gone up for the last few years.

Cross-examination continued by Mr. Morning:

At the time McMillan bought this property I came here and made the entries, opened the books of the new property, and closed
1010 out the accounts of the old. I was not a party to the transaction but was acting in a clerical capacity. I think they got some idea of what the property was before they acquired it. I don't know whether they had an inventory or not. The transfer was in the nature of a stock and bond transaction rather than a cash sale. I think the capitalization was increased materially with some new capital put in. I do not know how much. The books will show and they are here.

Redirect examination by Mr. Rose:

It used to be considered the best method to place the holder capacity at the manufacturing plant. Mr. Doherty personally figured on it, and found it desirable to do it the other way, putting in district holders and giving the same service with a lower investment. It has been a custom and had generally been considered that 4-inch cast iron mains were the smallest that you could use for service to perfect economy and many modern towns over the country use the 4-inch cast iron mains as the minimum size. Doherty & Co. have worked out a plan of having large trunk feeders carrying the gas out to the smaller mains to distribute it among the users. By having district holders instead of a central holder your investment is smaller. The gas can be supplied out of the district holder in smaller mains costing less to construct and the district holder can be filled from the central station by one trunk main. When the consumer is not drawing gas it can be sent through the trunk main to the holder and when the customer does use it, it comes from the holder. This tends to give a uniform pressure. By these two methods we have been able to serve the community at a lower investment cost and relieve the service from the burden of paying a return on increased capital. The present plant constructed with district holders would not be ¾ of what the distribution system is in some places where they put in big pipe all over the system
1011 with the central holders. These results do not come from a single plant but are the result of a study of a great many places and conditions. We think that it is of a decided advantage to have the services of an engineering company that makes a comprehensive study of the whole industry.

Recross-examination by Mr. Morning:

The idea of the district holder and elimination of large trunk mains is very nearly an original idea of Mr. Doherty. He broke away from the established custom and worked it out. I do not mean to say that there was never a district holder before he went into the gas business but I do mean that he developed the idea of district holders for storage purposes rather than having them all assembled at the point of manufacture. That method was first employed elsewhere at Mr. Doherty's suggestion, and at that time was a matter of public knowledge among gas men and engineers. They could have adopted it here independently of Mr. Doherty but I doubt if they would.

Redirect examination by Mr. Rose:

The 2-inch wrought iron mains have worked out very satisfactorily here and it materially decreases the cost of plant construction and it is more than sufficient to counter-balance the longer life of a 4-inch main. It avoids the loading of a larger capital return on the plant.

Recross-examination by Mr. Morning:

Prior to the installation of the East Lincoln holder the plant here had an excessive amount of 2-inch mains and had resulting trouble from inadequate pressure. When this case was tried in 1908 the East Lincoln holder did not exist. The holder was not constructed because we had long lines of 2-inch mains but because we didn't have enough large size mains to bring the gas to the 2-inch mains and the question was, should we put extremely large mains in to take all the gas when needed to the 2-inch mains or shall we take it through smaller carriers. If I were installing a new plant
1012 I would put in the East Lincoln holder in preference to laying mains of a larger size to the territory served by that holder. Since the last trial we have spent considerable money for service governors for the purpose of maintaining a uniform pressure at the service. It was partly due to the excessive pressure required to force the gas through the smaller mains to the outlying territory which increased the pressure upon certain of the services during different periods of the day, but the idea of putting on the governers is one of the features in connection with the whole system. The governors cost about $10,000. The East Lincoln holder is tied into the whole system. It is the place where the engineer figured it best to locate it on the system. One of the reasons was to give the necessary pressure to send it out to University Place and Havelock. We have a booster at the holder which is used to send the gas all over the system and towards University Place. My recollection is that the East Lincoln holder was necessary without regard to whether we built into University Place. We have another district holder at the gas works. As I recollect it the weak point in our system from the standpoint of locality was the location of the district holder. I consider our investment here in the distribution system low per thousand of gas sold.

Redirect examination by Mr. Rose:

The installation of a district holder would create less interruption of business and cause less public inconvenience than the changing of large mains for smaller ones. It becomes less and less practicable as the city grows to regulate the pressure at the service by an adjustment and change in size of the supply mains and the cure is by the use of governors. If the difficulty of uneven pressure were attempted to be over-come by an enlargement of the mains it would increase the cost at a greater rate than by means of small mains, district holders, and governors. Governors are coming to be a recognized necessity in all gas plants. It is impossible to obtain uniform pressure in any other way.

1013 FRANK W. FRUEAUFF, recalled for further cross-examination, testified as follows, pages 1134 to 1147, Vol. 1, original record:

Cross-examination by Mr. Morning:

My testimony as to the necessity of the East Lincoln holder was based upon recommendations and data placed before us either by engineers here or others we sent here to study it. C. A. Frueauff is my brother. He is an attorney in New York, and is paid a monthly retainer of $50. It is his duty to advise Mr. Doherty and myself and to advise the Lincoln company in different matters. At the time of the note issue he prepared the note and passed upon the character of it. We find it necessary and economical to have a New York attorney at $50 a month. The salary is charged to the local expenses of the property here. H. H. Scott is general manager of the Doherty Operating Co., a corporation which is formed to handle some of the engineering and statistical affairs of Doherty & Co. He is not on the pay-roll of the Lincoln Gas Co. The charge of $60, on January 1, 1910, against the Lincoln Gas Co. for the salary of Mr. Scott was for his time devoted to the Lincoln company. It represents a portion of his salary. When these men come out and do some special work for a property their time is charged to that property. This is covered by voucher 8001. We do not make any charge for stationery used in the New York office on behalf of the Lincoln company. The charge there for stationery is, I think, some that was prepared and sent out here. The premium of $1,500, April 20, 1910, of the National Surety Co., I think, is the premium that the company had to pay on the bonds in order to maintain this law-suit. It was charged to the operating expenses and paid out of the earnings. In addition, Doherty & Co. have to stand the sponsoring to the surety company on these bonds, for which Doherty & Co. receives no pay. My brother was paid a fee for services in connection with this case on appeal to the
1014 Supreme court. I am unable to say what it was. That was charged to the operating expenses and paid out of the earnings. In addition, Mr. Strode and Mr. Rose are also paid. Mr. W. H. Gardner is one of our men from New York. We sent him around once to nearly all of the properties to go over some items in our accounting and reporting system, and voucher 11,565, of December 1, 1911, for $31.54, represents, I think, his expenses while here. The item of $10 represents his time. The commission for paying interest on bonds is ¼%, and the item of $47.94, December 1, 1911, voucher 11,774, is the charge made by this company as fiscal agent for paying interest on bonds. Voucher 12,463, April 4, 1912, for $15.33, is, I think, the local company's contribution toward a general advertising campaign to popularize the electric vehicle. I am not certain about that. Paul R. Jones is general auditor for Doherty & Co. He goes out once or twice a year and audits all of the properties for the stockholders. He is paid a salary by Doherty & Co., and the item of $125, January 31, 1912, to him is for an audit of the local company's books. The item of

April 30, 1912, for $220, to him for 11 days is for his services in connection with the audit of the books of the company. The item of $3.25 of April 27, 1912, is for stenographer's work. I do not know just what it covered but it was probably something special that came up. Voucher 12,764, June 1, 1912, for $47.94, is for commission for interest on bonds. The item of C. B. Gilbert, of $25, for April and June, is for his salary. He is assistant secretary of the company in New York. I consider him a necessary adjunct to the transaction of the company's gas business here. He is on a regular salary from Doherty & Co., and it is pro-rated out among the different companies of which he is an officer. Mr. W. E. Quillan is manager of our general commercial department. He visits the different properties and calls to their attention new methods of securing business and helps stimulate the growth of business.

1015 Whenever he visits a property his time and expenses is charged to that property. The item of October 1, 1912, voucher 13,250, to him for $29.70, is the pro-rate portion of his expenses while on one of these trips. The item of October 1, 1912, for $100, advanced to Mr. Adams, was advanced to him while he was in New York. Mr. Gilbert acts as assistant secretary for four or five companies. His duties are along that general line. The item of December 1, 1912, voucher 13,526, for $42, to Columbus stock transfer agent, is the fee paid to the transfer agent in New York on Columbus, Ohio.

1016 *Stipulation.*

It is stipulated by and between the parties that the City of Lincoln through the City Attorney and his associates has secured an order from the District Court of Lancaster County, Nebraska, setting the case of the State of Nebraska ex rel., Frank M. Tyrrell vs. The Lincoln Gas & Electric Light Company for trial over the objection of the company immediately after the conclusion of the taking of the evidence before the Master in this hearing and the City is demanding an immediate trial and judgment in that case according to the prayer of its petition.

It is further stipulated and agreed by and between the parties that on December 27th, 1912, the following proposition was submitted to the electors of the City of Lincoln embodied in an ordinance, to-wit: (For copy of ordinance see Exhibit 102.)

1017 L. E. WETTLING, being first duly sworn, testified on behalf of the plaintiff on rebuttal as follows, pages 4059 to 4091 Volume 4 original record.

Direct examination by Mr. Rose:

I am a public accountant. In my employ with the Nebraska State Railway Commission and under the Attorney General for Nebraska, covering a period since 1906, I have had much experience with the analysis of accounts of public utilities and with analysis of valuation figures and contentions generally that come in litiga-

tion and hearings on matters of that nature, before the commission and before the Courts in several rate cases and tax matters. In connection with my professional business I have had access to the original records, accounts and vouchers of public utility companies as well as the exhibition of that information in hearings before the commission and the Court and also in the performance of my duties I have had occasion to refer to tax books law books and reports of commissioners in various states in the union generally. Shortly after the organization of the Nebraska commission, I was employed there first on a per diem basis, and prior to that I had been employed by the attorney general to assist in tax matters and express and railroad rate matters. I wrote the amicus curia page in the Missouri rate case and my work was utilized and embodied in the arguments submitted at that time to the Supreme Court of the United States, in that case. I have been following the vocation of a public accountant almost all the time since 1895. For about eight years I was regularly connected with the Farmers and Merchants Insurance Company and did not follow the business as a vocation, but I did considerable accounting both here and in Omaha. My first employment by the Farmers & Merchants Insurance Company was in the capacity of a public accountant for the purpose of analizing their accounts and submitting a report as to the values of the securities and the condition of the business generally and in several cases of considerable magnitude in connection with my employment by that company, I was called upon to perform the duties of
1018 public accountant and made an examination for the purpose of a possible purchasing of a number of insurance companies, and during the same time I completed an examination of the affairs of the Auditor's Office of the Pacific Express Company and there was also considerable litigation with the former Secretary of an insurance company in Omaha, in which I did a very large amount of accounting work. The Farmers & Merchant's Insurance Co. was an investor in the securities and stock of the Lincoln Gas Company at that time and they were represented on the Board of Directors. I became its representative about 1902 and am still a director on that Board. I have attended the meetings of the Board of Directors and have kept in touch with this utility in a very general way. I haven't made a very close analysis of the amounts, but I have kept in touch from time to time ever since I became a director. I have made considerable study along the lines of valuations, incidental to the question of the accounting, as in rate controversies and litigation, and during my term of service with the Nebraska commission I have always worked in conjunction and close touch with the engineering department. Our work merged to some extent and I did some little independent investigating and occasionally had some opinions along the lines of general practice which disagreed with them. I have made a study of the different engineering problems in so far as they enter into the items of construction, financing and operation of public utilities and have compared all of the items of cost entering into the giving of service and have made a study of what items of cost are proper capital contributions

and what are legitimate and strictly operating expenses. I am familiar with the practices and different theories which obtain in valuing a property as held by engineers, Courts and commissioners, and public utility companies. An inventory of the material in the composite plant would not necessarily reflect the cost of construction. It would depend largely upon the conditions at the time of the valuation as compared to the conditions at the time of the con-
1019 struction or purchase. The question of variation in labor costs, material cost and the possible difficulties of construction they might have elsewhere in the interim and a number of other minor reasons might affect and make up the difference between the two items. The materials actually in place in any business utility plant seldom represent all the materials that the company would necessarily have to spend its money for in acquiring the plant. It is not as a rule a practicable possibility to show all the materials necessary to be purchased and actually standing in a completed plant, except where the article is complete in itself and there is always in practice more or less loss of materials, disappearances for various reasons and the amounts will seldom be found in re-inventorying, and it has been the experience in making inventories of plants which have been constructed during a period extending over a number of years, that an inventory is seldom taken which does not and ought not to account for a number of omissions. It is seldom that an inventory is absolutely complete. It is almost impossible to avoid omissions in the ordinary course and there are generally variations made on that account. In a plant which as a whole is composed of a large class of items or containing a particularly large collection of smaller items, it is impossible to account in the construction finally turned over, for a working plant, for the total amount of material purchased, and for that reason it is the common practice and has been found practicable and necessary to make an allowance for various percentages for contingencies. The term contingencies and omissions covers also other things. It has a varying interpretation by different engineers and does not always include the same items. It generally includes the loss of material, breakage of material, unfor-seen accidents unfor-seen difficulties, met for instance if the contract is based on the trenching through a certain kind of earth and they should meet hard pan or obstacles that were not figured on in the original estimate. It also covers possible accidents during construction, damage claims and things of that kind.

1020 Also covering pilfering, stealing or loss of material and tools and whatever else disappears from other causes than pilfering. These items represent actual costs experienced by builders. Sometimes the cost is not quite so great as the allowance or estimate and sometimes it far exceeds it. From three to five per cent would be a reasonable allowance for contingencies for covering the actual costs in the construction of a plant like the Lincoln Gas & Electric Light Company's gas department. I only speak from general knowledge of what has been done at various places and plants of different kinds over the country as reported. I am at present a mem-

ber of the firm of Hurd, Gerber and Wettling and our offices are in the First National Bank Building of the city. In my estimate of three to five per cent contingencies and omissions I do not include any item for casualty liability. That is generally considered as a separate and distinct item. When I said accidents as a matter of contingencies, I referred to accidents to materials, such as breakage which occurs in putting a great many small component parts together or accidents to the works such as cave-ins and things of that kind. There are actually expenses experienced in the construction of a work of the magnitude of the gas company's plant, on account of casualty liability. The risk in building public service plants like gas and electric plants, street railway plants, telegraph plants, as to the question of personal liability for injuries and damages, it is almost the universal practice to insure against cost of that nature by taking out liability insurance as well as insurance against accidents and liabilities not coming from the actual work itself. The amount set aside for this varies somewhat, with the class of work and the basis that these liability insurance companies figure on is a percentage of the pay roll and the varying of rates charged is in accordance with the work done. In the job that has a small liability that runs from one per cent up to as high as five per cent and even as high as ten per cent of the pay roll but taking it as a sort of general
1021 average it runs from four or five per cent on the pay roll, and assuming that the labor cost constitutes practically one-half of the entire cost of the finally installing the plant of the gas company here, it would amount from two per cent to two and one-half per cent. That is an item that is recognized by engineers generally and by public service commissioners and by the Court as a necessary part of the capital expenditure and it is either directly or indirectly always allowed with very few exceptions. In the construction of a plant like that of the gas company, it is also necessary to employ engineers for supervision as the work progresses. It is a well recognized fact that no gas plant of any magnitude or any prospective magnitude is ever able without the assistance of engineers, to construct the plant. There is first the preliminary work to be done in the matter of surveying the field and determining the best location for the plant itself and the best location for the distribution system and the general outline. That is studied with reference to the population centers, of the place itself and it is compared to other places and generally involves a long and extended study. That is usual and ordinary by engineers who have specialized in that particular line, especially where the corporation proposes to build a plant of this nature. They would only secure engineers who have had particular experience and undoubted ability and integrity in that line of business. This item is almost uniformly recognized by rate commissions and Courts, in the making up of estimates of the values of the corporations under consideration, and such expenses are unavoidably and necessarily a capital expenditure, because there is no other fund to draw from. Until the plant is in working order, there is no chance to draw from other funds. In the construction of a gas plant having a physical equipment of the approximate value of $1,000,000.00 I should say from my general

knowledge that five to eight per cent would have to be allowed for engineering and supervision together. It depends to some extent upon the difficulties met with, the length of time that is taken to do the building and the amount of preliminary service and investiga-
1022 tion necessary and the rapidity with which the plant is built and the money obtained for the protection of the building. All of those things would necessarily enter in, but just what particular weight each of those factors would have, would be difficult for me to state. With respect to the omissions and contingencies, I have ready in mind two instances that came under my direct observation the past year. In the case of the Lincoln Telephone & Telegraph Company, the engineers for the commission made an allowance of 5% for contingencies and adopted as a basis for making the value, an inventory submitted by the company itself, which purported to show all the items entering into the construction of the then physical plant. They checked approximately one-half of the entire distribution plant and office plant and found in that one-half omissions that practically equaled the 5% allowed on the entire property, and it indicated that 5% allowance was in fact only about one-half of the actual omissions that they had met with in the inventories made by the company. The companies in York County and Johnson county submitted inventories also and the unit basis applied by the department resulted in an estimated value of the plant from those figures submitted by the engineers. The occasion came up a little later for a more careful investigation, and in checking at random, here, there and elsewhere in parts of the plant, they found actual omissions of wires, poles, cross arms and various portions of the plant, which if they had been carried into an investigation of the entire plant, indicated that the allowance of 5% for omissions and contingencies would not have been sufficient to cover it. This was the result of the actual checking of visual physical property by third persons who did not take the inventories. They were checking inventories taken by someone else.

When a dead plant is constructed, there is a capital expenditure required to convert it into a live plant. That is true in practically all lines of business, public utilities as well as others, and that is the amount that it is necessary to expend to establish the business
1023 itself and to turn the plant from a mere physical property into an earning property for the stockholders and investors. That amount at present and for some years past has come to be designated as going concern value as distinguished from the physical plant itself. In addition to that there is the item of working capital, which is necessarily a separate and distinct item from the physical plant and is just as necessary as the plant itself. There is generally recognized and known by engineers, commissioners and Courts an item of expenditure to compensate for corporate organization. Sometimes that is included in one item, but more generally it is included in with the so-called overhead charges for engineering supervision and contingencies. That is the most usual place to allow it, and constitutes all the necessary expenditures for making estimates; obtaining money, soliciting funds, promoting, articles of incorporation, examination of abstracts, legal advice, purchase of franchises wherever

necessary and all expenditures of any nature which are preliminary to the actual business, or in many cases to the actual commencement of the building or plant, and they don't enter into the physical plant itself, nor would they be found as such in the inventories of the physical plant itself. These are just as necessarily a part of the primary capital contribution in a well conducted and carefully planned organization as the purchase of machinery itself. It is usually necessary for the promoter, when an enterprise of this kind is entered upon, to establish an office, at least at the beginning of the work of construction, in the community where it is being carried on and he must necessarily surround himself with the necessary help to generally supervise and look after the work of construction and he must have assistants to see that the work is prosecuted under the plans laid out by him. He must have a pay master and an accountant and they are in addition to the work done by the contractor or the engineers and the engineers' supervision clear through the construction. It is necessary to have an organization of this kind clear through the period of construction until the whole work is taken over and the plant is ready to operate. The expenses of that
1024 organization is necessarily a charge to the primary capital, because there is no other source of obtaining funds to defray each expenses. These expenses preceding the establishment of the operating revenues and the establishment of such an office, involve rent, stationery and supplies and probably would include traveling expenses, depending on the conditions, whether or not it was necessary to go to the source of supplies and investigate and make contracts for machinery or possibly to the source of supply for obtaining funds for capitalization. It involves everything that is incidental to making the local office itself efficient for the purpose for which it was established. It might include traveling expenses and it might not include that. It would in the case of the gas company. The gas plant would have to be operated at a loss in actual practice. It would be unavoidable. Also in the case of the gas company or almost any other class of utility, it is necessary to put out solicitors or educators to solicit business and to impress upon the present patrons the advantage of the use of the utility proposed to be established and acquire, with more or less rapidity, the business which that company proposes to do. I know that it costs from $30.00 to $40.00 per customer to get consumers to take the gas and to continue using it. That expense always exists to a greater or less extent in every new company. Until the utility develops a fair revenue this expense has to be charged to the capital account and it must necessarily be paid by the investors either directly or indirectly. If the capital subscribed and paid is not sufficient over the amount of actual needs for the building of the plant, including overhead charges, that is the building of the plant and working capital, then they must either contribute more money to defray such expenses or the company must borrow it and afterwards repay it out of the earnings. Even if it is borrowed it would represent capital expenditure. Bills payable are as much capital while they are on the books as the stock subscribed for or bonds sold. After the company got

on a fair revenue basis it would not be equitable to the present
1025 consumers to charge the original capital expenses for developing the utility into the operating expenses. The practice sometimes has been to charge those expenses off in a long period, but it is in effect the same as capitalization. It enforces upon the consumer for a shorter time a larger charge, than if charged on the basis of capital on investment. At the start there is no source of revenue to defray that cost to the capital contributors. It is not only impossible to charge these expenses against operating revenues when they are not sufficient to meet the operating expenses, but it is also unfair to charge them into operating revenue until after the operating revenue is large enough to not only cover all operating expenses, but also a fair rate on the investment. I have never made a calculation of the going value of the Lincoln Gas Company plant that is absolutely scientific or what I would consider a proper calculation, only in a very general way. I would want to know definitely that amount of dividends that have been foregone by the investors in the past, and the amount of expenses met in some of those directions in advance, but lacking the ability and time to get that information I have made an estimate which is of course, rough, but on the basis of obtaining the consumer. Estimating that at $30.00 per consumer, I figure about $240,000.00 or $250,000.00 for going concern value in the Lincoln plant.

Working capital, generally interpreted, means that amount of money necessary to keep on hand in order to pay operating expenses in advance of getting returns for the sale of the commodity. For instance, if you are running as in your gas plant, you pay your men at the end of each week or the month or in the middle and at the end of the month and you pay for your coal, oil and supplies as you buy them from time to time and your revenue from the business which pays for those supplies does not come to you until from fifteen to sixty days after the product is manufactured and delivered and it is necessary to have the capital with which to meet these costs and
expenses, in order to pay it and keep up your credit and get
1026 the advantage of the lowest cost of material and labor at the same time. It is also necessary to keep stores for repairs and replacements in advance and also if your business is being carried on, which is usual and customary for gas companies, all over the country, it is also necessary to keep appliances, stoves and supplies of that nature on hand. You are also required to keep on hand a reasonable number of meters, depending upon the ratio of the growth, but you must necessarily have some in stock, because if a customer comes today and says he is ready to take gas tomorrow, you can't wait to send down east and bring it back or he may forget that he wanted to use gas. It is also economical to purchase supplies in large quantities ahead of the demand. It is cheaper to buy in larger quantities than in small quantities. It is necessary to keep more money on hand than you absolutely need, from time to time. It is good business practice, because there are frequently unforeseen expenses that you ought to be able to meet. Also your credit at the bank is not very good if you don't manage to keep a reasonable de-

posit on hand. They would rather not carry your account if you can't keep a deposit on hand that is commensurate with the size of the business and the work entailed in carrying the account. It is necessary to keep a balance in the bank to meet demands. There are demands coming semi-annually for fixed charges and for things that it is impossible to take out of one single month's revenue and the proper and usual custom of the corporations of all kinds, is to accumulate from month to month so that when the time for actual payment comes, the amount has been gradually accumulated from the preceding six months or a year. The same thing would apply to items not strictly fixed charges, such as the purchase of a holder or something of that kind where you make a contract requiring you to pay out definite sums in the future. Commissioners and engineers ordinarily allow a balance, where the bills are paid in advance, the amount of one and one-half or two months' bills. When a
1027 month's credit is extended as in the case of the gas company, an allowance of about two months is fair. The allowance varies somewhat in different parts of the country before different commission- and also according to the necessity for supplies and necessity for carrying accounts receivable. The inclination is to be somewhat liberal in those things as near as I can read from the reports, and the custom is always to make an allowance. Exhibit 7-*b* purports to be an Exhibit of material and supplies on hand, accounts receivable, cash on hand and in banks and advances paid out and constitutes in that the so-called current assets of the company, as distinguished from the plant assets. On the other hand items 6 to 11 inclusive cover the current liabilities being bills and accounts payable, wages and salaries, accrued interest on bonds and bills payable, deposits of customers in the hands of the company and the difference between the two amounting to $72,037.83 constitutes the then difference between the current assets and the current liabilities and is commonly considered working capital and is in conformity with the usual custom for arriving at the working capital of a concern. If the balances are clearly stated, it indicates the difference was the actual capital employed at the time for working capital, as a necessary part of the capital of the company. Depreciation from use in giving the service is generally recognized as a proper operating expense. I was a director of the company when the East Lincoln holder was constructed and put into service and I was acquainted in a general way from conferences with the manager, with the conditions that led to the construction of that holder. There had been a great deal of complaint, well founded, as acknowledged by the company, of a lack of pressure pretty much all over town but more particularly in the northeast portion of the town at certain periods of the day. It was almost impossible in 1904 and 1905 to get a pressure on the gas stove. I was living on the east side myself and happened to know personally of the conditions by reason of investigating it on the complaint of my wife. The complaint was pretty general and the question
1028 — as to how to correct the trouble. While there was some complaint from south and southeast it was not so strong as from the east side. It was determined to relieve the trouble and some relief

was obtained by tying in the mains so as to get better circulation, but it was found that it was necessary to do one of two things; either to build much heavier mains in all directions from the gas plant or to build a separate holder in the east side, which would take care of the development of the northeast territory independently and at the same time relieve the plant from the demand on it for that section of town, and give the capacity of the plant to the southeast section, and in that way the southeast as well as the northeast section would be relieved. The general opinion was that in the long run it would be a cheaper and less expensive operation to build a holder than to try to correct the main situation. That was assuming too, that the provision would in the future again have to be made for further enlargement and extension by reason of anticipated growth. An account receivable of a public service corporation is a part of its assets or capital, until it is determined to be bad and then it is charged off to profit and loss. I was present when Mr. Adams introduced and I have since had access to the comparative tables which purported to have been derived from the annual reports of the gas and electric light company in Mass. through the Mass. commission and I have also had access to the reports of the commission, volume 28 Document 35 for the year 1912. I endeavored to trace in this volume to its source, the information contained in the tabulation of the tables, and to reconcile the figures presented by Mr. Adams with the expenditures of the Mass. companies as they are reflected in the reports of the gas commission.

L. E. WETTLING, being recalled for further direct examination, testified on rebuttal for plaintiff as follows: Pages 4106 to 4191 original record.

Direct examination by Mr. Rose:

1029 As I understood the testimony regarding Exhibit 249 to 363 inclusive with the exception of two or three pages, the information contained in those Exhibits purported to come from Gas and Electric Light Commissioners of Mass. I have reference to the Exhibits contained particularly in the group of Exhibits entitled in the one case "Other gas plants compared with Lincoln gas reports." That comprises Exhibit 249 to 363 and other Exhibits, which were originally marked 240 and afterwards brought forward and corrected to 268 to 393 inclusive. As to Exhibit 249 which was specifically excepted, there are only two items appearing in the document referred to before the Court. In Exhibit 350 one of the items appears in the report referred to, but not in the form stated. The same is true of Exhibit 351 to 359 inclusive. None of the items appearing in Exhibit 360 are found in the document referred to and the same is true of Exhibits 361, 362 and 363. In Exhibit 368 I find only one of the items referred to and that is found in the document but it is not in the same form. In 369 the rate named for the town of Attleboro is $1.00 per thousand, and I find that the document referred to states that the average price received in Attleboro was $1.11 per thousand for gas consumed, this being shown on page 128, which states that in Attleboro the year ending June 30, 1912, the rate was reduced from

$1.20 to $1.10. At some time prior to that time the basis was $1.20. Now referring to the items contained in these two groups of Exhibits with respect to salaries, office expenses and distribution expenses, there are no conclusions or groupings of expenses in the document referred to, shown on page 248-a and forward, which correspond with the grouping in the Exhibit and there is apparently no information in the document itself which would enable another to cash the same amounts as shown in the Exhibits referred to, which are headed as to those items "All expenses except materials and labor making gas, repairs, renewals and taxes per sworn return to Mass. Commissioners," with the sub-heading "Salaries and office expenses" and "Dis-
1030 tribution, and general expenses", with the total of the two subdivisions.

The document referred to shows that the total cost of manufacture, purchase and distribution of gas for the year 1912 of Haverhill Gas Company, was .68026 cents per thousand cubic feet without any depreciation; for the Lincoln plant for 1912 Mr. Adams has estimated .599 cents covering all items of expense and depreciation and says that this is an extreme allowance for the cost of manufacturing and distribution and overhead expenses combined. Deducting from this amount the amount assumed to be depreciation, in accordance with the testimony this morning, the six cents per thousand cubic feet, leaves the total maximum cost of manufacturing and distribution for the Lincoln plant for the year 1912, .539 cents per thousand cubic feet, and .14126 cents per thousand cubic feet less than the cost in Haverhill, as stated, for the period referred to in this document.

The impression was left, by Exhibits 369 to 372 that the gross profits remaining in the Lincoln gross income above actual operating expenses, was so far in excess of the dividends paid per thousand cubic feet in Mass. that I have compared these Exhibits with the report contained in the document referred to. I find that the balance from the year's operation, referred to under that caption as shown on page 255-a after deducting therefrom the item called other expenses in the column at the top of the page, the profits were as follows: In Boston .27046 cents per thousand cubic feet; Broc-ton .303 cents per M cu- ft. Cambridge .30185 cents per thousand cubic feet; Charleston .28901 cents per thousand cubic feet; East Boston .17106 cents per thousand cubic feet; Fall River .24869 cents per thousand cubic feet; Fitchburg, .21766 cents per thousand cubic feet; Haverhill .2381 cents per thousand cubic feet; Lawrence .2399 cents per thousand cubic feet; Lowell .28948 cents per thousand cubic feet; Lynn .22419 cents per thousand cubic feet; Malden .22589 cents per thousand cubic feet; New Bedford .32597 cents per thousand cubic feet; Newton .19026 cents per thousand cubic feet; Pittsfield .30429 cents per thousand cubic feet; Springfield .3378 cents per thousand cubic feet;
1031 suburban .19009 cents per thousand cubic feet; Salem .33718 cents per thousand cubic feet; Taunton .30278 cents per thousand cubic feet; Worcester .23987 cents per thousand cubic feet.

I find that the cost of the manufacture, purchase and distribution

of gas, less residual and excluding depreciation reserves and other reserves, and also excluding other expenses ranges in the twenty Mass. plants, tabulated on page 254-a of the same document, from .48895 in Boston through a varying amount up to .93027 in Fitchburg. This excludes depreciation and other reserves and other expenses, which ranges from nothing up to five cents in some of the plants, per thousand feet sold. The depreciation and other reserves are combined in one column on page 255-a for these same companies and because there is not a very definite separation made, it is not quite safe to testify that they are for depreciation in gas properties, but the amounts range from $628.45 in the case of Salem, up to $74098.16 in Boston and from nothing set aside by some of the plants, suburban, New Bedford, Lynn, Lawrence, Haverhill and Pittsburg, to .11513 cents per thousand feet in Taunton. Some of these plants are strictly gas manufacturing plants and of course the reserve on depreciation stated in that case would be strictly against the gas business, but how much of it was strictly depreciation and how much other reserve, the document does not disclose; and therefore it is not useful for determining the exact amount of depreciation that the company chose to set aside in those cases. I find in the case of Malden, which was reported to have sold its gas for the year ending June 30, 1912 at the rate of 79.1 cents per thousand cubic feet, on the average, and I find that it sold 130,596 M feet to other companies and that the average price for that gas sold was 41.3 cents per thousand cubic feet and I further find that the average price to its consumers other than to the companies, was 90 cents per thousand cubic feet, which is 11 cents per thousand cubic feet more than the average price.

1032 In the case of Springfield, the average price was 80.5 and I found 166,000,000 cubic feet were sold on the basis of 40c per thousand, to other companies and the resulting average to the consumer was 81.5c. The average price received for the gas in Lawrence for the period was 80.8 per thousand. In the case of the town of Lynn shown in Exhibit 377 as having a 75c rate for the total amount of output for the years 1910, 1911 and 1912, I find the sales of a part of its gas in Marblehead to be at the price of $1.10 at a discount of 10c as shown in explanatory remarks in connection therewith. These figures are results of analysis by the commission of the return made to it by the companies. In estimating the cost of construction due to interest on money and taxes during the period of construction it is the usual and ordinary custom of engineers and public service commissioners to make an allowance therefor and add it to the valuation, interest during construction being as a rule calculated one-half the time of the estimated construction period at the rate of 6% per annum, so that if a plant required two years to build, the allowance ordinarily would be 6%, for interest in a plant requiring one year it would be 3%. The amount to be added for taxes varies according to the circumstances in different places. It is so wide that it would take considerable reference to determine just the rate. It runs all the way from nothing to two per cent. In Great Britain when they took over

the telephones they allowed 4.525% for interest during construction, which is the highest I ever met. In that same case they made an allowance for going value. It was not under that exact name. It was the cost of developing the business and it was explained in the opinion of the commissioners and the court, that the allowance corresponded with going concern value. They allowed 1.9% for subscribers agreement, 3.133% for raising capital, 1.95% to pay for the maintenance of the plant until the earning revenue was sufficient. That was a purchase case. The British government took over a lot of independent telephone plants and the reproduction new value was 15,512,484 pounds. After deducting the depreciation, the net amount paid for the telephone companies
1033 was 12,515,264 pounds, something in excess of $60,000,000.00. There was practically $16,000,000.00 paid for overhead allowance, going concern value, engineering during construction, interest during construction and all of those various expenses. The percentage was 24.37% of the physical value, including real estate.

I have one item to add for local engineering and supervision, for local administration and the head office engineering and administration, which were separate. The allowance for those three was 12.11%.

Cross-examination by Mr. Adams:

I do not now say that Mr. Adams testified that Exhibits 350 to 360 were drawn from printed report of Mass. Board of Gas and electric light commission for the year ending June 30, 1912. I was mistaken when I said that, as I had forgotten about the change of the numbers of the Exhibits, and assumed that they were applying to those introduced the first day or two I was here. The figures in Exhibit 368 are not in the same form in the report of the gas commissioners of Mass. for 1912. I think they are there in some form. Of course the figures for the years other than 1912 are not in that report. In a telephone case before the New Jersey public utilities commission, they allowed for going value. I am unable to give you the name of any commission or Court outside of the commission in Wisconsin, who have allowed for loss of material during construction. As that is usually denominated as contingencies and they do not allow it separately from the contingencies. I can tell you a number who have allowed contingencies made up partly of this item and other items. The expenses of the gas companies as taken from the report of the Mass. Gas and Electric Light Commissioners for the year ending June 30, 1912, I understand are an analysis and statement of expenses as the companies themselves have reported them. The report for the year 1912 on pages 248-*a* to 254-*a* inclusive, shows the heading operating expenses and the heading on page 255-*a* is net earnings and
their applications and on that page depreciation and other
1034 reserves are set down in one column and other expenses in another, and I am unable to find these same items in any

pages which bear the general heading "Operating Expenses", and neither do I think that these items are a duplication of the sums that appear on some prior page, under the heading "Repairs and Renewals". This tabulation does not disclose what these items other expenses were, and I have made no search to find out whether they might cover expenses pertaining to business other than gas operation. I do not know definitely, but I assume that they refer to gas operation. With reference to the price of gas in 1912 in the Massachusetts companies, I have endeavored to give the average net rate produced from gas sold to the consumers only. That conforms pretty closely to the highest net rate, but it is not the same except in a few instances. The amount of gas the Lynn company sold in the little village of Marblehead would affect the average of course, but not very much. The California railroad commission in the case of the San Diego Riverside and Los Angeles Railroad Company allowed 6% for interest on construction and in the case of the Southern California Utility Company, they allowed 3% and in the valuation of the Stockton Terminal and the Eastern Railway Company, they allowed 3% on the rate of 6% or one-half of the cost for one year. In the Iron Mountain Railway Company case, they allowed 3% for interest and in the Lake Tahoe Railway Company case, decision 640, they allowed 5% for interest and omissions. The commission in Washington allowed 2 or 3% in the Northern Pacific Railway Company case and of course there is the Wisconsin commission.

Cross-examination by W. M. Morning:

Ordinarily, the contractor figures for the contingencies and omissions and his price would include those items. On the question of the casualty liability, the principal must see that he is protected, and I would add to the contractor's price any risk in addition to the hazard of the contract. I can not give any specific instance where a property was constructed of any magnitude where the expenses of engineering and supervision was actually incurred by the company construction the plant, as I have made no
1035 investigation to lead me to anything like that. I have no personal knowledge of any construction of that kind. I think if the Lincoln Gas Company were to reconstruct this plant and there was a cost of $500,000.00 to construct the physical property, that it would incur an expense of $25,000.00 for engineering and supervision. The allowance of a percentage for omissions and contingencies depends upon the conditions met and the size of the items that go into making up the whole. It would not be so much contingencies in the assembling of a few large items as in the assembling of a great number of small items. For instance, in the case of a building to count the number of brick or estimate them by cubic measure. The contingencies are there just the same as though you know you have lost a certain number of bricks in the building of this building. The allowance must be made for the addition to the price or for added contingencies in

a lump sum. In laying pipe there are broken lengths and various other difficulties met which you can't see by looking at the map, which merely outlines where your pipes lay, so I feel that the item of contingencies, by the reason of omissions, cost, breakage and unfor-seen defects, would lie in the investor practically the same as in projected plant. There is not much difference. I think that would be true in the case of this gas plant. That would be in addition to the fact that the inventory might not be taken carefully. Our company employed Mr. Brodnax with a corps of assistants to make a complete and thorough inventory of this property and I understand that he has tried to do so, and that his inventory is just about as complete as it could be. I do not think he would make as many omissions as anybody else, but they are there just the same. He is an expert in that particular line and was employed because he was. He had some two or three assistants here and worked a considerable time. In the Lincoln Telephone Company case before the commission, our engineers found that the omissions in the inventory submitted by the company, amounted to 9%. After the connections were made the omissions would be reduced to a minimum, but there would still be the contingencies item.
1036 It is almost impossible to get an exact inventory, and we would still add the percentage for omissions, if the connections were made.

The purchase of large supplies of stock and material cuts down greatly the size of the bank account necessary to operate the business. I think that the expenses of organizing a corporation, is a part of the capital investment. If an individual was going into the business, he probably would not have that expense and if the individual had all the money needed to operate the business, he could get rid of the expense of getting the necessary money that a corporation would have, and under such an ideal condition a lower rate would be perfectly compensatory to him, while it would not be to the corporation. There were 253 new consumers added to the business of the company in 1912 which was in part the result of the operation of the new business department. The new business expenses for 1912 amounted to over $19,000.00. I think that is a fair representation of the net increase during the recent years and I believe the money was well spent. If they had not spent that much they might have gotten five or six or maybe ten or twenty consumers, or they might have lost more than that and there would have been no net gain at all. The people would fail to use some of the appliances they are now using, if they didn't have stimulation. The current expenditures per month in round figures for that year were about $18,000.00. The receipts are collected twelve times per year. The average will be outstanding about one and one-half months after the bills are delivered. The average is about forty to forty-five days, because there are a number who don't pay and of course others who are a month or more behind in their payments. Those who are late pay a little more. I think the working capital set out by Mr. Lea of $72,037.63 is a reasonable amount of working capital. It may not be absolutely neces-

sary to keep on hands in the bank $56,920.00 but it might be embarrasing not to have it. I do not think $2105.84 is a large amount of money to have on hands in the till outside of the banks. I do not know the purpose of keeping money on
1037 hand in the Doherty Bank in New York, but I think it is necessary to pay coupons and interest. It is part of the working capital. You have to accumulate the interest on bonds from month to month. If the charge is $30,000.00 every six months, I can not take it all out of one month's returns, I must lay aside out of the receipts $5000.00 each month and send it down to New York. I may send it down in advance or I may hold it out here and send it down altogether, it don't make any difference. There would have to be a substantial sum to lay aside on an average throughout the year, of working capital. If the company had no bonded debt and the money was being accumulated in the bank, its distribution in the way of dividends, while the money is there before division of dividends was made, would enter into and be a part of working capital. Of course if the dividend was not declared and the accumulation of the money kept there for five years or longer, we would not expect the public to pay a return on that. If it pays a dividend each three months instead of waiting until the end of the year, the amount would probably be less. The purpose of the construction of the East Lincoln holder was to remedy the condition of pressure all over the city, particularly on the east side and ultimately by the relief it gave to the east side, it would give a change for more pressure to be given to the southeast. It was generally anticipated that some time in the distant future we would reach University Place and Havelock, but I do not think it was definitely settled at that time. Prior to the construction of this holder, it is my impression that they were selling gas at University Place and shortly afterwards I think they started to sell gas in Havelock. My recollection is a little vague on that. I never saw Exhibit 389 before. The East Lincoln holder was necessary incidentally, to the Havelock business in order to raise pressure. The condition out there was exactly the same as in the sixth and seventh wards here. The holder is of considerable assistance in serving the districts of Havelock and University Place, but
it is my impression that it would have been built if
1038 we had not been able to get to Havelock. I don't think we had any right of franchise or any chance to get there when the holder was built. It was just a hope of the future. While Exhibit 389 contends that they were then already in Havelock, I think that as soon as they determined to build the holder, they immediately started a campaign for getting a franchise and permission for getting into Havelock and University Place. If we had not gotten the East Lincoln holder, we would probably have been forced to lay heavy mains from the works away out to University Place and Havelock and for a sub-distribution system running from the heavy mains. With this holder we were able to serve those places with smaller mains from the old works out there. The need of the East Lincoln holder was

felt regardless of the outside extensions, and the extensions out there did not come up until after it was determined that something radical had to be done to relieve the situation, and while doing that we probably concluded that we might just as well, with a little larger holder, build out there, but the holder would have been built regardless of the Havelock and University Place extensions. It might have been a little smaller and it might have been just as large. I do not know whether it would be economical to build a large one or a small one. I am not sufficiently acquainted with the operating end of the plant to say definitely. The matter of employing Sloan, Huddle & Co. did not come before the board of directors. I expect it was authorized by the New York office, I don't know, but that is where the orders usually come from, in regard to any considerable proposition or unusual thing. The ordinary running of the office is done here, with the usual supervision of the President from New York. I know that Sloan was here but I don't remember. My impressions is that it was two or three weeks. I do not know what they did to earn the $2650.00 from this company. I don't know what their report was, I never saw it. Mr. Sloan was here about the middle of 1912 or early in 1913, I am not sure. It was prior to this hearing. I know there was some talk about
1039 getting an engineer to make a valuation and I got the impression right from the start that Mr. Lea was the man who was going to do it. I knew that Mr. Sloan was here, but what particular thing he was doing I don't know.

Cross-examination continued by Mr. Foster:

In the valuation of the telephone company by the state railway commission, aside from the omissions there was an error of something like $100,000.00 on the conduits. They were calculated in conduit feet instead of trench feet. There were other errors that compensated for this, but I guess it reduced the valuation about $120,000.00. It was never brought up in that hearing, but it was corrected by the telephone company after it was discovered on the third checking over their business by other parties. It was discovered by Mr. Anderson of Chicago. The matter of omissions, contingencies and errors works both ways. If you get the wrong quantities *and* you may make a mistake on the unit price. I understand there were some errors of considerable size in the inventory of the Lincoln Gas Company and I don't think some of them were discovered until checked over the second time. However, in making an inventory you seldom include everything that you have, even with the most thorough checking. In reference to the $30.00 per customer allowed by me in the going concern value, this should be allowed even where the cost of obtaining those customers was charged to operating expenses, if while these operating expenses were being incurred the stockholders didn't get sufficient dividends to cover their investment. If they relinquished the dividends and turned them into the new business expenses or the developing of business, it is just the same as if they had received the dividends

and handed them back. If an amount equivalent to dividends had been paid out on interest or coupons on bonds to cover the value of the plant, the expenditures of this kind, after the preliminary building up of the plant, should not be both in the operating expenses and the going concern value. If your operating expenses are $90,000.00 and in that is included $7500.00 for new
1040 business and investors had an investment in the property which entitled them to earn $7500.00, there is no difference between leaving the $7500.00 in for the purpose of getting new business, and drawing it out in the form of dividends and then paying it back for new stock. I do not see why the cost of producing new business should not be charged to operating expenses and the cost of making gas. It is a necessary, ordinary, usual and common expense, practically, in all companies. Out of the working capital I think there is $44,000.00 held on deposit which was secured through the sale of notes, the proceeds to be invested under the supervision of the State Railway Commission, but if this $44,000.00 was not in the working capital, we would have to borrow it from some other source.

Cross-examination continued by Mr. Morning:

If the Court should find that the reason the company here had not paid any dividends, which was due to the fact that it was paying excessive bond interest, then the current expense of obtaining new business would not be included in the current operating expenses and also included in the investment of the company under the name "Going Value". It would not be justified in both cases.

Redirect examination by Mr. Strode:

Frequently in construction work, the item of omissions and contingencies would be involved, if the contractor was doing the work and that item is taken into account frequently by the item of extras; when you can't cover everything by the contract, and provision is made for extras in the price fixed. The contractor attempts to include omissions and contingencies when he makes the contract and adds enough to the price for what he thinks is the fair cost. It would not be possible for a person to come here to this present plant and design and build it and avoid having anything left out or anything short, and in addition to what the contract is for, as to a particular piece of work, the company still has to bear the items of contingencies and omissions, in that work, in connection with other work lying between the two. These percentages vary of course in different places,
1041 according to the information of the various commissions and Courts. They are generally applied with a full knowledge that part of the work is done under contract and if you want to apply contingencies specifically to those items where such contingencies were likely to occur, then that percentage for contingencies if applied only to the items where they might occure, would be much greater, so for the matter of convenience in calculating the matter of allowing a fair average, they say the contingencies will be applied to the whole

regardless of these specific items, and they apply it to the land simply to bring in the whole, as far as that basis is concerned. Occasionally you will find where the Court or commission specifically says the percentage for contingencies will be allowed on everything except the land, but as a rule it is allowed on all values and the proper allowance made in the rate of percentage so that they feel it is covered. The Mass. report prepared by the commission, says that it is compiled from the reports as stated by the companies in their returns. I understood and assumed that the items occurring on page 255-*a* of the commissioners' report for Mass. for 1912, being other expenses and depreciation and other reserves, were part of operating expenses of the gas because they are in the tabulation of the gas operations and the operations of the gas manufacturing company, and were directly connected with gas operating expenses because they are deducted prior to the deduction for interest and dividends. The item of depreciation is entered properly as an item of operating expenses and I am acquainted with the holding of the commission and Courts in respect to that item and the amounts usually allowed by them, and it is generally allowed in public service plants for the purpose of anticipating and distributing, along a large number of years, that unavoidable decay, coming from wear and tear, from weather stress, obsolescences, inadequacy, which is not realized directly from year to year and is distinguished particularly from repairs and maintenance, so that

when any plant or any of the component parts of the plant,
1042 are worn out and useless there should be on hand in some
form sufficient funds to replace the worn out, lost or no longer possible to be used part of the machinery, without calling upon the stockholders or investors to invest new money. The percentage of the depreciation varies greatly with different classes of utilities and the variation is caused principally by reason of the varying ages and different classes of utilities and the component parts thereof. In a plant where the average life of its component parts is ten years, the depreciation will be much greater than in a plant where the average life of the component parts was 25, 40 or 75 years. That is the principal factor which accounts for the variation in the percentage of the depreciation allowed. When so allowed they are permitted to be added to and charged against operating expenses currently. After you determine the life of a particular equipment, by that fact you can determine the amount of depreciation, the annual portions that are to be set apart to take care of that equipment. This of course assumes that there is enough money expended from the so-called current accounts to keep the plant repaired and in its ordinary working condition. In determining the life of any particular equipment, it is assumed that it shall be kept in as good repair as possible. Of course there are certain things that are impossible to take care of, as they wear out, for instance; the pipe lying in the ground. If its life is 50 years, at the end of 25 years you can say that it is half gone, but you can't replace that one-half by any sort of repairs, and the repairs and appliances and the maintenance must be taken from the operating expenses. I have examined Mr. Lea's calculation of the going value, shown in his report and offered in evidence, and I know that it is the

method that has been approved by a great many engineers. I have heard it brought forward a great many times and it is a much more specific method than the one most ordinarily used of lumping the matter together by taking the foregone dividends for the whole period and calculating them and sometimes even computing interest
1043 up to the time or of taking the cost of acquiring patrons and consumers with a certain unit of cost and applying that to the number of consumers for the number of years. There are a great many methods used, but I think the most approved method, while in a way it is theoretical, it accords thoroughly with the practice, and that is the plan which Mr. Lea has applied. It is as scientific and accurate as any that can be projected. It is not possible to get it absolutely accurate, no more than it is possible to determine the life of any particular equipment. My method of estimating $30.00 per consumer for going value was just one of my plans for checking rather than for the purpose of really arriving at a definite reason for it, and I cited it as an instance of the manner in which some people arrive at going concern value. It is a kind of short cut, but inaccurate. It is rather the result of making a division and finding out how it came about, rather than to follow out the real theory of the problem. I know that from knowing what the new business department was costing for the next ten years. It is made on about the same plane and fully as accurate as the computation of repairs and renewals on the basis of 9c. per thousand feet of gas.

Cross-examination by Mr. Adams:

I have compared the report of the gas commission of Mass. for 1912, with the original returns of the several companies from which it was compiled, and I do not know under what heading in this return the items marked other expenses on page 255 occur. I assume them as operating expenses because the commission has put these tabulations out under the authority of the state that they are accurate and reliable.

Cross-examination continued by Mr. Morning:

Ordinarily in the past twelve or fourteen years, no sums have been set aside and entered in the operating expenses for depreciation. There may have been one or two years in which it was set
1044 aside. No item of depreciation has even been entered in the operating expenses. Such items that have been entered may have been through extensions or renewals, but they have never been segregated; and in order to make a comparison between the general expenses of this company and the general expenses of the Mass. companies, the item of depreciation, if they have such an item, must be extracted, and I have done so in the comparison I have made. The principal criticism that I had of Mr. Adams' tabulation, was the omission of item of so-called other expenses from his statement of all expenses except manufacturing expenses, renewals, maintenance and taxes, and then attempting to compare them with the items in the Lincoln reports. Mr. Adams had no figures that included the entire

expenses. In the one instance of Haverhill plant I took all of the expenses as shown in that report and added the so-called other expenses and then from his estimate of the Lincoln operating expenses complete, extracted from each the allowance and depreciation and compared the net result with the net result at Haverhill. We don't know yet whether Mr. Adams compared the same general items from the Mass. companies with the same items of expense out here. We don't know whether the items included in Exhibits 350 to 360 and from 367 on, designated as all expenses, except the cost of manufacturing, renewals, repairs and taxes, we don't know whether that was a just and proper comparison and contained the same identical items as were contained in the so-called estimated 12c. per thousand cubic feet for general expenses and distribution in the Lincoln plant. The figures that he used can't be found in the report. Mr. Adams claimed they were found in the reports made to the commission. The same groups are not in this report. They are not grouped in that same form and you can't identify the items.

1045 Cross-examination by Mr. Adams:

When I studied the reported summary of expenses of Haverhill plant from the report of commission for 1912, I intended to take all operating expenses plus all other expenses item.

Redirect examination by Mr. Strode:

The heading of Exhibit 350 is "All expenses excepting materials and labor making gas, repairs, renewals and taxes, per sworn returns to the Mass. commissioners." I assumed under that heading that Mr. Adams had undertaken to assemble all the items of expense in the manufacture and sale of gas, except those specific items which he specifically excluded. It is impossible to identify the items contained in this Exhibit with the items from the published report, but I do know that Mr. Adams has excluded entirely the item of other expenses from his Exhibit.

Recross-examination by Mr. Adams:

Page 8 of part of the original return used by companies to the Mass. commission for the year ending June 30, 1913, has for its heading: "Gas scheduled statement of income and expenses." On the page is a place for the item "Other Expenses" and on line 29 is the item "Total expenses."

1046 E. C. HURD, being first duly sworn, testified on rebuttal on behalf of the plaintiff as follows, pages 4230 to 4105, original record:

Direct examination by Mr. Rose:

I am 45 years old and my business is economic engineering. I graduated from the engineering school at Illinois in 1889, and have followed construction and general lines of engineering with slight

interruptions ever since. For the past three years I have been in charge of the valuation of public utility properties for the Nebraska State Railway Commission, but at the present time I am engaged in private practice along the similar lines. Our firm is the firm of Hurd, Gerber, & Wettling, with offices in the First National Bank building, Lincoln. We do both engineering and accounting. I have erected several hundred miles of steam railroad, about 50 miles of electric railway, and have engineered for separate electric light and fuel plants and two hydro-electric plants, and have taken part in the business management of an electric property, and have done some little work on gas plants, but I don't make any pretense of being a gas engineer, and I have acted in various capacities in the handling of such properties for bankers and brokers. While I was with the Nebraska State Railway Commission we valued the entire railway properties in Nebraska except street railways. Practically all of the telephone property and express properties and the Interurban railway properties. In valuing steam railway properties you are valuing almost every conceivable class of property that you can think of, everything connected with the steam railways, even electric light plants, gas plants, and all kinds of things. I have also in the course of that employment had to do with the valuation of a street railway property in Lincoln and suburban properties, and I am acquainted generally with the fundamental elements that enter into the cost of construction of public utility plants. My information and data comes from every source that we can get, not only from my own experience but from the sources outside.

In a plant like the gas plant in the city of Lincoln there
1047 are costs specified in the construction on account of contingencies and omissions that are not reflected by an inventory of the property. It is a very usual practice for engineers or valuators who are acquainted thoroughly with that class of work to make an addition to the original organized fundamental items, usually in the sum of a per cent, and to prove that fact by the experience of those who make inventories and afterwards checking so as to establish the reason for making the addition which you term contingencies. The factor of omissions and unfor-seen circumstances that can't be taken from any visual expression or history of a property in its construction in its vicissitudes. No one man can grasp it by simply going over and taking a list of the property. There are circumstances too numerous to mention that grow up out of actual experience and an engineer in making an estimate for the cost of a new construction always adds a very liberal per cent for that item. In the actual construction that percentage ordinarily expresses the cost represented by that addition. It results in the final inventory in a valuation in adding, after you have made the first summary of the several items, an amount commensurate to cover that. There are instances that those facts have been developed almost to an exactness what the checking of the inventory might mean. Even with the infallibility of one person's work from that of another still there might be some of the remaining things which the second man didn't see. I might cite some of the cases that have come under

our experience in the telephone appraisements, and also in the railway appraisements, where it was supposed to be a complete inventory of the property but in re-checking there were some things found left out. I know in the case of the Missouri Pacific R. R. Co. that purported to be, and to all intents and purposes was, a correct inventory but on one branch they left out three important steel bridges
from the inventory. We discovered it and it amounted to
1048 quite an item. I don't remember the per cent but it ran several per cent for that item, and we probably added two or three per cent to another amount. In the case of the Lincoln Telephone & Telegraph property we made a checking of approximately 45% of their entire property in the field and central station and the omissions alone were approximately 5% of their entire valuation, and possibly we over-looked something further, but we allowed the 5% on that basis. I took it from that proceeding that they were anxious to have a large valuation and the dropping of large items from the inventory in that case did not work to the pecuniary advantage of the company in the situation it was in before the commission. It was simply an omission which incidentally goes with most all work of that character. In the York case we made a personal inventory of the plant, I, myself doing the work, and I found quite a number of items out in the field which amounted to something like 4% of that entire item, which in telephone properties is 75% to 80% of the entire value, and my assistant in the Johnson county case found almost similar circumstances in checking the inventory which the company's employees had turned in as being correct. There were some items found that weren't in that inventory. The item of omissions and contingencies costs money. It represents construction. If everyone is so absolutely accurate that they don't do what the usual fellow does then there wouldn't be any such item, but if you take the ordinary run of affairs of business you find they do make omissions, and have other contingencies. In addition to that there are such items as loss of materials, bolts, and broken material in the actual assembling of buildings and this is illustrated by a test which we made on some railroad track. The Union Pacific R. R. was double tracking. The engineers made the estimate and the material was very carefully gone over as to the weight of rails, and the distance, and the track fastenings. The condition was ideal
and we got exactly what went into that track today, but the
1049 amount which was used is approximately 3% greater than what you can find there today. I do not think it is a practical possibility with the present efficiency of labor to avoid these losses. Materials are very apt to be stolen, lost, or disappear in one way or another. There is always some lost on that account, and the more small parts you have the greater relative per cent you have. In a property like the Lincoln Gas plant the physical property is valued at approximately one million dollars by one side and $560,000 by the other side, and if you have every item accurate and have the exact amount of money which they had expended I would say that you will find a difference at least of 4%. In other words you would add 4% to your fundamental items to cover this item of con-

tingencies and omissions. It may be less than that and it might be more than that but that would be a reasonable amount. That would be an expenditure and an investment that could not be avoided. To my knowledge that is an item that is generally allowed as a part of the cost of construction by engineers, public service commissions, and courts. The expenditure for the item of engineering and supervision is another item that would not be reflected in the inventory of the physical property after the plant was constructed. It would be just as much an item of expenditure of the capital account as any physical, visible thing. The size of the plant and the various conditions surrounding it have a good deal to do with that matter of expenditure. If it is a question of reproducing this plant there is no question, taking all things into consideration, but that it is presumed that the promoters would at least seek expert engineering advice as to design, and have a study made of the field as to the economic location of the producing plant, trackage facilities, location of mains, and all of those things, together with the actual construction designs, and later supervision of the structural portion of the plant as it was placed, and I would say that a reasonable amount on this plant would run from five to ten per cent on the con-
1050 struction cost, depending on how earnest the promoters were and how well-placed the plant that they might have designed. The purpose of spending money for this purpose is to increase the economy of construction and operation of the plant after it is finished and it would be money very well spent. The contractor ordinarily would not have any part or parcel in such a matter. He would be supervised by the engineer who was employed rather than the engineer being employed by the contractor. In order to get the benefit of the engineering skill the promoters require the contractors to be subservient at all times to the engineer. Also in the construction of such a work there is always casualty liability. I have never known of an extensive construction that didn't experience such an item. Recently it has been taken care of by directly obtaining insurance on the labor employed. It becomes a direct charge for construction and is reflected either in the increased price which the contractor charges or is paid direct by the owners. I haven't made any accurate calculation on the plant here on this item but from my general knowledge of the rates I would judge that on the distribution system that item would cost about 1.8% of the total cost. The rates are based upon the relative amount of labor and on the distribution system, 60% is labor and 40% is material. On the buildings and machinery the rates would probably equalize that, giving a relative amount of labor and material that would differ from the distribution plant somewhat. Together, the two items would amount to about 2% of the inventoried items. It is unavoidable that in addition to the sums paid the contractor for erecting the works, in the execution of such an enterprise funds must be employed for different times upon which no revenues can be derived. Also, in the building of a utility of this size the length of time for construction would be sufficient so that the property in a dead state would become taxable, but of course the extent and

amount has a good deal to do with the amount of taxes paid.
1051 The taxes on the real estate would not be relieved at all no matter who owned it. I made quite an exhaustive study on that taxation question before the operating period on a number of utility properties and received some very accurate statements relative thereto. And by considering the property and the investment of about one million dollars the tax item on this property would run about ¾% of the total value of the property when completed. Some of the conclusions reached were as low as ½%, some approximated 1%, owing to the length of time the construction is in progress. Now as to the interest on the money, during the construction work under my charge we have carried out a policy of allowing for that, unless the term of construction is fixed, at one-half of the total investment for the total time at a reasonable rate of interest, and in all commission work they allow a rate of 6%, and if you would reduce that to its cost, whatever the length of the construction period was, at 6% it would give you the result. That would be only on the total of the fundamental items. As to the time necessary to build a utility like the Lincoln Gas Company's involving the expenditure of approximately one million dollars that is a little difficult to answer. I haven't made a study of the situation in that regard but there are some principles which are a pretty good guide. The condition for establishing a business and the conditions for obtaining machinery and the assembling of the property should be on an economical and sensible basis. You might hurry the construction or you might delay it. Probably if you hurried it you would eliminate some of the expense and abnormally create others, so that possibly a hurried construction would cost a little more than what you would have to pay on a moderate rate of construction. I should take some time to build a business or plant of those dimensions. I would take the course of a provident investor and would see that the property advanced in the same relative rate as the
1052 building up of business, and I would say for this plant I would take two and a half years—something of that kind.

E. C. HURD, recalled for further direct examination on rebuttal, testified on behalf of the plaintiff as follows, pages 4267 to 4303, original record:

The item of interest during construction is a part of the investment. The commissions so allow it as being such. Whether actually realized or experienced it is, in part at least and as a matter of equity and fairness it has been considered in the proportion which I have mentioned. If the investor had his own money it would be worth the rate of interest in effect if he had not invested it idly in the plant. It is generally considered part of the over-head expenditures in appraisals, however. I think first statements of values are being refined. Personally, I question whether it is an overhead charge but it is truly a part of the cost of construction, and the preceding remark might apply also to the item of contingencies which is many times included as an over-head charge. Contingencies really should apply to the related elements. Omissions or contingencies occur in some particular fundamental item. The proper

way would be to al-ocate it to that item but this does not in any way deny an actual investment but simply mildly criticises the calling it over-head charges for the reason it causes some misunderstanding as to the classification. As to whether omitted or over-looked items fall upon the contractor or upon the investor depends altogether on how the statement is based. If you are making up a category of elements to comprise a reproduction cost of a property you might put it on two bases. One would be to say that the whole matter was contracted for at so much per unit or whatever was being constructed for a lump sum. But very generally these contracts have a condition or provision in them that in case of additional work, etc., it is to be carried on and put into the contract plus a certain per cent that vertually is a contingency accepted by the con-
1053 tract. So in actual construction the burden may ultimately fall on the investor absolutely and it doesn't make any difference if your basis of procedure is to make the statement up and it is void and the contract plain, you are doing it yourself and you simply fall heir to some contingencies. It makes no difference. They are specified just the same and my practical experience is you don't get away from it many times. I find them larger than anticipated.

If the plant is once constructed working capital necessary to conduct the business is incident to the first financing and can't be separated. You can't conduct any line of business without some ready money to proceed with and pay for certain things that are really not inherent to the construction. They are beyond, and to illustrate: if you are operating a gas plant you have to supply yourself with a certain amount of labor and a certain amount of fuel and tools, and those various elements are common in the conduct of the business and become inherently a part of it and you have to have enough money to carry that. Then if you are prudent and expect to make a success of your business you must be in a position to purchase these supplies at the best time and at the most economical time and in quantities and it makes no difference whether you have the money on hand or whether you are able to borrow it. It is all the same fact so far as carrying that amount of capital is concerned, and when invested for this purpose it is a capital expenditure. There are several plans used of determining the amount of working capital necessary. One of these is to take the actual experience of the property and you find it generally to be the most reliable. Every plant fluctuates more or less in its suroundings and considering that the accounts are kept carefully that probably is the best thermometer that can be devised. Another is to take an accounting of all of the current assets and liabilities of the property as found and the difference usually is represented as the working element, and if you take the difference between those it is a demonstration of what is actually carried by the company as working capital. Another
1054 plan is to determine from the character of the business and the amount of time for which material must be carried from season to season or from purchasable time to purchasable time and from that how much money will be idle and the expenses be met.

That is more or less a modification of one of the schemes I mention but is used frequently. It is certain that a complete statement of the cost of the property or value would be imperfect without an allowance sufficient to carry the working business of the property as represented in a working capital.

Going value is an item of capital investment known to engineers, utility commissions, and courts. Included in going value as one of the elements is what is usually termed by commissions and courts as development costs. These differ in one class of plants considerably from other classes. Development costs expended after you have your physical machinery in perfect readiness for operation to solicit and get business to care for it as a money-making going thing are certainly a capitalistic expenditure. Going value is a thing difficult to prove but there is a bona fide investment in that item. By going value is meant all of the elements arbitrarily classified as intangibles. There is no question but what this is true. There are accepted plans for determining values or formulating value statements of property. Some of them seek to show only a certain cost for a building of the plant, and others attempt to show value. I think there is quite a difference between cost and value. A physical machine may cost a good deal of money or a little money and yet its position or possible utility or what it can be used for has a good deal to do with the value of the whole idea and I don't think they are absolutely co-related except in one respect and that is as to cost. If you are organizing a cost statement purely only one of the elements on which you would figure going value would be dependent and have an indeterminable part in finding out what your intangibles were. Now there might be an investment in going value or there might not be. If it is value that we are after, or, in other words, what a man would pay to find a successful machine in operation and I am sure he would pay something to find a sure going institution to operate and it would be worth something to him
1055 because it has proven successful and moving along and he doesn't have to resort himself to the means of expending and doing some work and building something new to find whether or not it will be a success, and the measure of the two, or that value, is demonstrated by what he might pay over what had been developed. If you were running a store and advertising the business you are paying the money for development costs which is the same. You may begin advertising a week before you open the store and it is very similar to what you have here where you hire solicitors to go out and get subscribers for whatever you may have to sell so that becomes actually a matter of cost. Now in calculating going value this should be added to the cost of the physical machine as being one factor undertaken to develop it. If this development cost was not paid as a separate item or included in going value or in some form in the valuation it would be eliminated from part of the inevitable capital expenditures.

In a case like the gas business where the contracts are obtained for the company and the connection is actually made and experience shows that the customers obtained are consistent customers the vari-

ous commissions have allowed in their valuation for the expense of obtaining such contracts as development costs. One method of reaching a conclusion on a matter like this is taking the probably number of consumers at a certain period and succeeding periods and estimating the cost of procuring those customers. The depreciation of the company's property from wear and tear while gas service is being rendered is a part of the operating cost of that service. There is no other account that it could be charged with. Depreciation means final renewals and repairs and it must come and it is the universal practice that it should come out of the operating revenue. The reversal of such a scheme would be a continual and increasing capital account such as the railroads have in Great Britain. This is considered impracticable and incorrect in that particular because every time a renewal is made the capital account is increased so
1056 that the capital expenditures for a period of years would be enormous. To my knowledge such a practice is not countenanced by courts or commissions in this country. It is absurd to consider depreciation as anything else than a part of the cost of the service. I have examined and understand the method presented by the tabulation of Mr. Lea to ascertain the going value of the Lincoln plant. Assuming that the figures of costs in section K of Exhibit 7 are correct and from my knowledge of this property here and its being in a successful situation, my opinion is that he has used an approved method and one that is used and accepted in estimating going value. That is what the going worth in a plant is over and above its physical factors of cost and shows what a man might pay for a property in addition to its physically shown investment because of it being a going concern. I think it includes the actual capital expenses that have to be allowed for the development of the business such as I have classified separately.

Cross-examination by Mr. Foster:

Mr. Lea's method is a method built up first of a determination of the investment, and second a determination of the progress of the business based on the experience of the property under consideration, casting ahead for a period of a certain number of years that may be ordained to continue the progress of the actual plant, and also to build corresponding therewith a hypothetical plant until a hypothetical plant practically parallels the existing plant at that time, and then reducing the matter of years to a present time basis and extracting therefrom the going value as represented in the future returns. As I remember it the earnings shown by Mr. Lea are based on the experience of the property at the existing rate. If the rate were reduced to $1 it would be introducing a new factor into the equation of going value. The rate of return is a vital element in the computation. If you computed the going value on two different rates you will arrive at two different results. This is exemplified by a losing concern. If at present it was losing
1057 money a very different result would be obtained as to the going value than you would obtain if it was a profitable con-

cern. If the consumers of the Lincoln Gas & Electric Co. were divided into three different districts for the purpose of collection of bills and if each one of those districts had a different period from the other for the payment of bills making three different collection periods during the month the expenses of clerical force, etc., in the office by reason of the frequent collection would exceed somewhat the expense in a less frequent collection and no matter how frequently the collections were made if each individual was given the same length of time to pay the bills that process would practically amount to the same as collecting the entire city at one time. The customers would be carried an equal amount of time so the amount of working capital for each individual customer would not be very greatly different. It might make a very little difference but the total length of time carried as an average would be about the same. You might have the use of the money and you might not in the operative conduct of the business if you were collecting at three different periods each month. If you are carrying an individual either collectively or singly the length of time would amount to about the same conclusion. If you are in position to buy supplies in large quantities you thereby save in the purchasing price. The two large items of supplies used by gas utility companies which they buy in large quantities are coal and oil. The coal is purchased in considerable quantities specially because of conditions of the market and many times threats of strikes in the coal mines. A utility has to be prepared to run continuously. The oil might not be affected by such conditions. It is true in a measure that both coal and oil are bought by most public utilities on contract at quantities to be delivered from time to time as needed, but still all of these contracts are subject to strikes and unavoidable conditions and a utility would have to be prepared to protect itself in that way. If a gas
1058 utility company was buying its coal and oil under contracts if done under a considerable period of time and you took a limited period I would not say that the amount of money which is represented by the quantities actually purchased and kept on hand would be a very accurate basis for figuring working capital. If you were taking a very extended period it would be a nearer basis but there are exigencies in all cases and though a company, as I have stated, might not have the money actually on hand and has to borrow it it would be the same thing. If you had accurate statistics on a five-year period it would be an influencing criterion, but would not be conclusive. I am familiar with the amounts allowed by various commissions and courts for over-head expenses and Mr. Gillette in his investigation of the cost of constructing the Washington railroad allowed somewhere from 6% to 24%. The average was somewhere about 11% or 12%. One was very high—about 24%, and did not include any interest on the money during construction or any contingencies. His items of over-head expenses do not quite correspond to the testimony that has been given here. It would correspond in certain items, but is not a true parallel to what has been mentioned here. I have assumed that a period of two and a half years would be required for the construction of this

property, but I did not go into it in detail and I haven't formulated any detailed construction plan and I cannot give you what items I would construct in the first year unless you will give me time to analyze it. If nothing else was considered than the buildings of this company they could be put up in a few months. I do not think I could tell accurately how long it would take to lay the distribution system because there are so many related things. In a plant of this character it would be financial foolhardiness to erect the buildings all at once with no regard to machinery and then lay the mains all at once without respect to the consumers' situation. To intelligently attack the problem as a whole I would say it would take about two and a half years to successfully put in the plant and complete the thing in the most economical way, and
1059 take care of the consumers as you found them. My assumption includes working in the winter months where that work could be economically carried on, and I would have the plant entirely ready by the third summer.

Cross-examination continued by Mr. Morning:

The mains would be laid by one class of workmen, the buildings constructed by another, and the holders by another. I do not thing it would be wise to undertake to build the plant all at once. My experience is that in putting up properties of the character of a utility you have got to arrange it in such a manner as to take what you are trying to do along with building it and you must arrange your labor and the delivery of material at economic seasons and that a hurried construction makes a more expensive construction and you have an idle plant a longer season than you do if you conduct it in a more conservative manner. The construction of the buildings, mains, and the holders may all be progressed at the same time and if you are progressing them in that manner the maximum period of construction would be the longest time required to construct any one of them. If I were called upon to put in a property of this kind I would expect to be delayed by certain factors, the machinery would probably need a number of months, possibly a year, to produce just what you desired, and you would find those contingent factors would delay certain other work so that it would a result that you would have a great deal of idle capital laying around unless you paid a heavy premium to get an immediate delivery of all of your material. If you did that you could put it all in in a short time. Under this quick process you would have a large amount of plant lying idly because you would not get the users connected, and the more conservative time which I mentioned for the construction of the plant would have something to do with the amount of users you were able to connect up. In my opinion the two and a half years represents the economic period. It
1060 might be more and it might be less. Whether or not you would be able to have part of the money drawing interest during the period of construction depends upon the method of financeering. It is not usual for the financeers to put up all the

money in a large bunch at once. It is usually done by payments. Sometimes they issue bonds and sell them as they need the money, but the more usual plan is for an under-writing syndicate to finance the project and they pay it in payments about as the engineer constructing the work designates that he can economically put in the construction and the payments are made along from time to time so there is not all the money lying idle or anything like it. The syndicate would simply charge interest on the money as it was drawn. I consider money spent for engineering well invested. Any plant that is adroitly engineered would have as a general principle a better efficiency after it is finished than one crudely put up. That operates to add somewhat to the capital but afterwards to reduce the operating expenses. As between two plants, one constructed under the supervision of a competent engineer and one under an incompetent engineer, I would expect to find a greater value in the one that was constructed under the supervision of the competent engineer, and the difference in value would probably be in the neighborhood of the equivalent of the percentage allowed for engineering. If after a study of the working condition I found that a plant was crudely erected and without very much design the purely engineering work would be small and of little value. However, the superintendence that is attendant with this would be just as much for a crudely constructed plant as one where there was good engineering. The superintendence factor is a larger one than the purely engineering problem and one that you cannot get away from in either case. There would be some superintendence in the construction of a plant piece-meal, and some of it probably would be supplied by the officers of the company in a general way without the employment of outside help. At St. Paul, Nebraska, in the construction of a telephone plant the investment was about
1061 $40,000 and the engineering expense in the actual construction of that plant was approximately 10% of the fundamental cost. They paid about $4,000 in the construction of that plant for engineering and superintendence, and the engineer and those who were engaged in it got the money. I got this information from the books of the corporation. There are many bids for engineering made and accepted and contracts entered into at 5% and over for public utilities put in by municipalities. There are some expenditures that are borne usually and not accounted for in municipal affairs that a private corporation would exact an accounting of, such as the matter of helpers, etc. They are not entered into the accounting as engineering and superintendence. They are entered in a separate account set up for them and do not appear in the title so that the records of a municipal construction are faulty in that respect. The general use of working capital is to provide the current supplies and pay the current bills that are necessary to operate the business and if we had the books of the company showing about what their monthly expenditures were according to the checks it would show in a limited way pretty well about how much money was actually needed to pay the current bills. The difficulty is that many times the shifting of accounts,

etc., doesn't altogether reflect just what has been paid. The expenses are usually in excess of what those accounts show. Ordinarily in a corporation like this its bills are all paid by check and if we took year in and year out the average amount of those monthly checks it would have the appearance of showing about how much money was required to operate that business and pay the current bills. One of the elements for which the money is spent is to produce and build up the business. The working capital is for the entire conduct of the business. The working capital pays the salaries, wages, and all the supplies and meets the exigencies that may arise, and produces the going business that we speak of, and has a relation to the going value, but going value is not entirely bound
1062 by the working capital. Going value is built up to a very large element by spending money, but the money that is spent for this is not altogether spent from this working capital. Working capital is one of the elements of going value, but there are other elements that enter into it. The working capital represents the blood of the corporation. In going value there is the capitalistic investment to consider on which a return should be paid in addition to the working capital. That portion of the capitalistic investment represented in going value is that money which is rotated in the affairs of the corporation and in the conduct of its business. It is being continually rotated. I do not consider that you are required to pay a return on working capital while it is working capital and then after it is spent to build up the going value that you are required to pay a return on that. I do not put in in that light. I think the working capital is only an agency to a means and is not really the vital matter. I might pay a nickel to ride two miles on a street car but that doesn't indicate what the value of my ride is. I do not think that working capital or what is necessary to conduct the business is the only feature to consider in reaching value. The idea of going value is that you are reproducing a plant up to a certain stage and going value is the cost of reproducing the business apart from the cost of reproducing the physical plant. If you were to go back into the history of a plant and see that the public has paid a return on $25,000 of working capital continuously from the inception of the scheme up to the present time and you could prove it and that working capital is kept intact from other earnings then it would have something to do with the calculation of going value. There would be a period in the early stages of the plant that the income from the business would not pay the operating expenses. How long that would continue is problematical. The loss during that period goes to make up part of the capitalistic investment in going value, and
1063 after a sufficient time had elapsed for reimbursing the owners by economic management of the plant that deficit would be amortized. That is done in some places where the actual history of the properties can be pretty well covered, especially very nearly new properties. I do not think it would be accurate to carry that loss indefiniteily to future generations as a part of the investment. It would be more accurate to make the generation that got the

benefit of that service to bear its own burden. This precludes the idea, of course, of a continually losing plant. All I know is that here seems to be a going property and because of the conditions as we found them there is evidence of some value beside the mere physical elements that we found, which was the difference between a machine installed and not in operation and a machine going and in successful operation, and that difference, roughly speaking, is represented by going value. It is necessary that the operation be successful and it should pay a compensatory return.

Redirect examination by Mr. Rose:

Mr. Gillette in his calculation of the Washington railroads returned an amount under the classification which was used for engineering and superintendence but it was not under that classification called a part of the over-head. In the reproduction of a plant with upwards of eight thousand customers the attainment of that patronage would involve the actual expenditures of funds as a reproduction proposition and it would have to be a capital expenditre in reproducing the plant. To use the working capital for the purpose of reproducing the business would require that it be replaced. It would dissipate the working capital and if used that way to maintain it, it would be necessary to have a new capital contribution. Working capital is a continuous, persistent item of primary capital.

1064 W. M. MORNING, being first duly sworn, testified on behalf of the plaintiff, as follows, pages 1102 to 1111, Vol. 1, original record:

Direct examination by Mr. Strode:

I am special counsel for the city in the prosecution of this suit and have been retained in the presentation of this case to the end. I assisted in the presentation of a bill presented to the last legislature authorizing and empowering the city to establish and maintain and operate a gas company. The bill I presented was finally enacted after several amendments. They did not substantially affect the bill. The bill was a general bill applying to all public service plants. An amendment was suggested which required the city to buy out any existing plant at a fair valuation to be arrived at by the process of condemnation. It was proposed to have the valuation determined by appraisers. I opposed that as an individual citizen for the reason that we thought the city ought not to be compelled to buy, but should be left free to do what was deemed best for the interests of the city. I did not have in mind the suit pending to put this company off the streets or to forfeit its rights. I did not undertake to get this bill through for the purpose of compelling the company to make a settlement with the city regardless of the justice of the terms. The only thing I had in mind in fighting against the amendment was the idea that the city ought to have the right to enter into the service of its own people on equal terms with the corporation and not be compelled to buy out an existing plant as a condition precedent, that the city

ought to be at liberty to deal at arm's length. Some of the people there were members of the municipal league of which I am a member.

Cross-examination by Mr. Foster:

The league was formed for the purpose of getting authority for the city to engage in public service business in certain lines, especially that of electric lighting. We had been in the past limited
1065 to an expenditure of $150,000 and were able only to light our streets and could do no commercial lighting and the primary purpose of the league was to get a bill through giving the city power to enlarge its electric lighting plant and while doing it we thought it best to get a general power. The municipal league gets back of candidates for city commissioner. I think they are pledged to municipal ownership of public utilities. I do not think this fact would jeopardize the investment of capital or affect the rates of return on capital invested. The city of Lincoln will buy the gas plant and pay a large bonus on its worth. I opposed any provision in the law being made to take it over at a fair valuation because I considered it unfair to compel the city to buy whether it wished to or not. The city is seeking to eject the company from the streets as the people here have had a great deal of trouble with public service corporations. They have had to sue for taxes and have had trouble with the service rates, and have had trouble with the quality of the product. In 1905 the gas was so bad it actually went out at the burner. There was no standard. I have never heard of any special complaint since that time. Then the rate question came up. All the cities around here were getting gas for a dollar or less, some in Iowa, and other places. I do not think the suit to forfeit the franchise right is being prosecuted to compel the company to submit to a reduction of its rate. It was an effort to clear the books and put the city in a position to negotiate with the company.

1066 F. W. Brown, being first duly sworn, testified on behalf of the plaintiff as follows, pages 912 to 913, original record:

Direct examination by Mr. Strode:

I was Mayor of the city of Lincoln at the time the dollar gas ordinance was passed. The only investigation I made to determine whether gas could be manufactured and sold in this community at one dollar and return a fair rate on the investment was a few inquiries as to the selling price of gas at other places, and the general demand of the people for dollar gas. I made no particular investigation and relied upon the courts taking care of the minority if not right.

Cross-examination by Mr. Morning:

I found gas selling in other towns of similar size, but not similarly situated entirely, for a dollar. Evanston was one of them. A special committee of the council had the ordinance under consideration and

John S. Bishop was a member of that committee. They made a report to the city council on the reasonably profitable price for gas and I do not recall to what extent their investigation went.

1067 R. C. OZMAN, being first duly sworn, testified on behalf of the plaintiff as follows, pages 914 to 919, original record:

Direct examination by Mr. Strode:

I am and have been City Clerk of the city of Lincoln since May, 1909, and I keep and have a record of the proceedings of the city council. They are made up following the proceedings of the council each week. There are fourteen members in the council. I have the record here showing what is called the gas quality ordinance passed by the council and approved by the mayor.

Exhibit 25 is the original ordinance relating to the 3% occupation tax passed by the council and approved by the mayor in 1909.

And I have here also a record of the council proceedings showing the passage of that ordinance. Exhibit 25 is offered and received in evidence.

The city of Lincoln has a municipal lighting plant in full operation by which it lights 100 miles of streets, the city hall, and fire stations throughout the city, and the pumping stations in connection with the water department. The lighting plant has been constructed out of money realized from taxation and is being maintained from that source together with some money which has been paid on machinery by the water department. In the natural distribution of taxes a portion of the occupation tax sought to be collected from the Gas company would be devoted to the maintenance of the electrice plant by the city. Prior to the installation of the municipal lighting plant the Lincoln Gas and Electric Light Company was under contract with the city for lighting the streets.

1068 Cross-examination by Mr. Foster:

The city is not furnishing light for any property or persons other than itself and during the day is purchasing electricity from the Gas company. We use lights at the city Hall on dark days. The city also gets its power for the elevators from the Gas company. The city light plant does not give any day service, nor does it manufacture gas. Part of the apparatus in the municipal lighting plant was purchased with funds of the water department. Both departments use the same machinery, first for pumping and then for lighting, and they are both located in the building at 27th and A streets, where is located the city water plant.

Redirect examination by Mr. Strode:

We use electric power to pump water furnished by the municipal plant. The plant runs both day and night but only furnishes current for street lighting at night, but furnishes power at the water station during the daytime. The city plant does not furnish power for the

elevator in the city hall because the voltage is such that we cannot use it in the elevator. It is not because of any kindly feeling towards the Gas company.

1069 HARRY L. SCHMITZ, being first duly sworn testified on behalf of the plaintiff as follows: Pages 3371 to 3409 original record.

Direct examination by Mr. Strode:

I live in Lincoln and am bookkeeper and have been for the past six years, for the Municipal Water Plant of Lincoln. I keep the record of the cost of labor entering into the maintenance and operation of the water plant, and the construction of the water mains. I have here the record showing the number of feet and the size of water mains laid by the Municipal Plant in Lincoln for the years 1910 to 1913 inclusive, and it shows the number of hours of labor and the amount paid for labor for the laying of that water pipe, and the total amount expended for labor. This data is taken from the reports handed in by the foreman of the construction work and it refers to the different districts in which he is laying pipe. A copy of this record was submitted to Mr. Adams, the city's expert about a year ago, at his request. Exhibit 402 is the summary of the amounts expended for labor in laying water pipe in Lincoln in 1910, showing the amount in feet of the different sizes and the amount expended for labor in laying it. In this exhibit I do not know what the item of $159.48, labor and drayage, is on. The materials read coal, oakum and oil, hydrants, plugs, offsets, L's and T's, reducers, crosses, valves, sleeves, cross valves boxes and one 12 inch sleeve. These represent the materials used and they are referred to as specials in connection with water pipe.

Exhibit 403 is a statement of the pipe laid in 1911, showing the size, number of feet and the labor cost itemized.

Exhibit 404 is a statement of the pipe laid for 1912 showing size, number of feet and the itemized cost of the labor. The item not there of Carters, is the work of our own teamsters and is in addition to the other item of teaming, 1081½ hours.

1070 Exhibit 405 is the record for 1913 showing the number of lengths, size and labor cost. These items represent the naked cost of the pipe in the ditch for labor and hauling. It does not include any of the overhead charges born- by private institutions.

Exhibit 406 is a statement of the material used in constructing a private service to the Beatrice Creamery Company, November 17, 1910 from the street to the building. That also shows the items of labor for that service, which was a total of $32.28.

Exhibit 407 is the statement showing the material, pipe and labor in laying fire services and four inch lines. The labor given is the total amount expended for labor for the services referred to in the exhibit. A length of water pipe is 12 feet, and for laying 384 feet of six inch pipe the city expended $496.29, which is a little over $1.29 per foot for the labor alone. That was done for fire services in 1912.

Exhibit 408 shows the labor account for laying 56 lengths of four inch pipe in December, 1913.

Exhibit 409 shows the material used in the construction of fire service and four inch pipe mains for 1913, and shows 35 lengths of four inch pipe, the balance of it being for specials, and then there was the hours of labor, which was $202.66, the naked cost of laying 35 lengths of four inch pipe without any overhead expenses. We used a trench 12½ feet long, 4½ to 5 feet deep and 18 inches wide.

Cross-examination by Mr. Adams:

My knowledge as to the actual work of laying the pipe in the trenches and as to the depth of the trenches is very limited, because I have seen very little of it done. The usual cover over the top of the water pipe is five feet of earth and with a four or six inch pipe, that means a depth of fully five and one-half feet. I am unable to tell you the exact dimensions of the section. I have never measured the depth of any of the water pipes nor the width of
1071 any of the trenches. Figuring a section as two feet by 5½ by 12½ makes 137½ cubic feet and $1.00 as usually paid by the water department for digging a section, which makes it amount to about .0072 of a dollar per cubic foot, or just about 20c. per yard. The figures which I gave on my direct examination include only the expense of supervision of the foreman laying the pipe, and the foreman in charge of the gang but do not include the salary of the water commissioner. He gave a good deal of attention to this work. He supervises both the office and field work. I do not think fire hydrants are commonly called specials. Exhibit 403 does not include any repairs, but if they put down a new main in place of an old one, it would be shown there. It only covers new and additional and extended water mains. If a length of pipe was replaced it would not be shown here. The water department in determining the length in feet of its mains laid, multiplies the number of lengths by twelve. Exhibit 403 represents a total of 26 jobs, which is an average of a fraction over a thousand feet on each job. The labor cost which I have given is over all the years and includes the taking up and replacing of brick pavings. The asphalt paving is handled by the city engineering department. It includes the cost of cutting through the asphalt, but not the labor of re-paving it. The labor cost shown in Exhibit 406 covers the cost of digging the trenches, laying the pipe and making the connection.

Redirect examination by Mr. Strode:

I really do not know the exact depth of the trench for water pipe, as I have nothing to do with the outside work, and in making the computation of a section on a basis of a trench 5½ feet deep I do not want to be understood as saying that the trench was that depth, nor 24 inches wide. As a general proposition, this water pipe is laid on unpaved streets. There can't be a house on the street
1072 without water. If the city has ever laid a water pipe under a pavement during any of the seven years I have been here,

I don't know it. The service to the Beatrice Creamery Company was under a paved street. That was a special instance where we undertook to do that work for the Beatrice Company and charged it back to them. In all cases the cost of services must be found by the property owners.

1073 *Testimony of Alton D. Adams Complete.*

1074 Mr. ALTON D. ADAMS, the City's expert called in behalf of the Plaintiff was duly sworn, and testified as follows:

Examination in chief by Mr. Strode:

Asked if he had a statement of the number of miles of gas mains in the City of Lincoln,—I have such a statement given me by the company, I haven't checked it up myself. I have a statement of the total number of meters, and I think, also of the meters in use, a statement of the entire number of meters was furnished by the company, and I have been investigating the company's records, the company gave me a statement of its total number of meters; I don't recall that the statement showed what portion of the meters was or is in use. I think that the record which I have compiled in the gas office from their books and papers show the number of meters in use. I have no statement as of this date of any kind of meters. I think the records from the company's books and papers show the number of meters in use and in stock, that is my recollection. On December 25th last year I had such a record as is contained in this book entitled "Transcript of Record, Supreme Court of the United States, October term 1911, No. 83; Lincoln Gas & Electric Light Company, Appellant vs. City of Lincoln et al." I had that on the 25th day of December 1912. My recollection is,—concerning any further record or information or data with respect to the number of meters,—that I had this statement from the company prior to that date about the total number of meters. That statement would be in writing. Whether at that date I had any information from the records, or otherwise, as to the number of feet or miles of gas mains in the city, other than the transcript just referred to, on the 25th day of December 1912,—I am not sure, I think I had the
1075 record spoken of handed me by the company, but would have to refresh my recollection about that.

On December 25th 1912 I had made no independent complete compilation of any inventory of the equipment, I had looked the plant over and investigated the inventory contained in this transcript I have already mentioned. Prior to December 25th, 1912, I had been over the plant and apparatus several times, I had made no written inventory. I had the larger items of the plant in mind. I got this part from my inspection and part from the plant. I got my information with respect to the number of miles or feet of gas mains prior to December 25th 1912 from the company, from the statement which I have spoken of; I feel quite sure it was handed me prior to December 25th 1912.

Concerning governors used by the company prior to December 25th, 1912,—I think I had a statement about the number of governors, from the company; I am not sure about these dates, I haven't refreshed my mind as to that. Whether that would be in writing in compliance with my request,—that would undoubtedly be in writing, not answering a part of your question. Not necessarily upon my request for my own information, it would be in writing at least.

Concerning any record of additional equipment, gas service or gas mains subsequent to the testimony contained in the transcript referred to,—I am pretty sure I had a statement from the company on these matters prior to December 25th 1912, which undoubtedly was in writing. I think I have some of those statements furnished me here. I have one of the statements of the mains, furnished me by the company, here in my hand; I have another one that is either here or over to the hotel. I haven't measured the mains, have no statement made by myself, I simply have the company's statement. Haven't made a tabulation of the number of feet of mains, I have nothing only these figures the company has
1076 given me. I have copied the various lengths of mains out of the report, I am only able to give the Master in this case now a statement of the number of feet of gas mains in the city of Lincoln owned by the Lincoln Gas & Electric Light Company, only these statements they furnished me. These papers, exhibits "1" and "2" give all the information there is except that in the Transcript of the Record I have already mentioned. I have other data drawn from the books and records of the company with reference to the number of feet or miles of gas mains, or the side of the main in the streets of the City of Lincoln of the company. I haven't that data here, yes it is here in the City, that is simply copies of the records of the company showing the size of the mains I think, I am making valuminous copies and would not attempt to tell you all they show accurately. Whether I know now, or have made any tabulated statement of the number of feet of gas mains in this city on the 25th day of December, 1912,—why, I never knew that. Whether I took any pains to arrive at how many feet of gas mains or their size, of this company, on the 25th day of December, 1912,—those statement- furnished by the company show that approximately, That (indicating) is the statement of October 31st 1912, but you are asking about December 25th, 1912, Christmas Day, an easy date to remember.

Witness handed papers to examine and state if that wasn't all the information witness had received upon his own requisition on the company for information as to the property of the company prior to December 25th, 1912,—answering the question as I go along, a large part of the papers handed me did not originate with the company. The first paper looks like my requisition, or a copy of it and was sent to the company for different items that I wanted information about. Referring to the next paper and whether that was not an answer from the company to the witness for information asked,—of course, I can't recognize these figures, but they look

like notes of information that was handed to me. I may
1077 not have given you all, I may have more over to the hotel the company furnished me, I think I have another but can't find it. I will get what information I have at the hotel or anywhere else, furnished me by the company prior to December 25th, 1912 and produce it here; that is what written information I have.

I have not prepared a statement showing the amount of property and value of the property of the Lincoln Gas Company. I have all the details shown in the Transcript of the Record of the Supreme Court of the United States. Besides the Transcript and exhibits "1" and "2" I have the details furnished by the company and on various parts of the property, I have already stated they are not limited to the papers I handed to you. I will produce those. I did not make a report on the valuation of this property as of the 25th day of December 1912.

Mr. ALTON D. ADAMS resumed the stand for further examination.

Examination-in-chief continued by Mr. Strode:

Witness asked whether he had here all the information and date furnished by the company to him, prior to December 25th, 1912,—no, it is not all here. I have here all that I could find here in Lincoln, but I remember I left some in the East. I wanted to say there was an explanation, or an addition to an answer I gave before lunch, that I wanted to make at this time, before it slipped my mind. I was asked about the schedule and list of property on the 25th day of December 1912, and I said I never had the schedule of the property on that day and never knew exactly what it was, meaning I never had a precise schedule of the property as of that date, and as I remember, I called attention to it in the next sentence that I did have statements of the company relative to considerable
parts of the property in October 1912, and I didn't want
1078 the impression to go in that I didn't have substantial information about the property on the 25th day of December 1912, although I didn't have a precise schedule on that date. As to what I did have on that date, well, I had the schedules of the property that I showed this morning as coming from the company, identified as exhibits "1" and "2". Witness asked if exhibits "1" to "5" inclusive are all the information from the Lincoln Gas Company prior to December 25th 1912, furnished by the company,—it is not. There was one or two blue prints of mains as I remember it, and I now recall no other written information aside from the schedules I have just produced. I think there were two blue prints of mains but I have left them in the East. All the statements or schedules from the company were furnished me prior to December 25th, 1912. My recollection is those blue prints showed both the miles or feet of mains, their size and also the location of the mains in the streets of the City. I used those blue prints as a basis for determining the number of feet or miles and size of mains, prior to December 25th, 1912 only in a general way. I looked it over, I relied mainly on the company's figures and on

the record of the Transcript. Outside of exhibits "1" to "5", and the blue prints, and what is contained in this transcript of the testimony taken upon a former hearing I had no other written information that I recall, furnished prior to December 25th, 1912 by the company, I had some general information secured from conversations with the officers of the company. Witness asked whether subsequent to December 25th, 1912 he had secured any further information from the company, or any other source, with reference to the property of the company, answered yes sir. I haven't that here, only partially, it isn't in shape to present. I have a great amount in process of compilation partially here and partially not. I have not prepared any statement or inventory of this gas company up to this time,—apart from the statements and inventories that I have already called attention to
1079 furnished by the company and obtained from the record. And that is these exhibits "1" to "5", the record of the testimony shown in the Transcript, and these blue prints. On one of the written statements of the property given me by the company there was a statement about the number of governors, that statement about governors is contained in a sheet attached to exhibit "5".

Whether I had any information furnished by the company, or taken by me from the records of the company prior to December 25th 1912, with reference to the gross receipts and operating expenses of the company,—I think I did. I don't think I have it all here, but think I have a letter here that bears on that point. (Produces Letter) there is a letter that fell into my hands, being a letter with reference to the net earnings to the company prior to December 25th 1912, outside of that and what is shown in this Transcript taken upon a former hearing, I had, as I remember a statement of the earnings and expenses for several years prior to 1912, a pencil statement, I have been unable to find it this noon. I think it was either furnished by the company, or Mr. Foster having obtained it from the company.

Whether up to this time I have taken or secured an inventory of the gas property,—would say various parts of it. I haven't taken any accurate inventory up to this time, the parts I have taken are shown in these exhibits "1" to "5", there are several sheets attached there to exhibits "2", "3" and "4", and a large mass of papers in process of preparation now at the office of the company in an incomplete state. Whether that is an inventory of the property or what the books show which I am referring, to,—it is what the books and papers of the company show the property to be. Concerning whether I have taken an inventory of the gas property,—I estimated the statements of the company and the records of its books with reference to parts of the property not readily accessible as proper
1080 proofs of an inventory, and so treated it in this appraisal that I have, and exhibits "1" to "5" and the statements at the office of the company. I haven't made up a detailed schedule of the parts of the plant at the works, which are open to inspection. It is not customary to measure up the mains nor to go around to all

the houses, and count the meters in making a schedule. I am telling you what an inventory is, I have taken the company's statement for that, number of meters, feet of mains and number of governors, the amount of receipts and operating expenses, and looked over the plant considerably. On December 25th, 1912 I had a great deal of this information I referred to now as being in the office of the company or in process of being put in shape in an,—I had a great deal of it in exhibits "1" to "5". Outside of exhibits "1" to "5" and these blue prints on December 25th 1912 I had compiled no figures at the office of the company in the way of an inventory. With the saving that I previously made that I may have left something besides the blue prints in the East, I have given you here all the data, outside of the blue prints, furnished me by the company, or taken by me from the books of the company, prior to December 25th, 1912. I don't recall anything that I left in the East besides the blue prints, if it was anything I presume in all probability outside of the blue prints, it would be a matter of small consequence.

Mr. ALTON D. ADAMS, a witness for the defendant City, having been previously sworn herein testified as follows on behalf of the City.

Examination-in-chief by Mr. Foster:

My name is Alton D. Adams; age 49 years; residence Natick, Mass. My business is that of Consulting Engineer. As to the line of work followed by me,—and my experience as an engineer,—I began engineering in the electrical field in 1885, and con-
1081 tinued to 1894, with a very slight intermission, and was continuously employed by various corporations in the design and construction of electrical plants and machinery; have designed machinery for various manufacturing plants to a very considerable extent, which was put on the market and sold by several manufacturing corporations and have erected electric power stations in various parts of the country. That employment by some specific corporation, ended in 1894 when I took up the business of consulting engineer on my own account and have so continued to date.

A year or two before 1900 I began to devote special attention to the affairs of public service corporations, to a study of their operations and plants, etc, before that my contact with such corporation had been merely in the way of erecting plants for them, or designing parts of such plants, since about 1902 or 1903 my time has been mostly devoted to the valuation of public utility plants and to various sorts of investigation of the affairs of such corporations, for various interests. I have appeared in a very substantial number of rate and valuation cases for different parties.

I attended the School of Engineering of Harvard University, Engineering Department. I graduated from the four year course, but spent only about two years there because I had spent two years prior in other schools, where I did not graduate, and subsequently went to Harvard School and took its degree there; the technical degree B. S. I had further work in connection with the Harvard

School and engineering, with my acquaintance with public service corporations to further prepare for that work I took a post graduate degree there, I took the full law course and graduated there in 1904 two or three years after I took the post graduate course, and received the degree of Bachelor of Laws at Harvard University, and I should like to explain that point, my incentive for attending Harvard Law School was the fact that I had become interested in the affairs of public service corporations and was convinced that I would
1082 never get to the bottom of such affairs until I understood something of the legal side; that was my motive for attending the law school and I have devoted a great deal of my time during my life to what you might call public service law. Concerning my experience in the valuation of public service properties in rate, valuation and tax cases,—I might explain that during the time I was attending the Post Graduate School and the Law School at Harvard I was still carrying on my business as a consulting engineer, which I have stated extends from 1894 to the present time; I make my living that way, and attending these schools was an incidental matter with me and to my business as an engineer; was constantly doing important engineering work during those years from 1900 to 1904 when I graduated from the Law School.

Now coming to my experience in public utility cases, as such, the first I now recall was a little gas case at Ashtabula, Ohio; I didn't go very far in that case because a settlement was made, it was a gas rate case, I did assist counsel, however, in that case with various figures and computations and of course was paid for my services; I didn't appear in any court proceedings in that case.

The next public utility case, as far as I remember, where I appeared was in the matter of the consolidation of the gas companies in Boston, a valuation of the properties and hearings were held before the Gas and Electric Light Commissioners of Massachusetts and arose in this wise; prior to 1904 there were some six or seven gas companies operating in Boston, according to their experts, their combined assets amounted to something like $25,000,000.00, they wanted to combine, and it was quite generally felt that they should be allowed to combine under proper regulations they brought in a petition before the Gas & Electric Light Commissioners of Massachusetts who had jurisdiction with authority to combine and the capital at which they might combine fixed, the object of the application was to see at what figure that should be fixed. The case run along several months, we had many hearings before the Gas &
1083 Electric Light Commissioners, a bill was brought before the Legislature while in session, it became apparent right away that the Legislature was likely to deal with the matter over the heads of the Gas & Electric Light Commission and that Commission suspended hearings pending the action of the Legislature, so that Commission never made any decision in that matter, but the Legislature did pass a bill fixing the capitalization at which those companies might consolidate, I think the capitalization was about $15,000,000.00.

One of the next cases in which I was employed, if not the next one,

was that of the City of Watertown, New York and the Watertown Gas & Electric Light Company. Those hearings were had before the original Gas Commission of New York State which antidates the present Public Service Commission and had jurisdiction of the whole state; that Commission was the original body which fixed the 80 cent gas rate in New York State which was subsequently taken to the United States Court in Wilcox -vs- The Consolidated Gas Company.

In the Watertown case the main proposition was one for the consolidation of the Gas and electric companies which had a combined capital at that time of about half a million dollars and they wanted to increase it to $2,500,000.00, the city opposed that increase on the ground that the property didn't warrant anything like it, and on the further ground that they didn't want the consolidation, it was bad policy so they contended that required extended valuation; we had many hearings, I spent a long time in that case; the hearings were brought to a close before the Gas & Electric Commission of New York, and the consolidation didn't occur, the Commission voted against it.

I think that Watertown case was in 1906 and the following year there was a rate case in Saratoga Springs between the city and the local Gas & Electric Company, that came up on a petition for a reduction of both gas and electric rates; that petition was heard before the old Gas & Electric Light Commission of New York. The
1084 City of Saratoga Springs got a reduction in the electric rate, I don't know what it was, but the gas rate before the order of the Commission was pretty high, making it possible to give such reduction, it seems to me it was up somewhere around $1.70; it was a very high rate; that case involved the valuation of both gas and electric properties as well as dealing with the matter of operating expenses of both properties.

One of the next cases I was in on behalf of the City of Salem, Massachusetts where I appeared for the City in support of a petition for a reduction of the rate; that was a gas case, that case came up before the Massachusetts Gas & Electric Light Commission. The gas plant was valued and operating expenses gone into and the outcome of that was a reduction in the price of gas.

About that time I made a report to the City of Woonsocket, Rhode Island, on the fair price of the gas there; involving an investigation of the situation and an approximate valuation of the property and consideration of the operating expenses, that wasn't a court or commission proceeding; I understand that the rate was subsequently reduced on conference or agreement or what not between the company and the City. I valued the plant. I don't know as I am getting these in their regular order, but somewhere about 1907 as near as I recall, I was employed by the City of Cedar Rapids, Iowa, in support of a rate of 90 cents per 1000 feet that had been fixed by the City's City Council, and was being opposed, I think, in the State Court of Iowa; in that case the 90 cent rate fixed by the City Council was supported by the State Court and subsequently in a decision of the United States Supreme Court.

In 1906 or 1907 I was employed by the City of Racine, Wisconsin in a gas rate case, that was a petition before the Wisconsin Commis-

sion on a petition by the City for a reduction in the rate of
1085 gas; that case was tried before the commission and I appeared; the gas rate was reduced, I don't remember how much the reduction was. My specific work in that case was an estimate of the operating expenses and of the depreciation and its effect on the value of the property; my recollection is that in that case the city to a large extent took the costs of the engineers of the Commission, some of them we disagreed with and deducted from those and dealt with it by way of depreciation to get at the values; we also objected to some of the specific costs and prices the Commission had used but there wasn't a complete setting up of new price for the property by the City in that case, only partially; the gas rate was reduced there to $1.00.

I had a gas case at Attleborough, Massachusetts. I appeared for the town of Attleborough, that case was last year; the gas out-put there is between fifty and sixty million annually; the result of that case was a reduction to $1.00 per 1000 feet; they make only coal gas, but a very fair quality, about 17 candle power according to the state test.

I appeared for the town of Lemonster and there they got a reduction of I think 40 cents, on a petition for a reduction in the price of gas before the Massachusetts Commissioners: that is a small place, the gas rate was high, we got a reduction from $2.00 to $1.60.

I have appeared in a case in Northhampton, Massachusetts during the progress of the proceedings in your case here, in fact I finished it shortly before I came here the last time, that was on a petition by the City before the Commissioners of Massachusetts for a reduction in the price of gas at Northhampton, we are still waiting for a decision from the Commissioners. We valued the property in that case and estimated the cost of gas, etc.

The Haverhill Gas Case was an important one that was heard intermittently during the entire year of 1911 before the Gas and
1086 Electric Light Commissioners, being on a petition of the City of Haverhill for a reduction in the price of gas; the output there is almost exactly the same as in Lincoln and is water gas only, they have no coal gas plant there unfortunately: the Commission last year, after the conclusion of the hearings in the case, fixed the gas rate in Haverhill at 80 cents per 1000 cubic feet: I should say a fair quality of water gas is made in Haverhill,—in Massachusetts we have a system of state inspection of the candle power of gas, the state inspector is one of the officials under the jurisdiction and control of the Gas & Electric Light Commission, he is required by statute and the regulations of the Commission to test the gas of different corporations all over the state and the number of tests depends on the output,—that is the larger companies are visited more frequently than the smaller ones the gas candle power at Haverhill, as I remember at the time of the hearings, was running somewhere around 19, the rate of 80 cents, as fixed by the Gas & Electric Light Commission for Haverhill for gas there, was appealed from by the Haverhill Gas Light Company to the Circuit Court of the United States and obtained a preliminary injunction against the City and afterwards

against the enforcement of that rate; that case is now being tried before a Master in the Federal Court of Massachusetts by the Attorney General on behalf of the Commonwealth; I am employed in that case by the Attorney General, in fact I ought to be there now, the hearings are going on from time to time and I am a witness in that case.

Within the period that I have been coming out here to Lincoln on this case I have valued the plant at Springfield, Illinois, of the Gas Light Company, and made a partial report thereon; the matter there, as far as my present knowledge goes, has been a matter of an attempted adjustment and agreement between the City authorities and the Gas Light Company; the rate there is $1.00 per 1000 feet, and the out-put substantially the same as it is here, within a few million feet per year; the City thinks they should have a reduction below
the $1.00 rate they are now getting, and an effort has been
1087 made to reach some agreement and that was the object of this
valuation to form a basis of some sort of an agreement. No agreement has been reached as far as I know what the outcome of the whole matter will be, in view of the fact that the Illinois Legislature passed a public utility bill last year, I don't know.

In the City of Ypsilanti, Mich., beginning sometime in the latter part of last year, I made a report to the City on the contruction of a new gas plant in that City; there is a gas plant there owned by a corporation and the corporation and the City have fallen out in their dealings, the gas plant is thought to be pretty old and somewhat run down, the City thought*ed* it wanted to build a new plant and obtained an estimate from me on the cost of construction a new plant; Later employed me to design and supervise the construction of such a plant and then a proposition came up relative to the purchase of the existing plant, that had to be passed on so that employment is temporarily held up until we see what the political outcome is.

The case at Melville, New Jersey was a tax case that I appeared in a gas and electric tax case. The City had taxed the property of the electric company and the gas company in Melville at a certain valuation, a regular property tax, and the company objected to the valuation put on those properties as being too high, and the matter had to come up before the state board having jurisdiction in this matter, I forget the proper name of the board; I was employed by the city to value the gas and electric properties in support of their valuation that they had put on it for the purpose of fixing the tax, I did that work. My understanding is that the tax rate was upheld, that the valuation not the rate, the valuation put on the properties was upheld, of course the rate was simply applied to all property in Melville, it wasn't a special tax as I understand. In Melville I also valued the water plant and electric plant for the City looking to a purchase; I don't think
the purchase has been consum-ated, they had competing water
1088 plants and the city thought it could buy the properties and
fix it up that way, that is why they wanted a valuation of the water and electric properties.

In the City of Racine, Wisconsin I valued the water works there for the purpose of selling to the City; the City is endeavoring to

acquire it under the Wisconsin law. The City is now being served by a private water corporation. I valued that water property, the property has not been transferred owing to the fact, as I understand it, that legal objections have been made in the courts which have held up the action on the merits before the Wisconsin Commission pending a decision on these various legal questions as to the rights of the City to increase its debt, and all that sort of thing.

I was connected with the valuation of certain National Civic Federation property. I was employed in 1906 and 1907 to report on the operation of sixteen plants, mostly electric, but partly gas in Massachusetts, eight of them being privately owned and eight municipally owned plants; the object was to get some figures and relative results of corporate and municipal ownership of said utilities, meaning private ownership, the work was done quite extensively taking many months and involved the valuation of eight of the plants,—the municipally owned plants,—we didn't value the privately owned plants, my instructions from the Federation were not to do that. There appeared to be objections on the part of the private corporations to having their plants valued, inasmuch as it was known that this report was to be printed in the record of the Federation and would become public property all over the country, it was thought unfair to value their plants and publish the results, so we simply valued the municipal plants and reported on the operating results of the privately owned plants. That report as to the plants in Massachusetts was made by two men,—It was thought at first it might be a joint report but didn't turn out that way,—and Charles F. Pritchard and myself each put in a report; Mr.
1089 Pritchard's and my own reports were published separate. Mr. Pritchard was the manager of the Lunn Gas & Electric Company.

I appeared for the District of Columbia in a case, I believe in the Circuit Court of the District involving the quality of the gas supplies by the gas companies, there are two companies in Washington, the case took considerable time and investigation of the case and the testimony about. The specific object was to enforce a very considerable amount of penalties the District had provided against the companies for failure to provide gas up to the required standards. That case came up somewhere around 1910.

I might mention among my earlier work in connection with public utility cases, that I appeared before the Industrial Commission a special commission created by Congress in 1900, and gave testimony on the operation of gas and electric plants in Massachusetts, my testimony there will be found in Volume Nine of the reports of that Commission, the report runs into twenty volumes I think: they had a great many hearings and took testimony in great length as to industrial operations and then the report was printed by the United States Government.

In addition to the various gas cases I have made valuations in a number of electric cases, have already mentioned the case at Melville.

In 1910 I was employed in an electric rate case by the City of

Montreal, Canada. About 1906 or 1907 I was employed by the City of Colorado Springs, Colorado in an electric rate case there. A year or two ago I was in a case in the City of Malden, Massachusetts an electric rate case. During the pendency of these proceedings I have appeared in an electric rate case for the City of Northhampton, New York, before the Commissioners. I did not make a valuation for all of these cases. Not all of them, in this last case I did. In Colorado Springs and Montreal none was required, it was a question of the fairness of certain rates which wasn't thought to require a valuation. Then for the town of Lemonster I had an electric case up there and down at Blackstone, Massachusetts
1090 an electric case there. Those cases were both before the Gas & Electric Light Commissioners. Those were rate cases for a reduction of the rates. As to the outcome I believe I last mentioned Lemonster and Blackstone there the rates were reduced; the Colorado Springs case the contention of the City was upheld, and in a sense the rate was reduced, the Colorado Springs case arose in this way: It was claimed there should be a large reduction in the amount of past bills that had accumulated against the City by the electric company because the service hadn't been up to standard of the contract between the City and the company. The question involved in that case was the value of the service that had, as a matter of fact, been rendered it being recognized and admitted by the company that the service had not been up to the standard the contract called for.

Concerning what study I have made in the installation of gas apparatus and the construction of gas properties,—well, in connection with the decade gas work I have outlined, of course it has been a constant study to familiarize myself with the construction of different gas properties I have had to deal with, that has been accompanied by a good deal of study on the general art of the manufacture of gas and apparatus connected therewith. I might say a word in that connection about the records of the Massachusetts Commissioners *of* Gas & Electric Light. The records of those Commissioners run back to 1885, much the oldest commission having jurisdiction of gas and electric matters in the United States, having been in existence some 26 or 27 years and then began in 1885 to exact reports from the companies on an extended printed form, one of which I shall be able to exhibit in this case; a report of the property of the company and all of its financial and technical operations each year. Those reports are all on file in the records of the commission and are open to any member of the public who chooses to go there at proper hours and investigate, and have undoubtedly *have* afforded
1091 the greatest source of information for the public in the United States as to the cost of operation, and incidentally putting light on the cost of construction, of gas properties. They throw a great deal of light and information as to the cost of making gas in the United States because they have been resorted to by persons from all over the country, they are a great bulk of public records that exist today relative to the cost of gas properties absolutely open to anybody that goes there at proper hours and

times to inspect them. Those records are made on printed forms, bound and printed pamphlets with vacancies left for answers to specific questions, to be filled out by the officers of the company and sworn to, and the statutes provide a penalty for a delay beyond one day's date. It is sworn to by the officers of the company. I have spent in the aggregate years studying the records of the Gas and Electric Light Commission.

Whether I have had anything to do with the case of Waterloo in the United States,—no I have never had any Waterloos in gas cases yet. I have never had anything to do with it in any shape or form.

Whether I have had anything to do with the matter of water power,—yes I have valued water powers quite a bit; I valued some on the Blackstone river, on the Susquehanna river, and several years ago had a very extensive water power matter on behalf of the bondholders, that case involving $45,000,000.00 on the Yadkin River in North Carolina.

As to what the various characters of property have had to do in common with the matter of engineering,—well, the valuation of construction, engineering construction have in common the fundamental principles of engineering; engineering is a science and art that applies to materials and structures, they go to make up,—from one point of view,—of course, it don't matter materially whether brick and steel and other materials of construction go into a structure for the purpose of forming a gas, electric or power plant of a water supply system, the same system of construction ap-
1092 plies to the market value of materials, with such variations as are incident to their different forms and control of the matter of cost.

As to what benefits, if any have been derived from the reports filed with the Massachusetts Gas Commission in ascertaining the life of property and apparatus used in the manufacture of gas,—that is one of the particularly valuable features, to my mind, of the Massachusetts, because of the form of the report is sufficiently complete so that engineers familiar with the gas business can read those reports and can go about and look at the properties and recognize the properties from the reports and trace the properties down through, now more than a quarter of a century of life, and see what the changes have been and thereby is created a record as to depreciation that is unexcelled. I have been doing that a great deal for the last ten years and made a great many records from it. I have repeatedly examined the property of the Lincoln Gas & Electric Light Company with a view of making a valuation of it. As to what examination of the company's property records, and books I have made and the time I have put on it,—I began to attend in Lincoln in the latter part of last year, have now forgotten the date would have to refer to my notes for that, being employed to come here by yourself (Mr. Foster) on the part of the City of Lincoln in this gas case, and have been here in the City of Lincoln,—apart from some work that I did when away from the City,—have been here certainly more than two months, perhaps as much as three right here in the

city. I have during that time repeatedly visited the gas works, can't say how many visits I have made, but enough to familiarize myself at least in general with the plant. Have spent a large portion of the time that I have been in Lincoln in an investigation of the records in the office of the Gas Company as to its plant, property and operations. Have spent a good deal of time in an effort to acquire a knowledge of the property of the gas company apart from the works, that is, the property scattered over the City of Lincoln under the streets, and I may mention, as I understand the testimony
1093 of the company's engineers, the greater part,—substantially more than half of the physical property of the Gas Company is spread over the City of Lincoln and is not down at the works at all. I am quite sure the valuation made by Mr. Lea shows over 60% of the physical value to be in what is termed the distribution system to a great extent is covered up and buried in the ground, and isn't readily open to inspection like building and machinery at the plant. I have given a great deal of consideration in an effort to arrive at a just a fair cost of what that property really is for a basis of valuation.

Then, of course, the vouchers of the company which run back to the year 1901, not back of that so far as I find, I have been through all of those years of vouchers and have made copious extracts from the bills since 1901 rendered to the company by various concerns from which it bought equipment. As to whether I caused any examination to be made prior to the year 1901,—I would say that it is impossible to do that. I made an extended search in the vaults and out of the way places for all of the vouchers we could find, we had a good deal of difficulty in finding these bills, not that I mean the company made any difficulty for us, but the bills were not filed in any regular way or place and we failed to find a large part of them, some were in a vault down in the basement nailed up in some old wooden boxes, entirely unsorted, and they had to be arranged and gone over before we could find what was in them. I can hardly dignify the assistance I have had from the company as to those vouchers by the name of a search, I don't mean to say the company has put any impediments in our way, I asked for all of them and they said all are in this miscellaneous pile, there was a vault down stairs and they said everything is down here now help yourself, we helped ourselves, and the company as to some special vouchers, have repeatedly given some assistance where I wanted a particular bill and in several instances found the bill I wanted, in one or two instances because some officer of the company had it. In general the policy of the company was to say our records were in such and such a place, go there
1094 and see what you can find, and help yourself. I did considerable for and questioning about these contracts entered into the past year for various parts of its gas equipment. Those contracts have only in part been discovered; I understand from the testimony of the company that they have all been turned over to me that have been available, a good many contracts have disappeared.

Then the regular books of accounts, such as ledgers, journals and cash books and some others have all been looked into with a good bit of care for the records of the structural cost of the property here, of course, those books are run under the names of the different one or two corporations that have preceded the present corporation, but the books are in the office — the company back to 1872 or 1873 when the construction of this plant was carried out.

Then the company — certain records as to the construction of its mains, I have made a considerable number of extracts of those and the process of investigating main work orders so called, which are orders to the foreman to lay specific pieces of gas mains in specific; these are still under investigation. The company has a very considerable file, I think nearly 700 of those work orders, which are on file in bound volumes and reveal a good deal of the fact relative to the part of the construction of the company's property. They are the best evidence, as far as they go, of its mains; but the orders appear only to begin about the year 1905 and run from there down to date.

The service cards are another source of information, I think they begin about 1905. The work of investigating these service cards, which are a written record on a little cardboard filed away, concerning the construction of service pipes from the main to the meter of some consumer, and contain a good bit of valuable information as to the size of pipe, its length and various other matters connected with its construction.

The company has a few drawings that have been made accessible to me, the files of the company are not very full in that
1095 respect, they are a source of information.

It has several maps of mains that have appeared in the testimony, those have all been considered by me.

Then the company has a special form of record called a gas report, being a specific form of record called a gas report, being a specific form of compilation as to its gas plant and particularly as to the operation of its gas plant, as far as I can judge for the purpose of showing the officials of the company, perhaps those absent as well as thcose present in Lincoln, what was the operations of the company from year to year. Of course, the figures that go into these so called gas reports are drawn from other records of operation of the company,—the station records, laying of mains, and various sources. I have resorted very considerably to those so called gas reports which are made out in the first instance month by month and later for the twelve months closed into the year. Those gas reports begin to be pretty complete about the year 1903 and continue down to date. So we have a pretty complete record of the operations of the company beginning with the year 1903 in those gas reports.

By operations I mean particularly the making of gas. These gas reports do not disclose, in any complete way, the construction of the property, for that you have to seek the bills, books and the plant itself as it exists down on block 79, and as it exists in the

streets of the City of Lincoln. I think that is a fair general statement of the scope of the investigation.

As to the condition of the company's construction account as it appears on the books and my investigation of it,—would say I have been over the construction account of the company, as it appears on the books, very extensively, in fact I have worked with Mr. Wiggins in the compilation of the account, which I understand he has presented here in evidence. The construction account appears on their books from about 1873 down to date.

As to what the requirements are in Massechusetts with reference to the issuance of securities by public service corporations,—
1096 as to gas and electric corporation- under the jurisdiction of the Massechusetts Gas and Electric Commission, the law since 1894 has permitted issuance of only such stock and bonds by gas and electric companies in Massechusetts as the Commission may approve and it is and has been, the practice in Massechusetts under that statute for such companies wishing to issue their stock and bonds to come in before the Commission and have a hearing, which is previously advertised, and they are required by the Commission in those hearings to exhibit and leave with the Commission as its record in the hearing,—those hearings are all public and stenographic reports are taken of all of them,—the companies are obliged to show the cost of the properties on account of which they *which* to issue securities. Are required to show their contracts with manufacture-s, for instance gas holder, water gas machines, and electric machinery. Are required to leave complete copies of the contracts and in the course of the proceedings are required to bring in the original signed contracts, so as to put specifically before the Commission the actual cost of the properties against which the capital is to be issued, and that is a part of the Commission's records and is the part to which I have referred this morning. That has been the practice since 1894, and not a dollar's worth of gas or electric stock or bonds can be issued without going through this process. In order to get that consent they must show the Commission the present total and detailed cost on account of which they ask for the issuance of the stocks and bonds, those records and hearings are open, to anybody who chooses to go and inspect them at proper times. That gives engineers who are interested a chance to inform themselves very generally what gas properties are costing in Massechusetts.

During the past year I have been employed by the New Hampshire State Commission which has jurisdiction of gas and electric properties in connection with the gas and electric properties at
Concord, New Hampshire, the capital of the state. That
1097 matter arose on the petition of the City of Concord to have a valuation of the property and employed me to do that work, that property there I understood to be controlled by the United Gas and Improvement Company. Some officials of that company came up there and we had one or two conferences between the commissions, the representatives of the Concord plant and myself, the upshot was that the valuation was not completed, the company made

the City a proposition for a reduction in the rate and that was accepted, the Commission wasn't moving on its own motion and when the petitioners were ready to have the case stop it stopped.

I was also employed in an electric case, a capitalization case, before the same Commission where a valuation of the electric plant and lines was involved, the question there being the proper amount of capitalization. That matter was completed and I reported to the Public Service Commission.

I have made a valuation of the Lincoln Gas Company's property used in the manufacture of gas, in the City of Lincoln. I have completed a valuation as of the date of January 1st, 1907, and I have well along towards completion a valuation as of January 1st, 1913, that valuation is not completed yet, that will take several days, I can't say positively but not very long.

Exhibit "180" which has been prepared by me, is entitled "Cost, depreciation and value of Lincoln Gas Plant, as of January 1, 1907"; it contains the figures relative to the cost as of that date and the depreciation and the value of the Lincoln Gas Plant.

I find the value of the Lincoln Gas Company's plant to be as of January 1, 1907, $279,915. That is shown at the bottom of the column in exhibit "180" headed "total value".

Explaining exhibit "180", it is in the form of a tabulation in four columes, the first left hand colume contain- the plant items, consisting of lands, buildings, works equipment, distribution system, and the combined items of engineering, interest, taxes and general 7%; the second colume is headed dollars, total cost, and contains the following entries set opposite the entries in the first column; land $2,250.00; buildings $22,247.00; works equipment $85,518.00; distribution system $229,125.00; the footings of the above quantities is the column is: $339,150.00; next below is an entry of $23,740.00 corresponding to the entry in the first column of engineering, interest, taxes and general 7%. The entry corresponding to the 7% is $23,740.00, making a total footing of the column of cost $862,890.00.

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The next column proceeding to the right hand in this tabulation is under the heading "dollars total depreciation". Opposite the item of land there is no entry. Opposite the item of buildings the entry is $5,585.00, intending to represent thereby the total accrued depreciation on the buildings that belong- to the Gas Company January 1, 1907.

The next entry in the column opposite Works Equipment, is, $21,717.00, representing the total depreciation accrued to January 1, 1907 on the works equipment of the company.

The next entry in said column opposite the words distribution system is $50,245.00, intending thereby to represent the total depreciation accrued on the distribution system of the company January 1, 1907.

The footing of the above amounts of depreciation in the exhibit is $77,547.00, to which is added the item of $5,428.00, representing the depreciation on engineering, interest, taxes and general.

The above items in the depreciation column foot up to $82,975.00,

representing thereby the total depreciation as computed here on the Lincoln Gas Plant as of January 1, 1907.

The total of the preceeding column $362,890.00 represents the sum total it would have cost to construct a plant the same as, or equivalent to, as the case might be, as to the specific pieces of apparatus or plant of the Gas Company on the first day of January 1907, using that date in the way that it must reasonably
1099 be used in connection with a cost of construction and the date on which the construction would be begun; it is impracticable and impossible to build a gas plant in one day, but the date of January 1, 1907 is taken as the date at which the prospective or substantial building of a plant would stand, and would make as fair an estimate of what it would cost him to acquire a plant the same as, or equivalent to, the Lincoln Plant as of that date.

The last column in exhibit "180" is headed: "Dollars, total value" and contains the following entries: Land $2,250.00; buildings $16,662.00; opposite works equipment $63,801.00; opposite distribution system $178,890.00 total footing of the above $261,603.00.

The next entry corresponding to engineering, interest, taxes and general, is $18,312.00.

The total footings for the total value column is $279,915.00. That completes exhibit "180".

Exhibit "181" prepared by myself is entitled "Depreciation of Lincoln Gas Plant as of January 1, 1907". It contains in general a statement of the estimated annual depreciation of the Lincoln Gas Plant as of January 1, 1907, a statement of the percentage of annual depreciation on the cost of the buildings, works, equipment, and distribution system, also with engineering added, and a statement of the total percentages of depreciation on those respective items:

On buildings the percentage of annual depreciation is 1.6;

The total percentage of accrued depreciation January 1, 1907 is 25.1.

And the dollars of annual depreciation of buildings is $370.40.

On works equipment the percentage of annual depreciation is 2.3; the percentage of total depreciation January 1, 1907 is 26.4 and the dollars of annual depreciation of works equipment is 2005.26.

1100 On the distribution system the percentage of annual depreciation on the cost is 1.8; the total accrued depreciation as of January 1, 1907, is 21.9; and the dollars of annual depreciation on the distribution system is $4131.58.

The footings of the above mentioned quantities are for column of annual depreciation 2.06; I should not speak of that as a footing-it comes in the next entry in the column of annual depreciation and represents the correct percentage of annual depreciation on the gas plant January 1, 1907.

In the column headed "total depreciation" the entry is 23.30: representing the total percent of depreciation on the entire plant as of January 1, 1907.

And the entry in the column headed "dollars annual depreciation" is 6507.24; representing the total dollars annual depreciation for the entire plant omitting the engineering, interest, taxes and general which is figured at 7% on the cost of the plant.

The engineering, interest, taxes and general item for percentage of annual depreciation is 2.06 corresponding to the combined plant to which it attached; the total percent of depreciation 23.30 corresponds again with the percentage on the combined plant to which it attaches.

And the dollars of annual depreciation on the engineering, interest, taxes and general is $455.50.

So that the footing of the column of dollars of annual depreciation representing the annual shrinkage in value of the gas plant as of January 1, 1907, is $6,962.74; that completes exhibit "181".

Exhibit "182" is headed "Ages and depreciation of Lincoln Gas Plant as of January 1, 1907". The exhibit is set up in five columns, the left hand column headed, "Plant items" contains a list of the items of the Lincoln Plant, except the land.

The next column headed "Years Assumed Life"; contains
1101 set opposite to each item the number of years it is assumed and believed may be fairly assigned as the life of the particular item against which it is set.

The next column, moving towards the right hand side, is headed, "Percent annual depreciation", and contains as a percent the depreciation which results from the years of assumed life, being computed by dividing the years of assumed life into the cost of the property item.

The next column, to the right, is headed: "Year old", and contains an entry representing the age in years of the time against which it is set.

The last or right hand column is headed, "Percent total depreciation", and represents the total percentage of depreciation of each item contained in the tabulation as of January 1, 1907.

Now to illustrate the application of the figures, the first entry "Purifying House"; the years of assumed life for that are 66.6 resulting in a percentage of annual depreciation of 1.5; that is a division of 66.6 into 100 gives the annual percentage of depreciation of 1.5; the age of the purifying house January 1, 1907 was 16 years; and the total percent of depreciation on the purifying house January 1, 1907 24% is obtained by multiplying the percentage of annual depreciation by the 16 years representing the age of the piece of plant or property. And that method of computation follows right down through as to all the other items in exhibit "182", the annual depreciation and the total depreciation being locked together, in every instance, by the factor representing the years age of the property on January 1, 1907.

There is this further as to exhibit "180", exhibit "180" shows the total value and cost of the gas plant as of January 1, 1907; it does not show an allowance for Working Capital, which of course, is necessary; it is my purpose if permitted, to supply figures for such an allowance at a later stage in the testimony.

1102 Neither does exhibit "180" give any allowance for the so-called development expenses, or "going value" which of course are elements of business value rather than plant value; they are closely related and probably run into each other, they do at least in my opinion; I don't think they are proper elements to consider at all in a rate case so I haven't included — in my estimate for those elements. I base my opinion on that point largely on my understanding of the court decisions, notable in the Wilcox vs. Consolidated Gas Company and other cases that I have rated; I think they excluded any allowance for the value of the business in a rate case, so I have included none in exhibit "180".

Mr. Strode: Let the record show that, in all his valuations he don't include anything for going value.

(Mr. Adams continues:) That method in all the valuation is the same, I haven't included anything in this exhibit. That is all I have to offer on exhibit "180".

Concerning depreciation I would like to state briefly in connection with exhibit- "181" and "182" that the method I have followed and the reason for the method in the matter of depreciation of the physical plant is this: depreciation is often spoken of and thought of in connection with the word "theory", I think the connection is more or less unfortunate; I suppose there is an element of theory about all opinions as to facts, but depreciation is certainly just as much a fact as anything we run on to in the physical world: property is like men, wears out and decays, and comes to an end after its useful life and in estimating depreciation as I have tried to do, it is necessary, I think, to, at the start, get into the fundamental idea of value. What do we mean by the value of a piece of property? To my mind the value of an engineering structure, like that of most physical things, is made up of two main elements, its utility and its usefulness for some
1103 purpose; and the time during which that usefulness can be enjoyed or had. The usefulness is an absolute element in measuring value and the time; one is just as necessary as the other.

To illustrate a little farther, perhaps to build a house is as good an illustration as any. The house is worth $10,000.00, it is worth $1,000.00 a year for a yearly rental, it is worth $100.00 a month for a monthly rental, it is worth very little to sit in for five minutes; so that the element of time in connection with the value of that house is just absolutely the fact that it affords a commodious and convenient shelter for the person occupying it. When we get the monthly and yearly rental fixed on that house we are getting the entire rental for that entire period of time, just as the selling price represents its entire value during its useful life as a house; and the selling price of the house is more than the annual rental because it will ordinarily last more than a year. The annual rental is 12 times the monthly cost value to be enjoyed. A year is worth 12 times what it would be enjoyed a month, and I should say the illustration applies to a piece of gas machinery, or gas mains in the streets or almost any other piece of engineering property; it is valuable because it can be used for a

certain purpose and it is valuable in proportion to the time during which it may be used. If what I have said is true, of course, it bears in a most certain way on the value of a piece of property that has existed and been used a part of its life. If a property cost $1,000.00 and can be used for a number of years, necessarily all the value goes out of that property, unless there is a little left for scrap, during that period of use. Suppose it can be used ten years, and for myself I can't conceive of any fairer rule, or one nearer the truth, that to say if a piece of property can be used ten years and with a substantially like usefulness during that ten years that it loses one tenth of its value each year and I say I can conceive nothing nearer the truth
1104 than that. And right there let me call attention to the further condition affecting machinery. Take a boiler, or water gas machine, the assumption that the value goes out of the machine as to the time of its use, in the proportion of the time of its use bears to its entire useful life, and particularly during the first half of its life a higher value than of any we have. If separated from the plant or situation where it is and is sold in the market, that is, you take a second hand boiler that might have a life of 25 or 30 years as a whole, take it after it had been used two or three years and sell that second hand and you will probably realize 50% of what a new one would cost. It is sometimes suggested that property loses during the early years of its use only a small percent of its value, let the pro rata percentage considering the time of its use in proportion to its entire useful life. I know of no foundation whatever for that suggestion. It is not supported by any idea that you could take the property out of the situation where it is and sell it again in the market and realize more than the pro rata remaining value in it is calculated on the basis of the lapse of years of life.

For instance take a boiler or engine used two or three years, that you will sell for 50 or 60%, its value drops in the market much faster in the lapse of years of life in their ratio of total life. I then think, however, it is proper to say a given machine after a period of use can be sold for anything like its new cost, which is an experience so general that I don't waste any time tarrying with it, everybody knows it. I don't think on that account a piece of plant should be depreciated at a faster rate than its years of lapsed life in and ratio to its years of total life, because I think we have to look at these things,—when we are valuing a public utility plant or any plant,—in every community as a whole to see what that would be worth to the man who wanted to carry on that business; and had the right to carry it on, in the
1105 situation where the things were, and I think the supposititious purchase, if I may use the illustration in that connection, would be governed not be the price at which the boiler could be jerked out of the plant and sold, but the *the* remaining period of usefulness that remains in that machine as compared with the period of usefulness that would be in an absolutely new machine. The market price of which is known, or estimatable, and so in computing depreciation I have taken it with the annual rate of depreciation which result, after I have used the figures simply by dividing 100 by the years of useful life it would have. I have taken it with the annual rate of

depreciation which has simply to be multiplied by the number of years the thing has been in use to obtain the total percent of depreciation and that the dollars of depreciation is to be obtained for each year, or for one thing that has an annual rate of depreciation is to be obtained by multiplying the annual percent of depreciation into the cost of that article new, and if the total depreciation of that thing up to any certan period of use is to be determined simply by multiplying the years of use into the dollars of annual depreciation. Now it seems to me that method of dealing with depreciation is particularly fair in connection with public service property which is really used for the benefit of the public which the public must repair from time to time as it wears out. A water gas machine we will say during its useful life is substantially as useful for the purpose of making water gas in one year as in another. Suppose it lasts for illustration 30 years, I see no reason why a consumer or group of consumers who have the benefit of the gas made in that machine should not pay back to the company that supplies that machine it- cost in 30 years and I see no reason why they should not pay back in proportionate amounts in each year. It seems to me that is the nearest approximation to the truth, of what it does cost in terms of a water gas machine for wear and tear to render that service we can get, and divided over a number of years we can use it to serve the public weal and get the amount the public ought to pay each year, and have a fixed application to the customer each year to repair that water gas machine that we could afford here, and to be constant and fair we must turn about and say that if it has been used 15 years that one half of its value, which depends on its usefulness for 30 years, is gone out of it; if the public has been paying a fair rate it has paid a sum necessary to replace one half of its value. It has used the machine during half the period it can be used according to our assumption; and the value so far as the public is concerned is half gone and I see no reason, therefore, why the public should pay a dividend on more than one half the value of that machine that they have paid to the company in the form of an allowance for depreciation one half of *the* its cost. And I see here no reason why they should continue to pay interest on more than ¼th of the remaining part until it finally loses its value.

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Right in that connection I would like to call attention to another physical condition, those are physical conditions all of the time. Of course, there is an element of assumption that enters into the life of the plant. We have to judge and conclude from experience how long a gas machine will last and there is quite a good deal of experience on that subject. We may be a little too high or too low but it is possible and practicable to estimate with fairness the number of years during which the public ought to pay back to the company the new cost of an article th-t the public has the use of. There is another crucial fact in this connection that is overlooked sometimes, that is that it is absolutely a physical impossibility to assume an even range of price to keep up and maintain as we say, the value of a specific plant or thing. It never has been done and never can be done, that is if you go around as we do in a rate proceeding and

enumerate all the articles you find in serving the public. It
1107 is impossible in the very nature of thinks, when the thing has just been installed, that those articles should have a value corresponding to their new cost; assuming an even range of prices it is possible to assume that prices went up between a certain period and boosted your plant, or that they went down and thereby dropped the existing value below what it would be if the price had been even. To as-ume an even price it is impossible to get any correct idea of physical thing by an original cost value. I think the value of a plant,—as we say, meaning by plant all the things engaged in carried on that portion of the gas business, for instance,—to be maintained? The only way it can possibly be maintained is by extending and by putting in bigger machinery, that is more valuable than the machines here on a certain date; or you may estend it by laying additional new mains, but extend it you must if you are to maintain the value it had on some specific date. And that, of course, is what we mean by maintaining the value of a plant. We can't go along here and find a plant that its value equals its new cost and find that this year or the next or any year. When we talk about maintaining the value of a plant I think we must mean,—and only can mean a plant,—taking a plant that existed at some specific date we have seen, that it expended enough on that plant to keep its value on what it was on that date in time past, and that date must be in the past. In other words if you look around you will see an aggregation of physical things that stood there with a value below the new cost, it must be so because they are wearing out or are partly worn out or are there ready for the scrap heap and if you want to keep the value up you have got to extend it and put in new and bigger stuff. It isn't sufficient that you put in new stuff by way or renewal. If you are going to take the value of a plant as of a certain date, you must extend it here by longer mains or bigger gas holders, and
1108 this principle applies to gas or electric plants or any other aggregation of physical things. That is substantially the end of my discussion of depreciation.

Mr. Strode: I want to ask whether this is offered for a substitute for the position taken by the City in the former trial in the testimony of Mr. Bemis, who favored the sinking fund theory. I would like to know whether the City is going to repudiate Bemis and accept Adams who favors the straight line depreciation, or take both of them?

Referee: I suppose the right of election may continue to the last, and may be continued to the end of the trial and permit the City to elect, this is a valuable right that can wait. To which ruling the plaintiff accepts.

Witness continues: I may say further in answering Mr. Strode that I didn't answer quite accurately in stating that I was through with depreciation, I was through with what I regard as depreciation, namely, that loss to the physical value that occurs to apparatus through time and use. I did want to say a word, however, following that about something that is sometimes called depreciation namely, the so called sinking fund theor-.

Referee: That is Mr. Lea's theory?

Witness continues: Returning again to the so called sinking fund theory about depreciation; it is very evident to me that the so called sinking fund theory has nothing particular to do with depreciation at all. You can apply it to life insurance and to the accumulation of any stipulated funds at any particular period in the future and the amount you must invest each year into your fund, you must get it into your fund or you don't build up your sum total at the end of the period. The amount you must invest each year varies with the rate of interest you assume your fund will draw. If you think you can get 2% it takes a long time; or if you think you can
1109 get 6% it takes a very short time. Perhaps I don't use the strict word if I say it is absurd to suppose the value of a steel machine, or brick building, or cast iron pipe laid in the ground varies according to the rate of interest some banks will pay on some funds. That is incredible to my mind that there should be any such occult relation in the shrinkage in value between a pipe laid in a main and the same fund accumulated in a bank.

Now the only connection I can see between the sinking fund method of computation,—and it is really a method of computation and nothing more,—and depreciation is this: that if you want to find out how much money you have got to put out at interest each year to accumulate a certain sum at the end of a period of years, the sinking fund table will give it to you, and that is all that it will give you. It won't tell you about the shrinkage in value of a certain piece of plant,—and of course your plant shrinkage to provide a certain amount each year as the period of usefulness goes out of it,—which can not correspond to the payment you would make into a sinking fund, where you would be earning not only simple interest but compound interest, and where the interest of each year would compound the next year and help to earn your sum certain at the end of the period so that you can see that the method of the sinking fund is a method of universal application; and if you want to accumulate a sum of money you can look into the tables to see how much that must be a year if you can get a certain rate of interest, and to my mind it has absolutely no connection with definite depreciation of a physical thing in some plant or in the ground, somewhere of course, we may assume that you are only going to get enough money to pay for each physical thing when it is absolutely worn out. And then again you are going to bring another thing into the sinking fund, which in the meantime you can make
1110 a computation about getting sums of money in year through help of a sinking fund but you can't get the value of a gas plant that way because so much of the value of the plant goes out each year in proportion to the years of use. If your money is in some bank earning a rate of interest it isn't being put into a plant and the value of the plant is not kept up, consequently the amount which the customer is bound to pay in interest and dividends is larger which is not kept up. So if it is practicable as it is conceivable to have the plant depreciation at an absolutely uniform rate through all of its element the result would be in the last year of the

life of the plant the consumer would not be required to pay much interest in the last year because there would be no value left to the plant it was serving. Suppose it was a 50 year life then a consumer would be called upon to pay interest on only 2% of the original cost. It would be impossible to carry on any public service at any such cost as that. It never was done and never can be, the gas pipe as a practical matter is carried on by constantly making additions to the plant. Almost in every case of extensions and invested money the consumer pays to replace the apparatus either by replacing it or by making extensions which add to the value of the property and that is the way the property is kept up and the company maintains the right to draw from the public a certain amount of dividends each year, which it could not do if the money was put in a bank somewhere at some rate of interest. So, I don't think, while the sinking fund method is a convenient way of finding out how much money you can get at some future time *but* putting a little in the bank each year,—I don't think you can keep up the value of a gas property or even keep running and furnishing gas by such a process as that,—in order to get your sum certain you have got to put your money into the bank and into the plant, in order to keep up the value of that plant you have got to put it into the plant and into the bank, so you are confronted with the two horns of the dilem-a.

1111 As to which method is usually adopted in actual practice,—the universal method in the gas business is to put the money into the plant and keep your plant up and keep adding to it. I have never heard of this wonderful one horse shay method of replacing a plant where they all go out in a wonderful collapse and then replaced by some sinking fund process.

Of course this is true of extensions and replacements necessary to keep up the value of a public service property as a whole and even to increase that value as often as happens are not absolutely uniform, for instance you *to* put in a large gas holder or machinery in some years that requires a greater amount than the proportionate amount that must be put into the plant each year, so you will find that well managed gas companies will occasionally accumulate quite a few dollars for a year or two and then it is gone, they put it into a big machine or extension that eats it up, so that picking out one year with another it equalizes, with the exception that occasionally you will accumulate a little money for depreciation and it may be a substantial amount, but in a very short time you have to take it out of the bank and put it into your plant or you can't keep up your business.

I want to explain this because I was asked to explain the method used in exhibit "182" and had just started to go through the purifying house.

Now coming to exhibit "182" as to what land I had included in this item,—$2,250.00 as shown by exhibit "180". I have included all land on which the gas manufacturing plant is located, the entire block. I made no division of that between the gas and electric plants because the land was all there and I thought the best thing to do was to get the figure for the value of it. It is perfectly obvious, that

a deduction should be made for the part of the land that is fairly in use by the electric department, but I had in mind the propriety of making several deductions from this cost and value col-
1112 umn after the items were all in there. I put in the value of the whole block but haven't made any computation as to the land that is used by the respective lines of business.

I did not include any land opposite that in block 79 on which the gas works are located, that was the only land that I found as of 1907 used in the gas business, the only land that the Gas Company owned at that time that I though- would be useful and suitable for the gas business. The company at that time owned a portion of lots 11 and 12 in block 77, diagonally northwest from block 79 on which is a dwelling house, but I didn't include that land because it obviously is not used for the gas business and very obviously not suited to be used by the gas business, most particularly because it is diagonally across the street, the area of the land is so small that would unsuit it. It might be assumed that they might acquire more land, but the great trouble is the land was situated diagonally across two streets and is not a suitable addition to the one occupied by the gas company. Referring to exhibit "221" the gas works now occupy block 79 and a part of block 76, although it does not show on exhibit "221", I am not testifying whether block 76 is owned by the company or not. I am simply informed that they do not so I haven't included it. It will be noticed that the railroad tracks run through block 79 and extend into block 76. In the event of extending the gas works to my mind the very logical extension of this extension would be to block 76, now considerably occupied by gas material and other stuff relating to the gas works. One of the corners is bounded by 2nd and M Streets and that diagonally across from that corner is block 77 and obviously would be very inconvenient if not impracticable to swing that spur of track around and get it to block 77; it would be inconvenient to carry on the gas works operations between blocks 79 and 77 diagonally across two streets. Of course, the thing could be done and if there was a strong reason for
1113 doing it like the occupation of all other real estate down there, but with all the vacant land in block 76 and in either direction from block 79 I can conceive no reason why block 77 would ever become useful for gas purposes, and so I have omitted it. I did not discover that the gas company was using block 77 in any way in connection with the gas business, for storage yards, material, etc., although a substantial part of block 76 is so used. it will be noticed that the spur track of the company runs clear across block 79 and nearly half way into block 76 so by practice the Gas Company appears to concur in the opinion I gave that block 76 is the logical and convenient location on which to extend the gas works.

In connection with exhibit "180" I want to explain the method of arriving at the assumed life of the property,—while the explanation is a little more pertinent to exhibit "182",—*be* before we get to exhibit "182" I might make the explanation I had in mind as to the assumed life.

The years of assumed life I have set down here for the various

classes of equipment that enter into a gas plant are as fair assumptions as I have been able to make from a very considerable observation of the period of use and age and looked at with a view of estimating how much longer it could be used. For instance I find a gas building used 30 years and look it over, we are having a life of 30 years and it is fit to live another 30 years. The years of assumed life used in Exhibit "182" have been made up in that way from such experience as I have gathered in the last decade, particularly as to the actual life of gas property I found in use and as to the probable time during which they could, and reasonable would have been in use. That is about all on that point, it is a matter of experience and judgment as applied to such property.

Of course the gas business is a little more than a century old, speaking of the world; it is a little less than a century in this country,—the first plants were installed in the early twenties in
1114 this country, and we have plenty of gas structures in Massachusetts that run considerably over a half century and from that to new ones only born yesterday, so while the period of gas supply is not long enough to afford a great number of instances where the longer lived parts of the property have lived their entire useful life, still the period has been long enough so that we, by following out the results in the way of replacement of property and their decay and a consideration of the conditions in which we find a property that has been in use a long term of years, we can form a very fair opinion as to what useful life ought to be assigned to particular parts of the gas plant and it ought to be remember- right there too, that if we make a small mistake in the assumed life of a gas property that it wouldn't be any man's one sided mistake, at least not in the way I have treated depreciation and value in this estimate, because, suppose I take the life too long,—my life of some part I have taken 100 years, for instance, cast iron pipe or mains,—suppose that only last 50, my 100 years will mean as a practical matter reduced to dollars, my computation will call on the gas consumer to pay only one half as much money each year for the replacement of gas mains as though the life had been set at 50. On the other hand my computation will only take the value out of the cost of the gas mains that are in the ground one half as fast as though I had assumed on a 50 year life. For instance, that 100 year life, if I find a gas main 25 years old that main still retains ¾ths of what it will cost to put in a new main to represent its value: and so the same method with the man who says that main has only 50 years of life he must say that 25 years is one half of 50 and the public must pay on only one half of the cost of that gas main, so my mistake made in estimating these years of life if you follow out this method of computating the depreciation I have followed here
is one that while it might work a small mistake it still isn't
1115 a one sided mistake at all. It acts both ways, as we sometimes say if the life is too long it calls upon the consumer to pay less in depreciation on the mains but makes him pay more in interest and dividends because it leaves a larger investment in the plant on which he has to pay a fair rate.

Concerning the source of information as to the ages given in exhibit "182",—the years of age in exhibit "182" opposite each class of gas property the bulk of them are derived from the records of the company showing when the structures was built, or when the machine was purchased. On a number of smaller items I have assumed the ages that were testified to by Mr. Brodnax and used by Mr. Lea in his valuation, in the main, however, I have satisfied myself particularly on the larger items from the records of the company when the item of the plant came into existence here. My ages will be found to differ from those given in the testimony in some instances, on that account, where I found differences between the records as I understood them and the testimony which had been given, I have assumed pretty generally that a mistake had been made by some other witness and that the record I found was a more reliable source of information and so adopted it.

Explaining exhibit "182" taking the per cent of annual depreciation in exhibit "182" I want again to call attention to the fact that those percentage- have been obtained in each instance by dividing the years of assumed life into 100. There is no variation from that rule in thic computation. Thus taking the purifying house 66.6 years has 1.5% depreciation; the purifying boxes taken at a life of 50 years have a 2% depreciation; and the shop tools taken at a life of 25 years have a 4% depreciation; and cast iron mains taken at a life of 100 years have a 2% depreciation. It is perhaps pertinent here to call attention to the way the depreciation has been computed on the cost of paving,—which is found in exhibit
1116 "182" on page 4,—of course, that figure for the depreciation of paving annually does not relate at all to the period during which the paving will last. I haven't attempted to express my opinion as to how long that paving will last. As I understand the matter the only interest at all the Gas Company has in paving is the fact that it covers some of the mains. Whatever value accrues to property through that fact may have disappeared when the main or service pipe covered by the paving has lost its value, when the pipe is no longer valuable to send gas through. It don't matter to the company whether they have paving or not. So on the annual per cent of depreciation applied to the service class of pipe, main and service, is applied again to the cost of the paving, over that particular class of pipe. Now the per cent of annual depreciation and the per cent of total depreciation stand to each other, in every instance, as it stands to the age of the property. In other words, take the per cent of annual depreciation and multiply by years and you have the per cent of total depreciation to be deducted from the new cost of that piece of property. That method is followed without variation through entire exhibit "182".

Exhibit "182" I may say, includes what I understand to have been the entire physical property of the company on the first day of January 1907. It begins with the building and then follows the various items of works equipment; then the distribution system, the latter being made up of cast iron mains, steel mains, service pipe, meters, and the paving over the several classes of mains.

As to the buildings and the items in the works equipment I have been guided in part by an actual inspection of the property,—of course, some of the items are so obvious there can be no doubt whether they are there or not,—in part by the testimony of Mr. Malone and Mr. Honeywell given in the previous proceedings in this case; and in part by the testimony of Mr. Brodnax and Mr. Lea in this proceeding. I haven't attempted to verify each one
1117 of the smaller item- of property by actual inspection of it, but have assumed the property, being stated by some one of those witnesses that which existed, in a number of instances without going there to see whether I could find it or not. That applies to the small items of property that are not necessarily visible when you go down there. I have in the majority of cases even as to those items, relied on the record. That was another reason for accepting the statement of other witnesses because I found in some past time the company had appliances, or such a piece of property and the only question would be, apart from the testimony, whether they had parted with it or still had it. For instance if a witness said it was it would be creditable to accept the statement; at least I thought so, and in that way the list of all buildings and works equipment has been made out.

In the distribution system more stress has been laid on the records of the company, as they exist in the office of the company than on the list of works equipment, for instance, because the company in the gas reports have set out year by year the amount of mains in feet and size and the number of meters they have in use, and show what was added during the year. That method hasn't been followed as to works equipment, for instance, as to buildings; those items are not set out systematically year after year in the so called gas reports, but mains, meters and service pipe are. In the matter of mains, meters and service pipe it was necessary to adopt some other method to determine the age of a specific piece of property, as for instance the purifying house; that house was built in 1890 and so giving the company the benefit of a fraction of a year which I have done in all of these cases or intended to, it is 16 years old. My method of computing those years from the records of the company was this, if they bought a piece of plant or machinery, to figure it out in age at the end of that year I didn't
1118 bother with a fraction of a year; that is a slight assumption in favor of the company. For instance if a building was built in 1890 simply subtract 1890 from 1906 as I did in the purifying house, leaving 16 years the value being as of 1907, which corresponds substantially as the last day of 1906. In dealing with mains, service pipe and meters, which are to a very large extent alike in kind and very dissimilar in age, it becomes necessary to vary that method somewhat and the figures in exhibit "182" for the ages of the different classes of property I arrived at by a computation, not by simple subtraction as I have just explained, and I think that method of computation might perhaps well be taken up now as anywhere, it is shown in a later exhibit also.

I will now ask the court to look at exhibit "187" on page 12 of

this document and also on page 13 of exhibit "188". In fact I think exhibit "188" is the only one I need to refer to in explaining the years of age for the meters, mains, and service pipe. Exhibit "188" is made up of two tabulations, one showing the cost and value of gas mains as of January 1, 1907 and the other the cost and value of steel gas mains as of January 1, 1907.

Now taking on page 13 of exhibit "188" in the column headed "Cost" in the tabulation of cost and value of cast iron mains as of January 1, 1907 there are certain costs opposite the years 1903, 1904, 1905 and 1906; those costs as to the year 1903 are the estimated cost of the mains laid in the ground that year, and as to the years 1904, 1905 and 1906 the same; there is also in that column of cost a large item of $62,978.00 corresponding to the entry "before 1903", that being the estimated cost of the cast iron mains that were laid by the company before the year 1903; the records of the company do not disclose in any direct way in what years those mains were laid.

Answering the referee as to where I get that amount of $62,978.00 would say that involves an explanation of how the cost of the mains was computed, in exhibit "186" page 11 in the right hand
1119 column headed "Total cost" and the section entitled "before 1903" you find cost $62,978.87. I would like to call attention now where it comes from. It is the estimated cost of those mains that existed before 1903, and when I come to deal with the cost exhibit I will endeavor to show how it is made up, I am now trying to show how the depreciation and life was gotten at. So I come back to exhibit "188" where I take cost of mains laid in the respective years and in the last column, moving to the right hand, "years old" meaning on the first of January 1907 for the mains that were laid in each year and also the mains that existed before 1903.

Now those "years old" are obtained in this way,—again I included in favor of the company the fractions of a year and only where it is a fraction of a year old as its having no age year. Taking the entry opposite the year 1906 no years of age are assigned to those entries of cost. Those entries opposite each year are the cost of the mains that were laid by the company in that year. Now on the first of January 1907 the cost of the mains means their cost at no age as I have set it down in this tabulation so no depreciation is to be deducted for that investment in mains; the mains laid during the year 1905 on the first day of January 1907 would actually have an age of one year and some months but I put down the one year; mains laid in 1904 have an age of two years as concerned with the end of the year 1906, that is January 1, 1907; and mains laid in 1903 have an age of three years, and that is as far back as the specific and complete records of the company go as to the laying of mains, but the records do show and there is testimony in this case to show what mains existed prior to 1903, that is, in 1902, and I would say that the mains laid in 1902 would have an age as compared with January 1, 1907 of 4 years, but between 1902 and the beginning of laying of cast iron mains of this company and its predecessors as shown by the books to some
1120 extent, and more clearly by the minutes of the directors meetings there intervenes a period of 26 years, that is, the company

owing to the failure of its early wooden mains was obliged in 1876 to discard the old wooden mains and lay cast iron mains and they made a contract with their superintendent a part of whose duties was to superintend the laying of the cast iron mains. As are intervened between the years 1876 and 1902, 26 years, it is an assumption,—more favorable to the company than the truth can possible be,—that the mains laid during the period 1876 to 1902 have an average life of more than one half of that period, more than 13 years, that is necessarily so because in starting a gas plant you start in and lay a good bunch of mains the first thing you do and get ready to serve the people over a considerable area, and that means you don't lay the mains proportionate to the life of your plant, that is, if your plant is 10 years old and you have 10 miles of mains you don't lay a mile of mains a year by any means but you lay it faster in the earlier two or three years. I have excluded that necessary method of construction a plant, the necessary rate of construction which must be more in the early years, and have simply assumed an average life between 1876 and 1902 of those mains, so simply one half of the period,—obviously if they laid their mains pro rata each year an average life of those mains would have been 13 years. We know as a matter of practice in carrying on the business they would have to bunch the mains in the early years. I have made no allowance for that but have made an assumption more favorable to the company is saying that these mains at the end of 1901 had an average life of only 13 years.

Concerning the size and character of those mains laid in the earlier years as compared with those laid in the later years, would say this isn't quite the place to bring that in; in fact I can answer your question sufficiently by saying that this cost of mains which I have
1121 set down, takes care of all of that which according to the gas reports of the company and according to my figures, of the mains existing at the end of 1902, for the cast iron mains alone was $62,976.00, whereas on the first of January 1907 the cost of all the cast iron mains of the company estimated with the same unit price was $73,175.00 showing that the company at the end of 1902 had laid $62,978.00 out of $73,175.00 worth of cast iron mains figured at my unit price. If you raise the unit price and say I am to- low it means that the cast iron mains laid prior to 1902 were still more valuable.

I have said the investment in mains prior to 1902 was on the average 13 years old and I have added to it the 4 years shown on exhibit "188" and the mains laid in 1902 which have an age at the beginning of 1907 and that is the time the 13 is added to the 4 years at the head of that column headed "years old".

In the next column on exhibit "188" is the percent of depreciation resulting from the years of age which the mains have, that is, the mains laid in 1905 would be one year old the first of January 1907 according to the computation, not figuring the odd months. And the mains laid in 1904 would be two years; those laid in 1903 would be three years old; and those existing before 1903 would be 17 years old on the average taking the average of investment in the average of foot years as we might say, so the column of which are depreciation

totals, not annual, in exhibit "188" for cast iron mains reads, beginning at the top 17%-3%-2%-1%-0% the last corresponding to the year 1906. That percent of depreciation being 1% according to a life of 100 years, 1% a year is figured on the new cost of the mains as exhibited in the cost column in that table, that is, 17% is taken on the $62,978.00 to get the $10,706 shown as the first dollar entry in the next column headed, "Dollars of depreciation January 1, 1907"

1122 in the same way 3% is taken of the $497.00 cost of mains laid in 1903; 2% of the $2,260.00 cost of the mains laid in 1904; and 1% of $5,672.00 cost of mains laid in 1905, that isn't 3% of the amount in mains, that is the cost of the mains themselves, 3% is $14.00. So that column "Dollars depreciation January 1, 1907" reads from the top down as follows $10,706.00-$14.00-$45.00-$56.00-$0.00 and the total footing of $10,821.00 is for the depreciation on those cast iron mains on the first day of January 1907. That depreciation is deducted from the cost of said mains in their respective years to get the last or right hand column in the exhibit "188", which show the value of cast iron mains laid in 1903 on the first of January 1907 of $52,272.00 and so on in the subsequent years resulting in the following on the first of January 1907 $62,354.00 for those mains.

Going back to exhibit "182" where the "years old" for cast iron mains is 14.7, that 14.7 is computed by dividing the annual depreciation of these mains, which is 1% of their total cost into the total depreciation of $10,821.00.

The figure of 14.7 is not used in computing this final figure set down but gives a convenient idea of the age of investment in mains and is obtained in just that way. Now the question as to the years when the mains were laid can be answered now rather than anywhere else. It appears from exhibit "188" that the cast iron mains which are the mains of large cost per foot, are the mains that were laid mostly before 1903, and it is for that reason that any computation based on the average age of those mains by feet is a result of getting the foot years of the mains and dividing that by the total feet and is not at all representative of the age of the dollars put into those mains. Since 1903 the company has been laying mostly 2" steel pipe, a pipe of the size and kind of a relatively low cost as compared with 4 to 20

1123 inch pipe it laid before in cast iron mains so that if you consider the foot year of all the mains laid and consider the number of feet laid on the average per year and get at the average that way you get a much younger looking set of mains than as though you considered the dollars invested to build those mains and get the average age for what I call the investment on the basis of January 1, 1907 price. I will show why that is very strongly so in a moment.

Calling attention to page 8 of exhibit "211" found in the folder entitled "Cost Exhibits", the exhibit is headed "Length of mains at end of 1902 and 1912 per gas reports". Those figures being taken from the gas reports that have been systematically kept by the company setting out the feet of mains each year. That record begins with the end of 1902 and with the first of 1903.

The mains there were divided in three classes, the size is set out in the left hand column. One class is the 2 inch size which stands by itself; another class is the 4, 6, and 8 inch size which are added up as to the length and the third class is composed of 10 to 20 inch size which are also combined. At the end of 1902 the length of 2 inch mains was 140,875 feet; the length of the 4, 6, and 8 inch mains, combined was 82,103 feet; and the length of the 10 to 20 in mains combined 15,750 feet.

The next column of that tabulation show the feet at the end of 1912 for each of those classes of mains. The 2 inch mains at the end of 1912 had increased to 357,067 feet; the 4, 6 and 8 inch mains had increased at the end of 1912 to 38,721 feet; and the 10 to 20 inch mains had increased none, it was just as it was back 10 years previous in 1902 or 15,750 feet. The next column is headed "feet of increase to 1912" that means 1912 inclusive. For the 2 inch mains the feet of increase is and shown to be 216,192 feet; for the 4, 6, and
8 inch mains 56,618 feet; there was no increase whatever
1124 during that period of 10 years for the 10 to 20 inch mains.

The final or right hand column in this exhibit "211" shows the percent of length in 1902 to that of 1912. This figure is obtained by dividing the feet of length that existed in 1902 into that which existed in 1912. Taking the 2 inch size, that appears as 39.1% of the length existing in 1912 which existed in 1902; and the 4, 6, and 8 inch size combined 59.5% of the total length existed in 1902 which existed in 1912; and for the 10 to 20 inch size of mains 100% existed in 1902 of the amount that existed in 1912.

Exhibit "212" on pages 9 to 13 is a rather extended computation. Taking page 10 first there appears in this exhibit "212" a tabulation headed "Amount paid for cast iron pipe per books and bills", the first on left hand column is headed "years and vendors" meaning the seller- of the pipe. The next column is headed "date". On page 10 the dates are principally lacking but will appear in later pages, due to the condition of the records and not to the fault of the copyist. The last column is headed "inch size" in which is given as far as the records cite the size of the purchases in those years. The next column is headed "Dollars price per ton", that is rather vague until you get over into the exhibit. The final column is headed "Dollars total cost" and that of course is the point of the exhibit, to show the amount of money the company has paid for cast iron pipe. This isn't for mains laid in the ground, this is simply the purchase of the cast iron pipe, assuming that the cast iron pipe purchased by the company has been substantially laid in the ground or down at the works, the company wouldn't have any other purpose than to put it into the ground or into the works.

Now the first purchase of cast iron pipe that record reveals is in 1876 from Dennis Long & Co. and I have assumed in making up this exhibit that the bills from the makers of cast iron pipe or the
book entries showing payment to makers of cast iron pipe
1125 represented the purchase of pipe. It is the best way
of getting at the fact that I know of. The situation is this, here is a gas company that want- to and is laying cast iron pipe and

here are vendors of cast iron pipe such as is used by gas companies and we find large and repeated entries in the early years and letters that go between the gas company and these vendors, and it is reasonable to assume that the purchases of the bills entirely at least, of the cast iron pipe was for pipe, and this is the basis we have assumed because we haven't the specifications of the pipe bought. I only had to make that assumption on a few. The basis of the assumption is, where the size of the pipe don't appear and where the book entries don't say what it is for, if we have a very brief entry in the construction account that a certain amount of money was paid to Dennis Long & Co. in 1876, showing $1,397.09 paid to Dennis Long & Co. and charged into the construction account. Dennis Long & Co. as we shall show was a maker of cast iron pipe and I have made the assumption that $1,397.09 was for cast iron pipe, that is the basis of my assumption and there are only a few entries where that didn't appear where that is the basis of it.

From 1876 to 1912 inclusive we show the total purchases of cast iron pipe during those years. I have no voucher numbers for these earlier years, when the bills began in 1901 we got some bills. I haven't the voucher numbers, I have the date the purchase was made, the month, day and year. I think it shows the number of bills that go to make it up, because it shows the separate entries. The purpose of exhibit "212" is to show when the investment of cast iron pipe was made in the main. We do not claim to have gotten every purchase of pipe but think we have the most of it.

On page 9 of exhibit "212" after having set out any detail that we had, the size where possible, the total amount of the bill and the name of the seller of the pipe for each year, there is
1126 combined on page 9 the footings for the various years and they are added up down to and including 1892, from 1876 to 1892; the footing for that period of years is $41,203.81.

Starting again with 1893 on this same page and coming down to 1912 it appears that since 1892 there was a further investment of $20,363.21 from 1893 to 1912 both inclusive. The grand total for the period from 1876 to 1912 for all the cast iron pipe purchased, that we have been able to find, is $61,567.02, and of that, there was invested between 1876 and the end of 1892 $41,203.81 out of the total of $61,567.02 paid for cast iron pipe during the life of the company. We don't claim that is all the company paid for pipe; we think it is most all, but the main purpose of the exhibit is to show when the purchase was made, namely, that the bulk of the cast iron pipe,—⅔rds of it substantially,—as far as the records will reveal was bought more than twenty years ago, 1892. They had paid for ⅔ rds of all they ever bought as far as we were able to find in 1892. This exhibit is designed to support my deduction on depreciation and show that any computation based simply on the foot years of pipe in the ground fails to properly allow for depreciation because the big expensive pipe costing big amounts per foot was laid years ago and the cheap pipe costing a few cents per foot or relatively a small amount has been laid in great quantities in the last ten years. I am stating my conclusion on what I have

found. I have searched the record and found all I can in that record. If you will show me that my search has been incomplete or inaccurate all right, but I have found all that I could.

I left out of my explanation of exhibit "212" a matter I want to add a little further as to the purpose of that exhibit. The exhibit was prepared for two purposes, one to show that the bulk
1127 of the investment in cast iron pipe as far as we are able to trace it, was made more than twenty years ago and the cast iron mains looked at from the standpoint of investment, for a considerable age and depreciation resulting from that age.

Then the further object of exhibit "212" was to attempt to show what weight of pipe per foot has probably been used by this company, because I believe it would be a fact that the pipe in the earlier years,—back of 1892,—was of a distinctly lighter weight of pipe, weighing less pounds per foot than that since that time and if the greater investment of pipe was made during those earlier years, and I am right in my opinion that the pipe at that time was substantially light- than it is now or has been in years since then, the fact that the greater part of the investment was made in the earlier years would show that they had a lighter pipe then than is being put in now for the company's use. I have another exhibit which shows the weight of the pipe.

Now continuing the explanation in connection with exhibit "188" on page 13 of the valuation folder, in relation to the age given for pipe and in exhibit "182" page 4 of the same folder I called attention to the tabulation on page 13 entitled "Cost and value of Lincoln cast iron gas mains as of January 1, 1907".

Now this tabulation, "Cost and value of Lincoln steel gas mains as of January 1, 1907" is prepared on exactly the same plan or scheme as the table headed "Cost and value of Lincoln cast iron gas mains as of January 1, 1907" and the first left hand column contains an entry of "years laid" first before 1903, and then following in order 1903, 1904, 1905 and 1906.

The next column headed "dollars new cost January 1, 1907" contains, as against the entry "before 1903" $26,338.00 being the cost I computed of the steel mains that have been laid up to January 1, 1903.

Then for the year 1903 the cost is $4,663.00; for 1904 $1,396.00; 1905 $3,323.00; 1906 $3,984; making the total for that column of
$39,704.00 as the cost of steel pipe existing on the first of
1128 January 1907.

Starting again with 1906 in the column headed "years old" no age is assigned for the pipe laid during the year 1906; for the pipe laid in 1905 one year old; 1904 2 years old; 1903 3 years old; and before 1903 13 plus 4 years total 17 years.

The next column is headed "percent of depreciation" and is made up by multiplying the years of age respectively by 2. I assume the life of a steel main here in Lincoln to be 50 years and that results from the method of computing I have explained in a 2% annual allowance on the cost of such a main for its depreciation. The re-

sulting percentages of depreciation are then: for 1906 nothing; 1905 2%; for 1904 4%; for 1903 6%; and before 1903 34%.

These percentages of depreciation for the respective years are taken on the cost of the mains laid in those same years to get the entry in the column headed "dollars depreciation January 1, 1907".

The dollars of depreciation on the steel mains laid before 1903 appears in this column as $8,954; mains laid in 1903 depreciation $279.00; 1904 $55.00; 1905 $66.00; 1906 $00.00; so that the footing of the column headed "dollars depreciation January 1, 1907" is $9,354.

Now these allowances for depreciation in the respective years are deducted from the estimated cost of those mains for those same years to get the right hand column in this tabulation "dollars value January 1, 1907".

To illustrate, from the cost of the steel mains laid before 1903, $26,338, there is deducted for depreciation $8,954.00 being 34% to obtain the value on January 1, 1907 of $17,384. Whereas to illustrate again, the mains laid during 1906 the cost of $3,984.00 is carried right through into the value column at $3,984.00 there being no deduction for depreciation because the mains are only a fraction of a year old.

1129 Making a total footing of the value column for steel mains as of January 1, 1907, $30,350.00.

Going back to exhibit "182" on page 4 of the same folder the 14.7 per cent depreciation on the cast iron mains there shown is obtained by dividing the total computed depreciation in the way I have indicated in exhibit "188" by the cost of those mains in all of the years, that is, the footing of the cost, and the percentage of 23.5 on the steel mains for depreciation is obtained by dividing the total depreciation as of January 1, 1907 amounting $9,354 by the total cost or $39,704.

The years old for those respective classes of mains can be obtained by dividing the annual depreciation figured on the new cost, that is 1% of new cost for cast iron mains and 2% for steel mains into the total amount of depreciation estimated on those respective classes of mains.

I am not going to discuss in detail the cost of service pipe and meters now but want to show how it was obtained, briefly.

Exhibit "193" entitled "cost of service pipe laid each year as of January 1, 1907" contains a list of the number of service pipes laid to the meter first before the year 1903, and then for each year subsequent to 1903,—these numbers of service pipes so laid was obtained from the gas reports, part of the records of the company and also the number existing before 1903; that number was 2911 to the meters. Now in each year the number of service pipes laid in that year is shown in exhibit "193" and is multiplied by $8.58 to obtain the cost of the service pipes laid in that year, that is, service pipes laid at some unknown time before 1903 being 2911 in number are multiplied by $8.58 to obtain the total cost of $24,976.38 for those service pipes, that method is followed through for each year. Taking the year 1903 the service pipes laid in that year to the meter was

691 that number multiplied into $8.58 gives $5,928.78, the cost of service pipe laid during the calendar year of 1903; and fol-
1130 lowing that method down through to 1906 inclusive taking the footings as shown in exhibit "193" gives $45,834.36 as the cost of all those service pipes as of January 1, 1907.

Going now to exhibit "194", page 18, the cost just found in the respective years are set up in a table headed "depreciation and value of service pipe laid each year as of January 1, 1907".

Beginning on the left hand side with column headed "years" first before 1903, and then 1903 and so on down to 1906.

Then the column of cost headed with $24,976.00 being the estimated cost of the service pipe laid prior to the year 1903; the next column headed "years old" which for the service pipe laid prior to 1903 has an entry of 13 plus 4 being made on the same assumption that was had for the mains, that is that the service pipes were laid pro rata with the mains; that probably isn't absolutely correct it may vary one way or the other, I think it is a fair assumption. The average age of service pipe laid before 1903 taken to be 13 plus 4 equalling 17 years, and the age of those laid during the year 1903 is 3 years and so on down to nothing in 1906.

The next column is headed "percent of depreciation" and is obtained from the years old by multiplying the years of age in each case by 2½% corresponding to a life of 40 years which is assumed for the service pipe, giving the percentage of depreciation of 42.5% for the service pipe laid before 1903 and 7.5 for those laid during 1903 and so on down to those laid in 1906.

The "dollars depreciation" column comes next on the right hand made up by multiplying the total depreciation into the cost of service pipe for each year respectively; that is taking the service pipe for the series of years before 1903, treated as one entry, the per cent of depreciation is 42.5 and that is multiplied into the $24,976.00 representing the total of estimated cost giving
1131 the dollars depreciation of $10,614.00 on the service pipe existing before 1903.

That depreciation of $10,614.00 is deducted from the estimated cost of $24,976.00 for those same service pipes resulting in the value in the column headed "dollars value" of $14,362.00 on the first of January 1907.

In 1903 the estimated depreciation on service pipe is $444.00 which deducted from the cost of those pipes, namely, $5,928.00 leaves $5,484.00 as the value of said service pipes on the first day of January 1907.

A like method is followed as to the service pipes laid in each of the other years with result of total depreciation of $11,435.00 as the footing of that column and resulting in a value of $34,397.00.

The column headed "percent depreciation" has at the bottom the entry 24.9 representing the percent of depreciation by the total cost of service pipe, under the heading "percent total depreciation."

The average age of investment in service pipes on page 4 of exhibit "182" there is also entered in the column headed "years old" of service pipes the figure 9.9 which is obtained by dividing the

annual depreciation on service pipes into the total depreciation, and the annual depreciation is obtained by multiplying the new cost of said service pipes by 2½% corresponding to the estimated life of 40 years.

I should have called attention perhaps to exhibit "183" on page 6 of this same folder where the total depreciation and the annual depreciation is set out for these mains, services pipes, and meters. It is there collected and brought back there from these detailed computations that I have been going through.

Exhibit "183" is entitled "age and depreciation of Lincoln gas plant as of January 1, 1907".

The left hand column is made up of the same items of
1132 property, namely, buildings, works equipment, mains, meters and service pipes, that we found in exhibit "182" where the ages and percentages of depreciation are shown but in exhibit "183" there is shown against those same items of property the dollars of annual depreciation resulting in each case by multiplying the percentage of annual depreciation into the new cost of the property.

The next column "dollars total depreciation" being the difference found between the value and the cost of the property, computed in this way for different classes of property, as in this detailed explanation I have just gone through, for the different service pipes, meters and mains.

Exhibit "183" contains a column giving the date when the property was acquired or constructed and is headed "years built" that is on page 5.

There remains the topic of meters. In exhibit "182" the age of which and the total percentages of depreciation as to age was obtained by a similar process to that followed in the mains and service pipes. The meters being things of the same sort that were acquired during a long term of years, and require the same treatment to get the average age of the investment.

The detailed computation as to meters if found on page 23 of the valuation folder, it is exhibit "201."

Exhibit "201" is entitled cost and value as of January 1, 1907, of Lincoln gas meters owned before 1903, and meters since bought."

The exhibit as to meters consists of tabulations having the years at the left hand column corresponding to the dates when the meters were acquired; then the cost of the meters in the next column in dollars; then the years old of the meters acquired in the respective years as of January 1, 1907; then the depreciation in percentage on the meters acquired in the respective years; and finally on
1133 the right hand column the value on January 1, 1907 of those respective groups of meters acquired by the company in those respective years.

It appears from this tabulation that the total cost of the meters as of January 1, 1907 was $33,172.00 and the value was $22,470.00 and the difference being represented by the $10,702 of depreciation. Resulting in a percentage of depreciation for the entire group of meters of 32.2 a depreciation of 2½% annually corresponding to a life of 40 years being computed and allowed on the meters.

Following the table that I have described relative to the meters is a computation as to the fittings and connections of the meters, the depreciation on which is figured in at the same rate as the body of the meters, and the cost of the meters and connections is thereby raised to $41,944.00; the depreciation is raised to $13,506.00 and the value on the first day of January 1907 is raised to $28,438.00, on the meters and connections.

In arriving at the cost of the meters before 1903 that is arrived at on a uniform basis of allowing a certain price for a certain size regardless of when it was purchased. The cost of the meters before 1903 was estimated on the same basis as on the others, at so much per meter.

There is no*t* difference between the cost figures because it is an estimate of the cost as of January 1, 1907. In arriving at the age of the meters for the items marked "before 1903" in that case the meters acquired before 1903 are taken at 17 years old, the 17 years is made up of 4 years,—the space intervening between 1902 and 1906,—plus 13 the assumed average age of the meters on the first day of January 1903 that the company had previously acquired.

The style of meters had not changed a great deal from 1876 till 1907; practically the style is the same as when this company commenced business in 1873, there are minor changes. There have been many styles of meters introduced, there is what is know-
1134 as the prepayment meter which allows the passage of a certain quantity of gas if a certain coin is inserted but the main measuring part of the dry meter was invented a great many years ago and very few minor improvements have been made on the invention. The meters the company bought prior to 1876 are taken into consideration by me as having been purchased on that date 1876, if they have any meters older than that I haven't increased the age on that account. The gas company were using the same kind for a long time prior to 1876 that they were using in 1876. Meters purchased 3 or 4 years previous to the year used in computation of mains are the same age, I might have run those back, but this is an approximate computation and I haven't tried to get the age exactly, of course, they had already discarded those pump logs they were using as mains, but that don't affect the meters. The life of the meter is easily 40 years and I just carried all at 13 years average on the meters the same as I used on the mains, it would be a little greater than that but there were only a few meters in use in that early day and it wouldn't greatly affect the result, it would raise it perhaps a coupe*l* of years. Exhibit "201" was being explained for the purpose of showing just how the entries made in exhibit "182" on page 4 of the folder were obtained. The total of $28,438.00 shown on exhibit "201" isn't carried into exhibit "182", that wouldn't go to the total cost and value for some time. That is carried into another exhibit. I want to get through showing how the property should be depreciated before taking up the cost.

The next exhibit in order would be exhibit "183". I think I have already described exhibit "183" as consisting of a list of the same items of gas property as that given in exhibit "182" and having

annexed to the respective items of property the respective dollars of annual depreciation computed on the basis of the lives assumed in exhibit "182" and the dollars total depreciation computed on
1135 the basis of those lives and on the ages expressed in exhibit "182".

In order to obtain the amount of annual and total depreciation shown in exhibit "183" it is necessary to show the *the* remaining cost of the property and respective items, but I would like to make whatever explanation is necessary to exhibit "183" now without explaining anything about the costs, anything more than to say they were necessarily used to use the application of percentage obtained in exhibit "182".

Now the first group of property items in exhibit "183" is that of the buildings on which the annual depreciation is shown to be $370.74, set out in detail for each building. And the total depreciation is shown to be $5,585.00.

For nearly all of the items of property in exhibit "183" the year "when built" is stated, that is not true of some of the items, but I think only those whose construction ranged through a period of years.

Taking works equipment the depreciation in "dollars annually" is set out against each item and the total depreciation and the footing of the works equipment is for the annual depreciation $1,934.06, to which there should be added,—although the computation isn't carried in this exhibit "183",—the depreciation of $71.20 on office furniture.

The total depreciation on the items of works equipment is $20,293.00 to which agains should be added the item of office furniture $1,424.00 which appears there but the footing wasn't made. Adding in office furniture to works equipment gives a total annual depreciation on works equipment of $2,005.26 and a total depreciation as of January 1, 1907 of $21,717.00.

On the distribution system which has been taken as including cast iron mains, steel mains, service pipes, meters, paving over cast iron mains, paving over steel mains, and paving over service pipes, the "dollars annual depreciation" is $4,131.58 and the total de-
1136 preciation is $50,245.00 on the distribution system.

As to the matter of cents in any considerable total I always drop them off; I have left them on here where I have a large number of items on the said annual depreciation the cents become an appreciable holding sometimes in the percentage of the total so they are left in the annual and dropped off in the total.

Whether this company had the same kind of service pipes prior to 1876 as subsequent,—well the history of service pipes is about this: in the very early days back as far as 1876 most of the service pipes, possibly all, were genuine wrought iron. In those days service pipes were made very small, ½ to ¾ inch was the ordinary house service and the use of those small service pipes ran along certainly past 1890 to a very large extent, with that exception I should say service pipes were of the same general character in the early years. The tendency in later years has been to put larger pipes in, the

extra cost of the pipes themselves is small but the convenience and lasting qualities are better.

Concerning the class of service pipes used between 1872 and 1876, speaking from a general knowledge of the pipes, I think I have described that, they were probably small ½ to ¾ inch wrought iron pipe.

In computing the ages of service pipes I applied the same method as in computing the meters. I made a somewhat favorable assumption for the company. I have taken the average age of 13 years when it is probably 2 or 3 years more than that. It may be inferred from my testimony that service pipes are still wrought iron, that is not the case. It is common to lay black pipe which is soft steel approaching wrought iron in looks, the mechanical qualities are not the same. There is quite a difference in it when seen under the microscope, the structural qualities seem to differ and by some seem to differ in lasting qualities too. The wrought iron
1137 is somewhat more expensive. In some cases steel is used for service pipes but the black merchants pipe is more commonly used. Exhibit "184" on page 7 of the valuation folder, headed "Cost and value of Lincoln gas plant as of January 1, 1907" and is in the form of a tabulation consisting of three columns, the left hand column contains the entry of the plant items already enumerated in exhibits "182" and "183", the same items are repeated in exhibit "184" with the addition of the item of "land" which has not previously been dealt with, not being treated as subject to depreciation. The left hand column contains the names of the items of property; the next column the "dollars cost" as of January 1, 1907, meaning thereby the cost at which the objects of property cost, on property or equipment classified there efficiently for the purpose in hand ought to be procurred and erected complete in position as found in the right hand column headed "dollars value" which contains the value of each item of property as of January 1, 1907. The first item dealt with in this exhibit is "land", certain land owned by the company and occupied in part as residence property has not been included in this valuation, for the reason that in the first place it is not used at all as far as I could observe, for gas purposes, and second as far as its situation is concerned it is such it does not appear it would ever be used or is really suitable for use for gas purposes; I don't think it would be good policy to use it for any extension of the works, it might be used for storage yards, but even that is in the future, as the company has stored its materials on another cite. I do not think it should be enumerated in the property on which the consumer at the present time should pay returns so that is another reason.

That leave- lots 1 to 12 inclusive of block 79 of the original plat of the City of Lincoln which I find to be in the form of a square as shown on exhibit "221". At appears that these lots con-
1138 sist — the entire block 79, also as I understand, the alley between the lots,—that being necessary to make out the dimensions of 300 by 300 feet amounting to 90,000 square feet. Block 79 is occupied in a considerable part by the gas works, also by

the electrical works. I have not made any separation of the portion of the land that is used for gas purposes from that used for electrical purposes. I understand the generating plant of the company to be located on that block, I know the electrical plant is there because I have been through it. This block 79 has a railroad track running through it parallel to Second Street and crossing M Street and extends a considerable distance into block 76. I find a good deal of gas material and *sutff* located now on block 76 into which block this railroad runs, but not being advised that the company owns block 79 or pays any rent for what it occupies I have not dealt with it any farther than to note that the company has by its actual operation extended its plant and property on to block 76, that being directly in line with block 79 that is the convenient way to extend the plant so you can keep your track straight and have only to go straight across one street in order to traverse the distance from block 79 to block 76. Now block 79 being 300 feet on a side contains 90,000 square feet. I have had a search of the register of deeds' records made and have a substantial number of sales of vacant lands that have been made in the vicinity of block 79 during recent years, for the purpose of getting an idea of what land in that vicinity is worth for any purpose in the market. I intend to prepare an exhibit of these sales of land in which every detail will be specifically set out, I haven't that prepared but it will go into one of the folders as an additional exhibit if proper to go in.

I will now have to describe the sales I have referred to,
1139 as throwing some light to my mind on the value of your land.

O Street, one of the principal streets in the City of Lincoln, crosses the railroad tracks by a viaduct and runs past blocks 48, 47, and 46,—block 48 being the one nearer the railroad tracks and viaduct so those lots front on O Street. I notice an electric car track running along O Street, my recollection is I have seen electric cars passing along that track. Now to the gas property you traverse two blocks along there,—there are two or three streets from O before you come to block 79 which is occupied by the gas plant. These sales which I have obtained record show a substantial consideration and one which I have assumed to be the actual consideration, because they are located in the half of the blocks 46, 47, and 48 which front on O Street, which are two block- away from block 79 occupied by the gas works. I have found in block 47 four lots fronting on O numbers 3, 4, 5, and 6 having a total area of 14,200 square feet, which were sold and conveyed by warranty deed in 1908 for $400.00 for the bunch, that amounts to .0281 cents per square foot for the land in these lots fronting on O Street.

In block 47 again lots 8 and 9 containing 7,100 square feet were sold and conveyed by referee's deed in November 1910 for a total of $140.00,—each lot being sold for $70.00 the consideration expressed in the deeds is .0197 cents per square foot.

In block 28 fronting on O Street lots 7, 8, 9 and 10 containing 14,200 square feet were conveyed for $700.00, which amounts to .0476 cents per square foot, those lots front on O Street next to the

railroad and viaduct, that is the block is next to the viaduct, the lots themselves are not next to the railroad and viaduct, that sale occurred on August 7, 1912.

In block 46, which is a block fronting on O Street bounded on one side by Second Street, lot 10 fronting on O street con-
1140 taining 3,550 square feet was sold for $30.00 July 1, 1910, that amounts to .0084 cents per square foot.

Another sale in block 46 was of lots 1 and 2 sold and conveyed by referee's deed for $56.00 July 2, 1910, containing 7,100 square feet amounting to .0157 cents per square foot.

Those are all the sales I have been able to get in this vicinity, they are all lots fronting on O Street, substantially 2 blocks from the gas works being to my mind a location that would make them more valuable. The value of land for gas purposes is something that is more or less alone I suppose all over the country.

I have a record here of sales in block 77 that being the block in which the company owns some residence property, lots 4, 6, 9 and 10 in block 77 were conveyed by tax sale and deed on January 24, 1906, four lots were included in this sale, one of them adjoins one of the lots owned by the Gas Company and is occupied for residential purposes, another lot adjoins the aforesaid lots and the other two lots sold under tax deed are in the other half of block 77.

While I don't have any general expert knowledge of the values of land in the City of Lincoln I think I am entitled therefore as result of this investigation some opinion as to the value of lands in the immediate vicinity of the gas works. I have acquired some knowledge of the value of such land the country over by various investigations of this kind that I have made and that is some help at arriving at a fair conclusion, as to the value of land in block 79.

I have put the value on the 90,000 square feet of land in block 79 at 2½ cents per square foot which brings the value to $2,250.00 that value happens to be written here in the column of cost prices,—it should be in the column of value but means the same thing. That is how the item of $2,250.00 for the land was arrived at. I might say that 2½ cents per square foot taking cities somewhere near this size is a figure that is more than has been paid in very recent years
1141 for a great deal of land occupied by gas plants. Of course you will find great variations on market values of land alone occupied by gas plants and land built up a good many years ago and about which business sections have come to have high values,—not for gas purposes,—but for some business purpose after the works were destroyed and moved away; by taking the land bought in recent years for gas plant purposes 2½ cents per square foot is enough, it is rather a high price. It is not uncommon at all to find such land bought at $1.00 per acre or leased so that in the light of the records of these sales my conclusion of the value is 2½ cents per square foot, and I find that conclusion to be not *all* all out of accord, except that it is a little high as the prices indicate, of land occupied by gas companies in other cities where such land has been acquired for gas purposes. Lots of land, if the gas works were taken away might be sold

for $1.00 per foot but that doesn't affect the value of the land for gas purposes.

Since I was on the stand yesterday I have learned of a difference in quantity of land owned by the company than that shown in my report. It has been called to my attention that M Street a 100 foot street on one side of block 79, the block owned and occupied by the gas company, has been vacated; and my information further is that would result in a reversion to block 79 of one half of the width of M Street for the length of the block. M Street is shown on this plan to be 100 feet wide and the length of the block being 300 feet one half of the width of the street for that 300 feet would add 15,000 square feet to the land owned by the Gas Company adjoining block 79. I shouldn't think this additional amount of land was *accessive* for the present or prospective use of the company,
it is not absolutely necessary now, it isn't so much in amount
1142 yet it should be included. I don't think it should be excluded
from the property to be considered, on account of its amount. I think it only fair to give the value of all that land and that ½ cent per foot ought to be added to the figure I gave yesterday, that is $375.00.

I would like to say a very few words in reference to my valuation of this property as a plant in operation to this the possibility that I didn't fully cover it in what I said yesterday. I intend to make it perfectly plain that I have valued this Lincoln gas plant as a going, operating plant,—going in the sense that it is operating and is to be operated and used as well as being used for the purpose of making gas.

Now the word "going" as I understand it is used in several sences in connection with public service properties and business. When I say I have valued the Lincoln Gas plant as a "going" plant I mean simply as an operating plant and suitable to be operated and intended to be operated, there is a "going value" that attaches to a public service business. As I said yesterday I have not computed that value for the reason primarily that I don't think the "going value" of a public service business is an element to be considered in a rate case, but I want to forestall particularly any inference from my testimony that I value any of the physical properties of the company as junk, or as material to be removed or sold, or anything of that sort. I have valued it all as equipment used and useful to be used in the gas business.

Answering whether I have left out of consideration the established relation between the company and its consumers,—insofar as the intangible end of the business is concerned, I have valued the service pipes of the company which constitutes a physical link, but I have left off,—as I understand the decision of the Supreme Court of New York in the Consolidated gas case has ruled out these elements in
those very words described so I thought it should not be
1143 included here. I might say that a witness in this Con-
solidated Gas case described good will of the Consolidated Gas Company to constitute primarily of the business relation and connections that had been established between the company and

its consumers and for having service pipes running into the premises of the consumer and defining that all under the name of "good will", one witness valued that at $7,500,000 and another one about $18,000,000.00 and when the court excluded the good will I suppose it must have excluded those elements which the company by its pleadings and testimony of the two witnesses had defined as good will.

As I remember, I had just finished last night with the land, Exhibit "184" on page 7, the next items to be considered are the buildings and works equipment; and perhaps it will be proper to say here that in valuing this property I have relied more or less on the various specific contracts and prices that I know of at which gas property has been bought and sold in specific places and at specific times. I have quite a number of such contracts with me, and notes giving the main points in a number more. Every one of these contracts are available for the use of the court, there is nothing private about them in any way and any contract or sale price I mention or have used in connection with any of this equipment, if I haven't got it here, anything that is under my control will be produced here at a later date if there is an opportunity to exhibit it.

In Exhibit "184" I call attention to the items headed buildings which includes the purifying house, retort house, coal sheds, oil tank house, blacksmith shop and stable. In looking over the testimony already in the case for the buildings which I have now mentioned I concluded to offer no testimony as to the value or cost of certain parts of the buildings, but to assume simply for the purpose of this computation that costs put on certain parts of the
1144 buildings by witnesses of the company. I made a mistake just now in saying that I did not deal with the value of those buildings, I have, but I arrived at such a value I have stated for those certain parts of the buildings, by dealing with the cost assigned for those parts by the witnesses for the company. The method of dealing with the buildings is shown on pages 9 and 10 of this Exhibit "185," and the purifying house will illustrate the method as any, and I will now call attention to that on page 9 at the top. Exhibit "185" is headed "detailed cost of buildings as of January 1, 1907" and contains an itemized schedule showing the way the cost of the buildings here set down has been arrived at. In these computation- I have assumed that the quantities of material set out by the company's witness for the buildings here the quantities there, I have not undertaken to change the quantities, in making that assumption I neither affirm or deny the correctness of those quantities: I have dealt with the matter as though they already existed there, I don't know and don't claim that they do or do not. Have taken the quantities as set out by the company's witnesses as existing in these buildings I have, with regard to excavation, the stone and concrete foundations, and the bricks applied a price to those quantities which I consider fair and reasonable for their construction as of January 1, 1907. The other costs of the buildings I have left as the company has set out in this testimony, and have changed in every case, the total cost of the buildings to correspond with the prices that I have adopted for excavating, and removal of the soil where the

buildings were erected based on the entire quantity of excavation that the company has set out; and for the stone and concrete foundation the company says exists there, based on the uniform price of $7.00 per yard for those stone and concrete foundations; and the price which I have adopted for the excavation and removal and grading of the soil is 40 cents per cubic yard; and the price I have used for the brick work in place is the uniform price of $15.00 per
1145 1,000 brick in position.

Now with that explanation we may take the purifyinghouse at the top of page 9 there is the excavation and removal,—I have added the word removal to make it plain that I am dealing with the same work and terms that the company has set out,—ordinarily I should call it excavation, that being the common nomenclature.

The excavation and removal of soil necessary to put in the foundation of the purifying house amounting to, I take it, at 4,536 cubic yards,—it is set down here apparently being a misplacing of the decimal point at 453. cubic yards but that would not multiply correctly into the cost and no doubt is a mistake of the typewriter. The excavation of 4,536 cubic yards at 40 cents per cubic yard in the cost of the purifying house amounts to $1,814.40.

The stone foundation is taken at 505.9 cubic yards as applied by the company, and to that I have applied my price of $7.00 per cubic yard for that class of foundation amounting to $3,541.30.

The total brick reported as put in that building is 198,155 at $15.00 per thousand amounts to $2,975.33.

Those are all the quantities in that building on which I have fixed a price, I have left all the other quantities and prices as the company has fixed them, I have assumed them to be so. The total of the above excavation, foundation stone and brick work as I have just set it out is $8,328.03.

The total cost of construction for the purifying house given by Mr. Lea on behalf of the company was $16,620.00 and from that there is deducted $12,317.00 which Mr. Lea allowed for the items of excavation, stone and brick work that I have dealt with. Leaving for the remaining portion of the building entire according to Mr. Lea $4,249.00 to that I add my above cost of excavation, stone and brick work amounting to $8,328.03 which brings the total cost of the purifying house to $12,577.03.

Now that is the method on which each one of these buildings has been dealt with, except the stable and blacksmith shop which is taken in toto not being a building in which masonery enters it is only wood and that is taken at the figures the company put
1146 on it. Throughout the computation as to buildings I have used the unit figures of 40 cents per cubic yard for excavation, $7.00 per cubic yard for stone and concrete work; and $15.00 per thousand for brick or tile on the basis of brick measure, all these unit prices are for the material as it exists down there.

Now with regard to these unit prices, taking the 40 cents per cubic yard, this may be said,—I think fairly that the excavation down at the company's cite when those mains buildings were construction in 1890 to 1892 the elevation of that gas yard was several feet lower

than it is there today undoubtedly; it was unnecessary at that time undoubtedly to make any quantity of excavation such as would be indicated now. I should think for a rough estimate, not having taken any levels, that the level had been raised surely as much as 4 feet, it isn't uniform and may be more or less, that is made an *an* approximate and I believe a fair estimate.

In that yard, besides excavations for the building there was in 1907, those gas holder- which are of the old type of construction or what we call a masonery tank, that is a deep hole is dug into the ground of a sufficient depth so that the moving part of the lift changes its position as to the amount of gas in storage and can drop down into the ground and pretty nearly disappear with just a little of the top stuck up, that means the removal from those parts of a very considerable amount of material. The pits, as can readily be seen by inspecting the site there, were not dug deep enough so that the required depth for the entire dropping in of the lift was entirely below the natural surface at that time. That didn't happen at all, what they did was to construct the holder pits partly in what we call excavation and partly in what we call embankment. In other words they dug the dirt out of the hole and piled it up around the edge of the hole, that is what they did when they dug for the
1147 200,000 cubic foot holder and the 50,000 cubic foot holder, briefly from an inspection of the property. Having piled the dirt up around the edge of the holes, these pits being large circular holes the inside was lined with masonery or a tank, the earth being in front of it it was necessary to pile it immediately about the mouth of the hole to bring the level of the soil to the top of the tank, it was then graded off for a few feet perhaps 100 feet in some instances although I would say 25 feet would have covered it,—anywhere from nothing to 100 feet,—the dirt was moved and graded off and that was what became of it. It was taken out of these holder pits and for the foundations of those buildings, if 4 feet was added to the natural elevation of the soil down at the gas site, it decreased just that much the apparent necessity for excavating, if you go down now and see how high the soil is about the footings of the buildings. I was down a few days ago and saw a man digging down to one of the footings. I understood Mr. Foster sent him. In doing that today you will get a substantially deeper excavation, one approximately 3 or 4 feet deeper for your excavation, than was ever made when the buildings were erected because the soil never having existed there it wouldn't be necessary to remove it today. And 40 cents is an ample allowance in fact possibly more than necessary but I intended to make the figure ample and sufficient. I would like to say in connection with what I have just said about the excavation and the level of the ground at the gas works I have tried to confine myself purely to expert testimony, I don't know of any other way to arrive at the facts I have been stating.

Referee: That particular part I think is entirely competent, you went over that ground and you saw it and you drew your deductions from what you saw, there is no doubt of any objection to that part.

1148 (Witness continues:) They are in a sense argumentative but they are at the same time engineering conclusions, all engineering conclusions are supposed to include some reasoning on which they derive the facts and show their conclusions properly by the use of good reasoning.

Proceeding then with the explanation of exhibit "185" having stated that I consider 40 cents per cubic yard of material removed an ample allowance to cover all the labor and the removal and disposal of the surplus material, or as ordinarily we would say the grading of the surplus soil into a suitable position after its excavation and all work done on that soil; in other words so many yards having been taken out of its natural position the 40 cents covers everything that was done to that number of yards of earth and the labor on it ap-rt from the taking of it out from its original position was very slight in my opinion because it was needed for filling very close to the point where it was taken out of its natural position and the labor of grading was very small.

In that connection I want to call attention to 1 or 2 facts that have aided my judgment in reaching that conclusion. Of course, I heard the testimony here yesterday of a man who claimed to have made a satisfactory compensation to himself by digging a hole 10 feet into the ground at 35 cents a yard, tends to confirm my estimate that 40 cents for digging holes that may have been 2, 3, 4, 5, 6, or 7 feet deep for those various buildings down there, it certainly confirms my position that 40 cents per cubic yard is a very compensatory rate. I have some facts quite apart from that which tend to corroborate the 40 cent rate. I will mention as one of them the contract which the City of Lincoln made last year for the construction of a 1,500,000 gallon reservoir adjoining the pumping station; the proposal which preceeded the making of that contract and on which it is based is exhibit "219" found on page 12 of the

1149 folder entitled "data considered" I called particular attention to the part of this proposal that deals with the excavation which occupies only one sheet and I have copied the entire proposal here.

In that proposal the rate fixed for 8,620 cubic yards of excavation is 30 cents per cubic yards as appears in the schedule of prices annexed to the quantity of materials to be furnished and removed. That 30 cents included the excavation and backfilling, and all work in connection with all that excavated soil and material. The contract was made at the figure of $13,361.00 for excavation of 8,620 cubic yards and the grading of it and the disposal of the material was all done at the rate of 30 cents per cubic yard for excavating.

Now I want to refer to the character of the excavating for that 1,500,000 gallon reservoir. The reservoir is a covered one, its general shape is that of a rectangular concrete box in the ground, the top is now covered with earth perhaps 4 or possibly as much as 5 feet above the original natural surface of the ground, the top is cover-d the earth which is undoubtedly a part of this original excavated material with dirt sides gradually sloping down to the natural

surface. In other words this reservoir was undoubtedly constructed just as the gas hole pit down at the works particularly in respect to the embankment. I have the city engineer's drawing showing the construction of that reservoir and the distance shown here between the floor on the under side between the reservoir and the roof is 16 feet and 9 inches so that I judge that the excavation of the natural soil for that reservoir, must have run up to 9 or 10 feet anyway; and that excavation, grading and disposal of the soil in final shape was all done at the rate of 30 cents per cubic yard of the original material in the yard. Whether there was a further provision in
that contract for the possibility of an excess in the excavation
1150 or a shortage,—Oh yes, this price I mention required the
contractor to state his unit price and there is a provision in the several specifications which applies and run at whatever amount they are and any change in the work is to be compensated for accordingly, that is if the city changes the contract the contractor is to receive 30 cents per cubic yard for addition amounts. The work was done by Abel & Roberts. I want to carry this reservoir matter of excavation somewhat further because during the present year on 17th Street the city has let another contract for a reservoir of 500,000 gallons capacity or ⅓rd the capacity of the one constructed last year. That reservoir is under construction, it appeared to be just ready for placing the concrete. The contract for that 500,000 gallon reservoir was also let to Abel & Roberts the contractor who had this contract last year for 30 cents a cubic yard.

Now that excavation on 17th Street is called the Van Dorn Street reservoir. The hole for that reservoir as stated by looking at it is about 12 feet deep at one end and some 8 feet deep at the other, the ground varies a little in the general elevation. I have a drawing of the reservoir. It is a rectangular excavation I should think fully 12 feet deep at one end and fully 8 feet deep at the other end and the removal of the earth from an excavation of that kind, from the lower levels of it is distinctly more expensive than the removal only of 5 to 8 feet, of course, the deeper you go the greater the lift and the greater cost of removing it that was brought out by the testimony here.

That fact, to my mind, having two city reservoirs here, one constructed last year and one this year, having a character of excavation, as I think, on the average decidedly mor- expensive than the excavation down at the gas works for the footings of these buildings
and that the same contractor took the job last year who took
1151 it this year and at the same price, all these facts tent to con-
firm the 40 cents per cubic yard price; which is 33⅓% more than the city has paid for those two is a further reason that 40 cents per cubic yard is an ample allowance for the excavation on those gas works buildings. I am not talking about the excavation in the gas holder pits. There is in both of these contracts separate provisions for the removal of any excess soil. I have stated that the 30 cents a yard for the removal of the yards goes in to make up the total price for — the work was let.

As regards what proportion the excavation in these two contracts

to the total amount of work done in value,—in the 1,500,000 gallon reservoir the excavation was 8,620 cubic yards as set out in exhibit "219" and at 30 cents a cubic yard amou-ted to $2,586.00; the total contract price for that work, which included concrete and rei*m*forcing steel and some minor articles amounted to $13,361.00. The concrete is figured at $10.00 a yard. I don't think I loaded the concrete a little, if you were to look at the drawing and inform yourself what kind of concrete it is and see the shape of it. Concrete is a thin*k* whose cost varies a great deal with the form into which you put it. If you have something which you must build up entirely with forms as in these reservoirs, costs a good deal more per yard than if you dump it in a little hole for a building with possibly only a little board along the side. I would like to call attention to the character of the reservoir contracts on that concrete figure.

Exhibit "223" is a plan and sectional elevation for the rei*m*forced concrete reservoir for the 1,500,000 gallon reservoir covered by the contract and proposal just mentioned, said proposal being exhibit "219." The general form of this reservoir is rectangular its total length about 193 feet and total width 74 feet,—I don't catch the over all depth,—but the distance from the roof to the floor
1152 which is sufficient is 16 feet 9 inches; the reservoir is of the covered type, has a floor, sides and roof of concrete being completely covered and is in the shape of a great big dry goods box in the ground. The floor and roof, except in the rei*m*forced portions are only 6 inches thick. The floor particularly you will understand is a flat piece that has to support a great weight, there being a depth of about 16 feet of water which the floor most support and the floor is only 6 inches. The guaranty against leakage in the contract for this reservoir is set out in the contract and is a distinct guaranty for a period of time against leakage of this reservoir, the point that I am coming to in the matter of concrete that sectional end fully is quite good as illustrating its character (indicating) these are post- that support the roof, we have a roof there and a floor that is only 6 inches thick and the sides vary from 12 inches at the bottom to 6 inches at the top. In order to get the soft concrete into that permanent form you have a good deal of form work to do; you must buil*t* forms for substantiall- all of that concrete work, because on account of its thinness and form but that adds greatly a*f* far as the putting it in. The concrete figure here for that 970 yards of concrete is $850.00 per yard, which is an entirely different class of work from putting in a footing for a building for which I have allowed $7.00 per yard. Concrete will vary anywhere from $3.00 to $4.00 per yard up to $25.00 or more according to character and location of the concrete. There is a great variation in the cost of concrete work according to the thickness of the masonery you try to form, its location and shape, and also according to the amount of cement you are required to use in the concrete and rigid-y of the specifications as to the matter of mixing and placing of concrete. If there is a lax*a*ty even in that cement mixture which changes the

cost, if it requires it must be mixed thoroughly with sand and
1153 stone that adds something to the cost.

This concrete at $8.50 per yard amounts to $8,245.00 out of $13,361. In regard to this class of work $8.50 a yard is much cheaper than $7.00 a yard for the class of work at the gas works in connection with those buildings.

Another item than need- explanation in connection with this reservoir is, that is the 85,500 pounds of reinforced steel. The floor, sides and roof of this reservoir,—the other one now being constructed is on all fours with this one, only somewhat smaller;—. Concrete won't stand the pressure of water at all without steel reinforcing so this contract calls for 85,500 pounds of steel to be laid in these concrete walls as constructed to give addition- strength, by putting that material in those walls it adds to the cost of your concrete decidedly. The $8.50 is the price for putting in the concrete the steel is extra, which is bid for at so much a pound, at .026 cents per pound. This steel consists of a variety of bars and shapes, there is some 20 inch beams among it, and a good deal of small twisted bar material which is cheaper in price than the fabricated material, that is steel material riveted together, as for instance for building the roof and floor, and this price is .026 cents per pound, that steel amounts to $2,223.00 out of your $13,361.00. There are some other very minor quantities in this reservoir contract amounting to a little over $300.00 but the three large quantities which make up almost the entire contract are the 8,620 yards of excavation at 30 cents amounting to $2,586.00; the 970 cubic yards of concrete at $8.50 per cubic yards amounting to $8,245.00; and the 85,500 pounds of reinforced steel, at .026 cents per pound amounting to $2,223.00.

I was dealing in exhibit "185" with the unit cost of 40 cents per cubic yard for excavation at the gas works, and have endeavored to explain my reason for thinking that a sufficient figure, and
1154 also gone into the matter of concrete some and as appears on exhibit "185" I have placed that concrete at $7.00 a yard for the concrete in position. In these buildings I have used the same figure for the rubble masonry which forms a part of the cost because $7.00 concrete would be fully as good as that masonry and $7.00 would be sufficient for the masonry itself,—today we would hardly put in rubble stone we would put in concrete instead,—and $7.00 per yard is very ample considering the class of work where you don't have to put in any reinforcing steel and only a small fraction of timber work must be used in the shape of forms, as compared with the reservoir contract with a large flat roof to support with side and floors as described.

In the matter of brick at $15.00 per thousand, for the character of brick work found down there, where the joints will vary all the way from ⅜ to ⅞ of an inch and where the bricks are of a very moderate quality,—the bricks themselves being worth $7.00 per 1,000 on the cars at the works as shown by many of the bills of the company,—$15.00 for those in position is an ample figure taking into account the fact that a small percentage of the brick required but a little more labor to place them than the great bulk of the brick

did and taking the bricks as they run through the plants, considering the character of the masonry work, being a very moderate class of brick work,—not meaning to throw any mud on the buildings, but they are intended for a rough building down there at the gas plant and are a very moderate character of brick work. Using wide joints and joints varying a great deal in brick work tends to decrease the labor cost. You can lay brick faster if you are not held up to any specifications as to joints, if you throw the mortar right in and let the brick go where they want to.

1155 That disposes of the three unit prices that I have used in making up the cost of these buildings. I have left all the other materials except the brick, stone, concrete and excavation, just where the company's testimony leaves them and have simply added them in to see what the amount will be for each building, taking the company's figures for everything except the items I have described.

Dealing with the matter in that way gives on exhibit "185" for the purifying house a cost of $12,577; retort house $6,088.00; coal shed $1,657.00; oil tank house $1,107.00.

The stable and blacksmith shop I have simply carried into the total for the figures, dealing with the matter in a uniform method and as dealt with by Mr. Lea figures, as not having any masonry connected with it; and the figures show that item $818.00.

That gives for the plant a total cost of construction $22,247.00 and the plants being depreciated in the way I have indicated in my testimony yesterday brings their value as appears in exhibit "184" to $16,662.00 as of January 1, 1907.

Those are the figures carried forward into the summary shown in exhibit "180" for the items covered by the words buildings in that summary, and perhaps it would be well to explain fully here in connection with exhibit "180" that I have followed the practice of adding my allowances for engineering, interest, taxes, etc. at the bottom of the footings in exhibit "180", that is on the first page of the valuation exhibit, and I have included in those footings the land in the sum on which engineering, interest etc. if fixed; I know of no good reason for excluding the land. If you are going to build a plant it requires a suitable piece of land and some money to have it surveyed and on that sort of thing and you lose some interest on it while the plant is being constructed; it is just as reasonable to include it among the items to which there is an engineering and interest charge as any other item. I notice the company have not so included

1156 it and it makes their engineering charge a little less, but it is included here.

Turning now to Exhibit "184" the next items are those included under the general heading of "works equipment".

In 1907, the date of this valuation, the first item to come under that heading as set up here is the 6′ 6″ water gas set furnished by the Western Gas & Construction Company. That set is considered here in arriving at its value in connection with the old Springer set, which is also of the same nominal size although of decidedly less capacity and inferior design. That Springer set appears from the records to have been procured in 1888, while the 6′ 6″ set was pro-

curred in 1891 from the Western Gas & Construction Company. Those two sets together have a capacity approximating to that of one 7′ 6″ water gas set of modern construction and to my mind a person who had the right to operate that plant and was free to buy and pay for two 6′ 6″ sets or to get him one new set could not look at them in any more favorable light than to say to himself here are two old water gas sets whose combined capacity is about equal to that of a 7′ 6″ set which I can buy for so much money. Waiving all the disadvantages attached to this ancient apparatus, the largest cost I can allow for those two sets is the new cost of a single 7′ 6″ set. I don't believe any sane man who was free to buy those for his own use or to buy any one set would give any more than the cost of a new set of equal capacity; I have valued the set on that basis. That is I have valued the set by considering what their new cost should be in view of the new cost of a single modern set with a capacity equal to their combined capacity; and I have divided that new cost between the Western Gas and Construction Company set and the Springer set in
the proportion of $\frac{3}{4}$ to the Western Gas & Construction set
1157 and $\frac{1}{4}$ to the old Springer set.

The reason for so dividing them is because that approximates their relative capacities. There has been such an improvement in the cost of water gas apparatus between 1888 and now,—that was pretty near the beginning of water gas apparatus in this country,—before 1901 we often spoke of 6′ 6″ or 7′ 6″ or 11′ according to the diameter of the generator of those sets while nominally of the same size 6′ 6″, there has been such a change in the art by improvements that I notice the company in its testimony puts in the Western Gas & Construction Company set as having about double the capacity that of the Springer set; and while the capacity of the Springer set is problematical I am willing to adopt the company's statement of the relative capacities. Concerning the economy of operation of running those two sets as concerned with running a 7′ 6″ set of the same capacity,—it would be distinctly less. No well advised company would think of running that old Springer set continuously when the cost of the material would be an appreciable item, but if you have to have some gas right quick you don't care much whether you are going to make 200,000 feet whether you run it at a cost of 10 cents a thousand feet or not, whereas if you were going to run it the year around you couldn't afford to run it at that price, you would have to raise the price of gas. It makes all the difference in the world whether you are going to use it a few hours in the course of a year or whether it was for the regular daily out-put of gas.

Going more into detail as to the estimated cost of those two 6′ 6″ sets I want to refer to the cost of the 7′ 6″ water gas set that the company purchased last year. The contract price for that set was $8,000.00, which included 635 square feet of cast iron operating floor
on steel piers and a pyrometer. Such operating floors are
1158 commonly installed by the party who furnishes the water gas sets; they are a special type of floor necessary and desirable. And can readily be gotten up at the factory where the sets are made, and are commonly furnished either under one sum covering the set

and floor as was the case here, or else at the usual price of $1.25 per square foot in gross area.

In designing to get at the price of the 7′ 6″ set purchased last year by the company, I have taken $8,000.00 which the contract or bills show they paid for that and deducted the cost of the 635 square feet of operating floor at $1.25 per square foot which leaves for the set erected in position,—it being in the contract to erect the set complete in position on a foundation provided by the company,—that leaves $7,206.00. That price compares well enough with various other price- I have of water gas sets in other places therefore I see no reason why it is not a very good basis for the valuation here. We have on the basis of that contract the cost of that set erected in position as $7,206.00, however, I have estimated the cost of the set at $7,300.00 for a set of that kind, a little more than this set actually cost them. I mentioned that amount of that estimate $7,300.00 now for the set, not because the machine was there on January 1, 1907, but because I wanted to show just how I proceeded to get at the cost of the two 6′ 6″ machines on that date. The company had to supply the foundation for the 7′ 6″ set that was bought for $8,000.00, and I estimated the cost of that foundation on the basis of quantities that were involved in it that the company says were required namely, the quantit-es of excavation and concrete foundation. I have assumed the figures of the company to be cocrect. That assumption is not an affirmation of the figures, I simply take them for what they are worth, they are the figures supplied by the company. Figuring the cost of the foundation on the basis of the quantities furnished by the company and on the basis of 40 cents per yard for excavation and $7.00 per yard for the concrete makes the foundation for that
1159 7′ 6″ set cost $206.00,—that is based on the company's quantities and my figures for the unit of the quantities in position on the foundation. The total cost I estimated of a 7′ 6″ set and foundation erected is $7,506.00. That is without the floor, I deducted the floor. I have all the company actually paid and a few dollars besides, at the company's quantities for foundation at my unit prices it was somewhat lower than theirs. The foundation is a relatively small figure in that anyway.

Taking that 7′ 6″ set at a cost of $7,506.00 I allowed for the cost of the 6′ 6″ set and the one furnished by the Western Gas & Construction Company in 1901, ⅔ of the $7,506.00 amounting to $5,-808.00,—found in the column of cost in exhibit "184". It should be understood in connection with this estimate that I am tracing through the steps of a process by which I arrive at the value of a thing that sets down on the gas company's property if it were new and then to see what depreciation has gone out of it because of age and use. I have take- the 7′ 6″ set at $8,000.00 the contract price, I understand that was for the set erected in position. No that does not include scrubbers and condensers, they were bought in 1908. In the 6′ 6″ set they have a scrubber and condenser with them. Whether I omitted it the item of scrubber and condenser amounting to some $1,200.00 in comparing it with the 6′ 6″ set, and whether my $7,506.00 is ⅔ of that or $5,808.00,—no, $5,808.00

is not the ⅔ of the other quantity. The condenser and scrubber in connection with the 7′ 6″ set at the estimated cost of $1,206.00 isn't included in the $8,000.00. The condenser and scrubber forming a part of the 6′ 6″ set it is necessary to add to the cost of a 7′ 6″ set the cost of the scrubber and condenser for such a set, as the total cost of the 7′ 6″ set is being taken as the measure of the cost of the 6′ 6″ set, and the figure of $5,808.00 for the 7′ 6″ set purchased in 1901 includes ⅔ of the $7,506.00 that the bare 7′ 6″ set would cost and also an allowance for the condenser and
1160 scrubber in addition. The condenser and scrubber for the 7′ 6″ set, estimating cost of that foundation of $1,206.00,—and ⅔ of the $1,206 or $804.00,—is added to ⅔ of the $7,506.00, the cost of the bare 7′ 6″ set so as to get the measure of the cost of the 6′ 6″ set with condenser and scrubber amounting to $5,808.00 as shown by Exhibit "184" and the cost of the 6′ 6″ set. These detailed figures while not yet included in the exhibit, will be include- so that every step I have used in arriving at these cost- may be had. This is the whole process that I have gone through, it is a little complicated because we are dealing with an apparatus that requires some complicated computations. Depreciation that 6′ 6″ water gas set of 1901 in the way indicated in the previous exhibits gives a value as of January 1, 1907 of $5,111.00 complete in position as it stands there. That is the present value as of January 1, 1907, of the Western Gas & Construction Company set.

Following through exactly the same process as to the 6′ 6″ set, bought in 1888 and called the Springer set we arrive at the new cost of $2,904.00 for the Springer set as of January 1, 1907 and a value as of that date of $1,336.00.

The next item under works equipment is the operating floor. Taking into consideration the possibility that the operating floor might be used for some other set, its new cost has been estimated on the basis of $1.25 per square foot, the ordinary cost of floors of somewhat more modern shape and construction than that is $1.25 per square foot is the basis on which I estimated the 7′ 6″ set which cost $8,000.00 total including the floor. I took the floor at $1.25 per square foot out of that contract price and am now estimating the floor separate at the same figure that I took out, namely, $1.25 per square foot. There being 947 square feet in the operating floor according to the reports of the company which amounts to $k,184.00 at a cost of $1.25 per square foot.
1161 As to that $1.25 per square foot being sufficient for the operating floor, there are several contracts I have with me relative to water gas sets installed several years ago at Springfield, Illinois and the year before last in Haverhill, Massachusetts, which carry that price, which is a very ordinary price for that construction and one that is not included in a water gas set proper in a lump sum.

The new cost of the Root #1 positive Blower is $142.00 with a value as of January 1, 1907 of $124.00. I *amy* say in general that this list of works equipment has been estimated in this way: I have put in generally my estimates on the machinery involved and have

taken the quantities of excavation and concrete of the company for the foundation and estimated the cost at 40 cents per cubic yard uniformly for excacation and any disposal thereof, and $7.00 per cubic yard for the concrete. Concerning where I got the inventory of the company's property contained in this list of works equipment,—I stated yesterday that this inventory is made up from several sources. There is the inventory that the company put in by its witnesses which applies to the first of January, 1913; that inventory has dates annexed which indicate whether the equipment was in place on the first of January, 1907, but more than that I have searched carefully the records of the company and have obtained for the greater portion of this apparatus the dates of its purchase or installation from those records. In many cases the dates will vary slightly a year or two sometimes more than that from the purchase of the apparatus by the company. That is the way this list has been made up, namely from the list put in by the company as of January 1, 1913, and eliminating those articles procured since January 1, 1907, and by inspection down at the works where all of the larger pieces of machinery are visible and an inspection of the records of the company to see what
1162 machines they have purchased and when they purchased it.

There are several slight variations from the rule about taking apparatus and equipment, such as taking only that which was there January 1, 1907. For instance, the new drum in the large station meter wasn't installed until sometime in 1907, but I have treated it just as though it was there on January 1, 1907, because the old drum was displaced shortly after that and the consumers got the use of the new drum during the greater part of 1907, that is as fair a method of treating that matter as you can make. Now a valuation of a plant as of a particular date is only an approximate method of arriving at the truthfulness and fairness in the matter and where this stuff was in use, or was put in very shortly after the first of the year, the consumer got the use of it during that year; in that case for instance, I have treated it just as though it was there on the first day of the year.

The same way with those coal gas benches. One set of those benches was extensively revamped in 1907, and I treated that as though it was there on the first day of the year.

The purifying boxes, set out in an earlier schedule, vary considerably in age,—that is one of the cases where I wasn't able to follow the age given in the schedule of the company. Three of the boxes were bought in 1892 as near as I can judge from the records; the 4 boxes in 1900 would make the boxes considerably older in point of time than the company's schedule so I treated the boxes in the matter of depreciation, on that basis and for that purpose do not set the boxes out separately as to cost. That age for the boxes is indicated on Page 30 exhibit "182."

The 10 foot station meter was installed in 1892, but the new drum mention-, which is the important interior working portion of the meter for measuring the gas which passes through it, was in-

stalled in 1907, so that to all intents and purposes was con-
1163 sidered new on January 1, 1907. So we would have for that meter as it was just as it stood erected in 1892, we would have for this between 1892 and 1906 which would be 14 years, but I have taken here only 7 years for that meter resulting substantially a less amount of depreciation because of a substantial part of the meter having been complete- rejuvenated by putting in a new drum in 1907. The age January 1, 1907, 7 years, although a large and imposing portion was bought in 1892.

Referring to the gas benches the cost and price are set down here, the benches I have separated. There are 6 benches of 6's down there and described in the following schedule as being 3 benches of ½ depth and 3 of ¾ depth;—the description referring to the depth of the furnaces,—the depth of the furnace makes some difference in the operation of the benches, the completeness with which you can get gasification of the coal before it gets up around the retorts. I have separated these benches into two groups of three partly because of the difference in depth and partly because of the age. I think the greater portion of the benches is what we call the gas bench, that word is used rather loose sometimes, meaning the whole structure, sometimes the interior part is used to mean the whole structure. A gas bench is made up properly: first we have a foundation, a rectangular slab of concrete in the ground of given dimensions sufficient to furnish footing for the structure. These benches are of the older simpler type, or what we call the horizontal retorts. Then there is built a brick arch closed on the two sides and the top and at one end with solid birck masonery walls, the other end is left open until we put what we call the filling and what is spoken of loosely as the bench,—they often speak of setting the bench meaning that you put in the material that goes inside of this brick arch,—meaning the retorts and pieces of fire clay and brick that holds these retorts in position. The re-
1164 torts being the portion of the bench in which the coal is put to head thereby gasifying it. In the construction of these benches there is a substantial amount of iron work necessary to hold it in place, the head runs up perhaps to 2,000 degrees roughly speaking, and that subjects the brick and masonery work to a good deal of contraction and expansion and it is necessary for the iron work to hold it in place. When the bench is filled we have to make the connection of the iron supports with the projecting ends of these retorts that stick out of the ground so that the gas may be carried off in these pipes. All of that iron work forms a very substantial portion of the entire structure of the bench and of its entire cost. We have in the bench three main elements, the arch, the iron work and the so called filling of the bench that is the retorts and pieces that support them.

That retort wears out pretty rapidly, they cost perhaps $24.00 or $25.00 apiece, their cost being minor items compared to the rest of the bench, but they wear from being subjected to the intense heat inside whereas the brick arch and iron work will last a long series of years. The retorts are made out of clay now, they used

to make them of cast iron, the cast iron retorts won't stand the head, not because you can't get the gas per ton of coal out of them but because they soon wear out and are more expensive than clay and clay is more in use now for making gas. I make this explanation about these benches so that what I want to say about their ages would be clear.

Referring to exhibit "182",—there is 6 benches in all,—3 of these benches were 14 years old January 1, 1907, that is the arches and the iron works which *consist* the main portion of the benches were installed in 1892, I may be mistaken and the age shown on the company's schedule is less ancient than I have indicated. As near as I can make out the other 3 benches were constructed in
1901 making them 5 years old on January 1, 1907, so I
1165 have used those ages, 14 and 5 years respectively in the depreciation of the new cost of such benches. The benches show on inspection distinctively different ages to any one with a familarity to such structures, they didn't come from the same place at the same time and look different; the iron work on 3 of the benches is distinctly lighter and less durable designed—that put in there in 1892 is heavier and in better condition.

The interior portion of the benches wearing out in from 2 to 3 years if the benches are used right along, and having to be replaced the cost being minor compared with the cost of iron work and main arches themselves. The fillings being taken care of ordinarily out of operating expenses it is fair enough and probably is the only approximation to the truth to just depreciate your benches according to their age without regard to the time when the fillings were put in because your fillings are renewed from time to time many times during the series of years your whole structure is going to last, so it is hardly worth while to inquire just when the last filling was put in. If you could find out exactly it would vary the figures a little as to depreciation and I have though- it fair enough*t* to consider the life of the structure as a whole with such renewals as must be made from time to time.

Concerning the cost of these benches as appears on page 4 of exhibit "184," the new cost of the 3½ depth benches is $7,034.00, the value as of January 1, 1907, is $4,080.00; the new cost of the ¾ depth benches of which there are 3 is $7,634, and a value of $6,489 as of January 1, 1907.

The cost of the charging floor for these benches is here given as $1,605.00 and its value $1,388.00. That charging floor has been estimated again at $1.25 per square foot, the same as the operating floor of the water gas sets. The floors are very similar in construction
both consisting of cast iron plates laid on steel beams, the hot
1166 coke is thrown out on this floor, it is right next to the benches which contain the benches and it has to be a fire proof floor.

Concerning the cost of these floors I haven't here the details of that cost, but the same benches will appear in the 1913 valuation and full details will then be submitted. The company's schedule on these floors includes so many pounds of steel and cast iron, and I thin*g* the schedule of the company shows a very much higher figure than I

have allowed for the floors. By taking 4 cents for steel in position which is a very sufficient figure, and 3½ cents for cast iron in position, and taking the weights of the company as shown for that floor the cost don't come out very far different from $1.25 per square foot, which I have estimated it. Perhaps this is as good a place as any to take up the question of the proper price to be allowed for structural steel and cast iron in these buildings, and in connection with these machines. There is a strong difference between the figures of the company on such items and those I present and I want to give the foundation I have for making such estimates as I have.

On page 13 of exhibit "220" is shown the cost to the City of Lincoln of man hole covers and rings, they being cast iron according to the drawings furnished me by the city engineer. They are furnished for a standard form of cast iron and are bought here in the city, I thing from John Westover bought largely on the basis of $8.00 each. that includes the cover and the ring and we generally speak of the combination as a man hole cover. The cast is not a particularly easy one to make in the matter of casting there is a large difference in the resulting cost whether the form is easy or difficult to cast because the molders and founders work is a large element in the cost per pound. These castings are not particularly favorable to
1167 make but are a sort of medium casting as far as foundry work is concerned, a very moderate grade of cast iron will do for man hole covers but they are fairly representative of the cast iron pieces or parts that go into those buildings. Each man hole cover and ring weight 375 pounds and the price general put as indicated by the two bills in this exhibit is $8.00 giving the price per pound of .0213 cents, the price has been raised 50 cents during the present year so they now cost $8.50 which would add 1/10 of one cent to this price per pound,—between 1/10 and 2/10 of a cent per -ound,—this additional 50 cents will add to the price per pound as figured here on the bills between .1 and .2 cents to the amount of .0213 cents per pound, and the price of 3½ cents for cast iron in position in connection with those floors, if you want to figure the floors on the pound basis, a price of 4 cents for steel down there in the floors of the gas works is very sufficient. This morning I called attention to the price of .026 for reinforcing steel in the reservoirs the city built. That steel not being fabricated, and some of it being in rather expensive form, that is a steel beam of one of the standard shapes you will find in a building as well as that reservoir, some shapes out there are more simple types than the beams. The price — for 85,500 pounds of steel and was a contract taken at .026 cents per pound on that reservoir.

In a contract for a roof over a lot of water pipes and valves adjoining the pumping station of the city and has recently let a contract for that small structure, and the price for the fabricated steel for that little structure was only 4 cents per pound and there is only a very little of it, but 4 cents for such steel I regard as liberal for structural steel, and certainly 3½ cents for cast iron in position down there as we find it is very liberal. I don't know whether that steel at 4 cents

was bought of Westover, I have forgotten the name of the contractor. I will bring in the contract and you can see who it is.

1168 That contract for building around those pipes is 4 cents in position for the steel used in building that structure.

I also have here a copy of a bill dated November 1, 1907, from John Westover to the company being voucher #2490, the bill includes among other items 97 floor plates, at $412.25 total. There is an allowance for 7 bad plates at $4.25 cents each which I judge by looking at the total figure at the average price charged per plate; I suppose they are part of the plates found in that charging floor of the benches, I measured those plates down ther- and found they were 3 feet square giving 9 square feet per plate which by dividing into $4.25 giving about 47 cents each for those plates. I don't know whether that was delivered at the foundry. I mean 47 cents per square foot at the price I have stated $4.25 each of the plates being 3 feet square amounting to 9 square feet each makes 47 cents per square foot. As to how much that is in pounds,—I am not sure about the thickness of those plates,—The company's schedule says ½ inch thick, I couldn't conveniently mention probably Mr. Westover could give you the weight. Undoubtedly while taking a square foot of plate would weight 450 pounds a square foot would weight just 20 pounds, that is just about 19 pounds per square foot and you divided your 19 pounds into your 47 cents and you will get just a little over 2 cents and under 2½ cents for those plates. Cast iron weighs 450 pounds per square foot and a plate if they are ½ inch thick will weight 1/24 of that of course. Anyway taking the cast iron at 3½ cents in position and steel at 4 cents in position will check up well enough with the weights given by the company, and $1.25 per square foot for a floor like those down there is an ordinary price; and 4 cents for steel and 3½ cents for cast iron is a very sufficient price. Plates 3 feet square and ½ inch thick are expensive to make, requiring a lot of foundry work and I would not be surprised if your cast iron plates in position run up more, and would overrun

1169 3½ cents a little but you would have enough lower cost of materials in your beams and other iron parts to pull your average below that 3½ cents. Wherever I have computed I have allowed everything on the pound basis put in these floors; I didn't consider it necessary to go into that detail, you can get your floor put right up for $1.25 per square foot if you can't tackle it the other way.

Exhibit "224" is a blue print of a drawing showing the standard cast iron man hole ring and cover used by the city of Lincoln the same as was originally sold to the city for $8.00 and which weighs 375 pounds resulting in the price per pound testified to this morning, being a plan and sectional view of the cover and as shown reveals its construction and indicates in some degree the character of the casting itself. Exhibit "225" shows the details of the construction of one of the reinforced concrete reservoirs particularly the detail of the concrete construction showing how the steel reinforcing appears, the parts which are laid into the concrete and showing the thickness of the concrete at various points. I think this is a drawing of the 500,000 gallon reservoir this is dated August 1913 and the

1,500,000 gallon one was built last year so I take it this is the detail for the 500,000 gallon reservoir now under construction. A great portion of the concrete is only 6 inches thick and undoubtedly reinforced with steel bars set with that sort of construction under the roof, sides and bottom is one that requires it to cover this cost of relatively high figure per cubic yard.

Exhibit "226" is a plan for the 500,000 gallon reinforced concrete reservoir under construction out on 17th Street. This exhibit shows the reservoir in the plan in a horizontal section and a vertical section reveals again the thickness of the walls and floor, it does not show much of the reinforc-ments, being on such a small scale. It shows that it has a length of 180 feet 2 inches and a width
1170 outside of the concrete, 33 feet 8 inches, the depth of the reservoir after its completion is shown at one point as 13 feet, taken at the deep end. What I h-ve called the deep end the ground is just level with the top of the reservoir so the excavation is 13 feet. The ground slopes a little to the other end of the reservoir so while the excavation is 13 feet at one end it is only 8 feet at the other end. Its construction is very similar in detail to that of the 1,500,000 gallon reservoir built last year. I have thought this reservoir should be explained because the prices for part of the material will somewhat differ to those on the other one. The excavation at 30 cents per cubic yard is the same; the price of steel work and concrete is a little higher. I will now show as one of our exhibits the proposal which contains those unit prices for the 500,000 gallon reservoir. I will mention now what the prices are so they may be fully understood, the 500,000 gallon reservoir now under construction the rate for excavation meaning the digging of the earth out of the ground and the final disposal of it is 30 cents per cubic yard and the quantity being 2,300 cubic yards; the concrete is 383 cubic yards that figure illustrates again the difficulty of that concrete construction. A structure as large as that with only 383 cubic yards of concrete is in here at $10.00 per cubic yard whereas on the other it was at $8.50. That amounts to $3,830.00 and the 47,000 pounds of reinforcing steel is 3 cents, the price of the larger reservoir was .026 cents per pound, all these prices are for work in place. That steel amounts to $1,410.00 and those three items make up almost the entire cost of the reservoir, there are some other little items that amount a little over $200.00 that we will not put in.

Exhibit "227" is a larger scale of the detail of one of the concrete reservoirs, dated August 1912 and undoubtedly is for the 1,500,000 gallon reservoir. I again call attention to the difficulty of
1171 the concrete work and of the reinforcing steel. That steel all has to be bent or placed with fair accuracy in the position shown and increases the difficulty of the concrete work and adds quite a bit to the market price of steel to be bent and placed in this position in small pieces, which has to be bent and fit in shape of the form of the reservoir walls.

Exhibit "228" is a plan and two sectional elevators for a concrete roof over the water pipes at the city lighting plant, these water pipes and valves are outside of the building proper. It is quite a small

structure 29 feet 4 inches wide by 64 feet long and has a depth all below the surface of the ground,—I don't seem to find the figure for the total depth,—but the head room underneath the concrete roof is 7 feet. The concrete in this structure is largely in the roof, there is some concrete footings for steel columns, but the roof is concrete and has to be strongly reinforced, being horizontal may have to bear considerable weight that may come on it from the outside being about on the ground level. The concrete is only 6 inches thick so that is an expensive job of concrete work entirely different from putting under footings. The unit price of structural steel was 4 cents in place, the city's contract for the structure called for all materials in place.

Exhibits "224," "225," "226," "227," and "228" offered in evidence by the defendant and received without objection.

The next item- in exhibit "184" being the works equipment, are the condenser and scrubber. There is nothing unusual about the treatment of those items, the cost figures have been made up by taking a fair price for the machinery erected in position and adding to the cost the cost of the foundation at $7.00 per cubic yard for the concrete and 40 cents per cubic yard for the excavation using the quantities of excavation and concrete the company as said existed in those machines.

1172 The 4½ by 25 foot condenser, in the schedule at a cost of $583.00 and has a value as of January 1, 1907 of $350.00.

The 5½ foot by 31 foot scrubber is valued at a new cost including the foundation at $319.00, that has a value assigned of $191.00 as of January 1, 1907.

The 4½ by 5 foot rotary scrubber is given a new cost of $2,138.00 and a value of $1,122.00.

The next items in the list are the 4 purifying boxes and a somewhat more difficult rule of valuation is applied to those boxes because they are all of an ancient and honorable type and would cost a great deal more to reproduce them than anyone would want to spend for purifying boxes of that capacity in this day and age. The boxes are valued on a basis of what other boxes of equal capacity but different design could easily be erected for in position.

Exhibit "229" contained in the folder on "Data considered" is one of the contract I have considered in making up my opinion as to the fair unit price of materials in connection with the construction of the gas plant. It is a contract between the City of Lincoln and G. E. Tobin for the construction of a concrete roof over certain water pipes at the city li*hg*ting plant at 30th and A Streets. This contract relates to the work shown on the blue print exhibit "228." This contract is for the amount of $1,090 in toto for the construction of this concrete roof. The unit price- relating to this work stated in exhibit "229" are as follows: excavation 50 cents per yard; concrete $12.00 per cubic yard; reinforcing steel at 3 cents per pound; structural steel 4 cents per pound. The contract was originally mentioned for its bearing on the price of reinforcing and structural steel and it is that part of the contract that influenced my judgment and on which I have relied in making up my opinion of the fair cost.

Regarding the grading work done on this particular job,
1173 I was there and saw it and made a personal inspection of the premises. The grading, including all that the term applies as applying to the soil in moving digging it is a small job but difficult one. I haven't with me the specifications for this which would throw greater light on the grading work but the impression I got from what little grading there is there and the character of it I am not at all surprised at the price of 50 cents per yard for it. I have allowed 40 cents for the grading at the gas works and most of that grading you would handle two yards to one as compared to this job here; I don't mean to make an exact statement but mean to say that the grading at the gas works is of an entirely different character and very much easier to handle.

Exhibit "230" is the proposal sheet for the 500,000 gallon concrete reservoir, now under construction by Abel & Robert, for the City of Lincoln. This proposal sheet used the price of 30 cents per cubic yard and 2,300 yards of excavation, that is the same price set out in the contract for the reservoir built last year by the same party for the city. That 2,300 cubic yards at 30 cents amounts to $690.00; 383 cubic yards of concrete at $10.00 per yard,—as against $8.50 that we had on the larger reservoir constructed last year,—that is an expensive concrete to build, it must be built with forms all the way through and highly reinforced with steel shapes; the total for the concrete was $3,830.00; 47,000 pounds of reinforcing steel at 3 cents per pound amounts to $1,400.00. The other items in the construction make up the total of $6,175.00 the price at which the contract was taken.

That is the proposal, the contract based thereon is particularly helpful in forming a fair unit price to be applied at the gas works with respect to the excavation and steel I don't think the price for concrete as any direct bearing for the price of concrete at the
1174 gas works, its character is entirely different. This excavation in both of these reservoirs taken as a whole goes to somewhat greater depth on the average than the average excavation at the gas works,—apart from the holder tanks.—I haven't mention- any price for the holder tanks yet.

Returning to Exhibit "184" where I left off I was at the subject of purifying boxes, the older types of purifying boxes as represented by those in the Lincoln gas plant of a rather wide and flat structure, usually made of cast iron. The gas passes through them for a certain purpose in its journey to the holder and to prevent the gas from escaping, there is what we call a water seal all around the purifier. That is the iron part forms a cup into which another iron part dips so that the gas passing through it at the very moderate pressure of a few inches of water can not escape. Such purifiers are required to be kept above the freezing temperature otherwise the water will freeze and you will break your purifier as the water expands on freezing. Therefore they are a more expensive type than would now be ordinarily bought and installed unless you bought some second hand appliances. I know of very few corresponding

to this type now being made and sold; I notice these are 24 by 20 by 4 feet deep they are shallow rectangular boxes.

With boxes of this old type it was necessary, at least for convenience, to put them in a building, so you can warm your building to keep your water seal from freezing, of course, you could by running pipes as in the case of holder tanks and gates, keep the water from freezing but if you built out of doors you would have to build some sort of cover in the way of masonery or concrete covering for such boxes. A word about England where the practice is very common this type of boxes have usually been put in a building and the purifying boxes with the flat side set in a horizontal position,
1175 which takes a building with a good sized ground dimension to hole such a purifier as you find in this plant, and the purifying house which is the name of the building has double the cost of any other building on the schedule, the most expensive, being $12,577.00 on the basis of my estimate, and more than that on the basis of the company's estimate.

For modern purifiers to be installed no such building would be necessary or desirable because the practice is rapidly growing when installing purifiers to install them differently from the manner found at the gas works and one which does not require any building and the purifiers being made in different forms it is not spread out like these here. It is cheaper to make them per cubic foot capacity and it is that which regulates the gas capacity of purifying boxes. The modern type box is made deeper than those here something like 8 feet deep, and in a rectangular or circular form but very much deeper perhaps 10 or 12 feet deep. It is the growing practice to put these boxes out of doors,--partially because no building is necessary and it saves the cost of a building,—the cost of this building here is nearly double that of the purifiers themselves and this type of purifier is expensive. In modern purifiers the use of water to prevent the escape of gas is dispensed with. Rubber or some other substance like asbestos is used to make a tight joint so the gas may not escape in passing through.

This being briefly the facts about the art of making purifiers and the practice of installing I have not felt justified in valuing the price on these boxes at what it would cost to make boxes of that kind, because I could buy boxes of a better kind for less money. I have valued the boxes down there by this process; I have considered the cost of boxes that would afford an equal cubic space capacity and have taken that cost at a figure at which the thoroughly
1176 modern type of box,—which might just as well be put out of doors,—could be had for as shown by various contracts. I have with me several contracts that relate to this matter one relating to the purifying boxes at Springfield, Illinois, where they have recently installed this out door type, another at Holyoke, Massachusetts, installed several years ago; another at Racine, Wisconsin. It will be notice- that I have added the cost for the purifying buildings into the sum total of buildings leaving it to be dealt with if at all later, I thought it desirable to show the cost of the buildings built on the basis I have mentioned. I think it just as well to dispense with

it, nobody would erect that building today to take care of the purifier.

The boxes at the Holyoke, Mass., plant,—a city owned plant,—cost erected complete on foundation furnished by the city including the support steel work for the purifying boxes and other intermediate connections 94.4 cents per cubic foot. It is a nice job of work very substantially built, with provision for handling the purifying material which is a compound of oxide of iron that must be lifted in and out of these boxes. That is illustrated to some extent by the fact that the bare purifiers erected at the Springfield, Ill., plant at a cost of 42.7 cents a cubic foot wasn't as high class a job as the Holyoke, job nor as complete, the facilities for handling the materials, etc., are not as good.

In the valuation by the engineers of the Wisconsin Commission at Milwaukee last year of some purifying boxes they gave the new cost of those boxes at 81.4 cents per cubic foot, I presume the value is very close to that and I think the boxes are nearly new and that valuation includes the purifiers complete with whatever foundation they have.

Now these costs per cubic foot I have given are somewhat lower than the cost per cubic foot of such apparatus as exists at the
1177 gas plant here, while I have thought it fair to value these purifiers on the basis of a modern type of purifier, I have not put it down as low as it might be for that type of purifier. I have valued that apparatus down there on the basis of a new cost of $1.00 per cubic foot including the foundation. The cost of the 4 boxes has been made up in that way,—we have 3 boxes and one which is different and the amount of computing there on is some different,—one box has 1,920 cubic feet, its cost set out in Exhibit "184" at $1,920.00, a dollar a cubic foot. Now the 3 purifying boxes given on the same basis at a cost of $5,760.00 and the value of the 3 boxes is $4,147; and the value of the one box is $1,690.00.

At the price I have mentioned, $1.00 per cubic foot would erect today and would in 1907 purifiers of the type spoken of and very economical to operate, and with very much less labor in handling your material which must be moved in and out of your purifiers is done more expedi-ously and with less labor than for those boxes down there and I put on that liberal valuation based at $1.00 per cubic foot. I have the Springfield and Haverhill contracts for purifying boxes here which are subject to inspection.

The next item in the list of works equipment is the 10 foot station meter installed in 1892 and a new drum, which is the interior working part, was installed in 1907 while the meter would have an age of 14 years because the outer part was 14 years in 1907 I have taken its age as 7 years on account of the renewal of the important part the interior of the meter. I gave the new cost of the meter including the foundation of $3,940.00 and a value of January 1, 1907, of $3,250.00.

The 6 foot station meter is given at a new cost of $1,250.00 and the value of $500.00 which being a pretty old piece of machinery and subject to considerable depreciation.

I remember there was considerable discussion about the
1178 utility of that meter when the company put in its case. I don't think it should be objected to using items of the plant and useful in the gas business.

The next item and an important one is the 200,000 cubic foot gas holder which I have given here at a new cost of $18,000.00 and a value on January 1, 1907, of $15,480.00.

Again it seemed to me necessary to arrive at the valuation of that 200,000 cubic foot holder by considering what would have to be paid for a different type of holder of the same capacity. I am not valuing a theoretical holder that don't exist, I am valuing that holder down ther- or I am trying to value, it by considering what it would be worth to a man who wanted to use such a holder in the gas business. I conceive it would be worth to him no more than a holder of equivalent capacity and utility minus the life that has gone out of that holder and that is the basis on which I have valued it. The company's schedule gives a great deal of information about the pounds of cast iron and steel, ect., in the gas holder, it is interesting, but holders are not commonly bought and sold as so many pounds of iron and steel, any more than a man lets a contract to have a house built on the basis of so many thousand feet of lumber and kegs of nails. Holders are invariably built by manufacturing concerns having extensive works for making gas holders and other articles used in the gas business, they are complete and usually tested and turned over in complete working shape to the party who pays the money. I think it is as common and accurate a method as any other to consider the price of holders at so much per 1,000 cubic feet of capacity that is what it comes to, gas companie's contract for a holder to supply what they want. In well drawn holder contracts the thick-
ness of the plates and parts of the holder are usually specified
1179 because that is a matter that bears on the strength and goodness of the holder. So in putting an estimate on the cost and value of a holder it isn't profitable to go into the question of the amount of material measured in pounds in gas holders.

I have valued this by arriving at what I though a holder of equivalent capacity but of different type could be bought for, and then depreciating from the purchase price a reasonable sum on account of and to the extent to which these holders are worn out and gone. A word about the type of this holder, the type is the reason I adopted this method of valuation, they are a type not now being built, I don't know of a holder of that type being built in Massachusetts during the last 10 or 15 years, I understand it to be claimed for this holder it was built for a special reason. It is the masonery type holder in which the part that contains the water consists of a masonery tank embedded in the ground and out of which works the iron cup shape structure containing the gas. To build that tank in the ground cost more money than to build a steel tank above the ground and put a shallow foundation of concrete under it. The modern or prevailing type of gas holder today is with the foundation built above ground generally of steel there have been and there are a few built with a reinforced concrete tank built above ground, or em-

bedded a little way in the ground, but the preva-ling type is the steel type tank gas holder corresponding to the type of the 500,000 cubic foot holder the company erected in 1908. The 200,000 cubic foot holder was built in 1890 and they simply followed in building it the somewhat belated practice of that time. The steel tank holder even in 1890 was rather extending its usefulness. The steel tank holder is preferable to the masonery tank holder for various reasons, and a steel tank holder of 200,000 cubic foot capacity could readily have been built down there foundation and all, for $90.00 per 1,000 cubic feet. That is the way they commonly estimate gas holders
1180 and being a 200,000 cubic foot working capacity, you would get on that unit basis a new cost for the holder complete with foundation, at $90.00 per 1,000 cubic feet for that 200,000 cubic foot capacity amounting to $18,000.00.

I want to call attention to some of the holder contracts I have relied on in arriving at that valuation of that 200,000 cubic foot holder.

I will refer first to a holder of 250,000 cubic foot capacity recently constructed in Framingham, Massachusetts, I have inspected the holder, it is well built and compares favorably in construction and general weight of the parts and workmanship with the 500,000 cubic foot holder at the gas works here. I compare it to that holder rather than the old holder because the old holders are of such a different type that they are not readily compared with a modern type of holder. The Framingham holder was a 250,000 cubic foot holder or 25% greater then this one at a total cost of $19,786.00 which figures out $79.14 per 1,000 cubic foot capacity, is almost $80.00. That includes the foundation; the cost of the steel alone was $74.40 per 1,000 cubic foot capacity, the cost of the whole thing was $79.14 per 1,000 cubic foot capacity.

In Illinois several months ago they were constructing a 1,000,000 cubic foot holder which gives it a lower price per unit capacity than any we have here, but that would throw some light on the matter. That is at Springfield, Illinois. The contract for that holder amounts to $60.00 per 1,000 cubic feet capacity; the price of holders per 1,000 cubic foot capacity goes down as the size of the holders goes up, that is, the cost of that Springfield holder was $60,000.00 for the steel alone, the steel work was covered by the contract with the Stacy Manufacturing Company and was $60,000.00 amounting to $60.00 per 1,000 cubic foot capacity. I have mentioned
1181 the holder they have bought at Framingham within the past year, I am quite sure that was only 25% greater in capacity than the 200,000 cubic foot holder down here which would make it a very good criterion of the cost, there is that much different in capacity but it would not vary the cost per unit very much, yet we find in the Framingham holder the total cost was about $11.00 per 1,000 cubic feet less than I have allowed for the equivalent of a 200,000 cubic foot holder here in Lincoln. I will take a holder that has only ¾ of the capacity of the 200,000 cubic foot holder. This holder was built at East Hampton, Massachusetts, I think within

the past year, I am not absolutely sure about the date. The cost of this holder was $13,500.00; the cost of the steel alone was $76.00 per 1,000 cubic foot capacity, when I say steel alone I mean for the complete parts of steel erected there by the maker of the holder complete and in working order and the total cost of that holder is $90.00 per 1,000 cubic foot capacity that was only ¾ of the capacity of the one here and as I said the price goes down per unit of capacity as the capacity increased, so whil- this East Hampton holder cost $90.00 per 1,000 cubic foot for the 150,000 cubic foot capacity the Framingham holder of 250,000 cubic foot capacity was only $79.00 per 1,000 cubic foot capacity and I have here allowed $90.00 per 1,000 cubic foot capacity for the 200,000 cubic foot holder.

I have a record of a large number of holder- but these serve to illustrate the matter. I think that a modern holder of steel tank construction, that would be on the whole decidedly more desirable than the masonery tank holder could have been put down there as of January 1, 1907 for a total cost of $18,000.00. There isn't the slightest doubt about that. I want to read one paragraph dealing with the fact on this method of valuation that I have adopted and used in this valuation of the Lincoln gas plant. This is from a case
in which Mr. Justice Pitney, then Vice Chancellor and who
1182 is now on the United States Supreme Bench, wrote the
opinion.

(Mr. Strode: I want to say if you are going to read any decision I want to object as incompetent.

Referee: It may be read. (Exception.)

(Witness continuing:) This case came up in the form of a bill to enjoin the water company from discontinuing the supply of water for public purposes in certain parts of the city and there was an agreement between the parties under this bill that the bill was amended to ask an determination by the court of a reasonable rate for public and private service: that is found on page 74 of the original report so that the court had the matter fully in hand to go ahead and deal with the property as to establishing a foundation for a reasonable rate. The court found in many parts the property was not of the kind and character that would need to be built for serving the consumer of water service by this system and the court finding that a dam was too large deducted a substantial sum from the cost because it said a smaller dam would have been big enough for the reservoir an- deducted for some of the pipes which the court said was not necessary, being the case of the Long Branch Commission vs. Tintern Manor Water Company, 70 New Jersey Equity, page 71, decided in 1905 and the paragraph is found on page 90 of the report and is as follows: "I deduct then from the $1,500,000.00 as follows:

| | | |
|---|---|---|
| Whole cost of works | | $1,500,000.00 |
| Loss on Takenassee | $100,000.00 | |
| Over cost of 36 inch main | 75,000.00 | |
| Over cost of dam | 30,000.00 | |
| Over cost of reservoir | 25,000.00 | |
| | | $230,000.00 |
| Leaving | | $1,270,000.00 |

as the amount upon which the defendant ought to receive dividends."

I just allowed then what was necessary to construct a plant
1183 suitable for that service as I understand the case, and the court did not allow them the cost of reproducing the plant that was there, simply the cost of producing a plant of equivalent capacity.

The $50,000 cubic foot holder at the works if of the masonery tank type; the iron part of that holder appears to have been moved from the old plant and the masonery part was built where it is, as that is not movable. Now the same consideration applies to this 50,000 cubic foot holder that applied to the 200,000 cubic foot holder, namely, that is *is* of a type which works well enough for holds and send out the gas, but cost more to have built the present day because people can build a holder of equal capacity for less money. The holder works well enough but it cost too much money per unit capacity to build it. I am not denying that it will serve the purpose only I don't want to pay too much for the service. I am giving what I consider this plant will be worth to a man who had the right and wanted to use it, I don't know as an engineer whether the sum this plant will be worth to a man is the proper test for fixing a rate or not, it may be that what remains of the investment once made is the best test for fixing the rate. I am talking about values and as near as I can find out it is what somebody who wants a think would be willing to give for it, rather than going ahead and building a new one for himself. Or perhaps what the city would pay for it if it saw fit to take it over on condemnation, I think the same rul- would apply there. Of course, if the city took this plant by condemnation, while I think the same rule would apply to measuring the value of the physical property, the city might have to pay for the value of the business which the company had acquired, but that is an entirely different thing from the value of the physical structures and I have expressed no opinion on that, the business could just as well be carried on with other
1184 physical structures.

In the case of the 50,000 cubic foot holder we have an illustration of the way in which we have the cost of gas holders going up as the capacity decreases, I have no idea that if the company dedn't have this small one that they would ever build one of that size, this was built in the infant days of the industry in Lincoln back in the 80's, I don't think it would be profitable or desirable to build a holder of that size on these works today, but it is there and useable

what there is of it so I have valued it as though anybody who would be induced to build so small a holder on so large a works would give for it.

Taking that holder at 50,000 cubic foot working capacity and comparing it with other gas holders of similar capacity whose cost I know, I have fixed as a fair cost for a well built steel tank gas holder of 50,000 cubic foot capacity $160.00 per 1,000 cubic foot capacity giving you $8,000.00 as the cost of a steel tank holder of a capacity equal to that masonery tank holder at the gas works.

From that $8,000.00 there is to be deducted the depreciation gone out of the holder by reason of age and use, which is computed in the way already indicated on the age of the holder and its estimated life and reduces the value of the holder on January 1, 1907 from the estimated cost of $8,000.00 to $5,120.00 for value. I think in allowing $160.00 per 1,000 cubic foot capacity I have allowed an ample figure for the cost of a steel tank holder with foundation erected complete in position down on those works.

The remaining items on page 7 call for very little comment. I have taken the 20 inch Connelly governor at what I consider a fair price erected and depreciated it according to its age.

The pumps I have assumed the price I believe were put on them by the company and depreciated them according to age.

The photo meter I have given the price for which I think a photo meter should be bought that is $300.00 and depreciation
1185 according to what I believe its age to be. That is one of the cases where my understanding of the age of the equipment is quite different from that expressed in the company's testimony.

There is nothing special about the valuation of the other items worthy of mention until we come to the Tar Tanks; there are 4 old boilers used as tar tanks which have been valued at so much per pound in position.

A boiler isn't usually built for use as a tar tank, and the expense incidental to constructing boilers is quite different from the expense of constructing tar tanks, so if you find a boiler used as a tar tank you must make a fair allowance for what tar tanks built as such would cost of equal capacity rather than the actual weighing up and estimating the weight of the material that may have been put in to resist 100 pounds steam pressure, it don't correspond to the trifling pressure that exists in the tar tanks. I didn't think that anybody would think of acquiring them by purchase for use as tar tanks would consider what material was in them, I would consider what I would have to pay for tar tanks constructed as such, and I have taken those boilers and estimated at the new cost of tar tanks of suitable construction on that. I estimated it at 3.7 cents per pound in position and have assigned a proper weight to the tar tanks of the capacity those old boilers would have if the tubes were not in there, the fire tubes take up considerable capacity of the whole tank I didn't figure them, I figured as though they were all holes and you could fill the holes with tar. They didn't have a foundation and I didn't add anything more. There is a couple of small brick tar wells down there and I assumed the cost the company put on those

tar wells and simply depreciated them according to their age as small items. The price assigned for the tar tanks is the same as you could acquire tar tanks of the same outside dimensions put in position which according to my estimate is $393.00 for steel tanks.

1186 The next item is the two oil tanks 8 feet in diameter and 24 feet long. I have put these two in one item because the company followed that course in its schedule, I have endeavored to follow the arrangement adopted by the company for the convenience of the court and parties. Those two tanks have a foundation. I have figured the tanks in position for 3.7 cents per pound for a suitable weight of metal in such tanks, and have figured the foundation at the quantities shown by the company to exist there, estimating those quantities at $7.00 per yard for the concrete, and 40 cents a yard for the excavation involved.

In connection with the price of 3.7 cents per pound on those tanks I call attention to one or two bills of the company for some similar tanks. It is my intension to throw into exhibit all the bills of the company substantially, that have been relied on as furnishing a basis of cost, that work hasn't been complete yet. One of the bills to which I refer and which has been helpful in considering a fair price to put on the tanks per pound is from the Graver Tank Works, East Chicago, Ind., July 20, 1909, two cylindrical tanks 10 feet 9 inches by 29 feet 6 inches shipped by I. H. C. O. C. & N. W. car V. T. company #115, voucher #6380 price of the tanks $630.00. Also another bill from William Graver Tank Works, East Chicago, Ind. to this company on November 22, 1910 for two cylindrical tanks 10 feet 6 inches by 24 feet 9 inches at $335.00 equalling $670.00 less labor driving leaking rivets $5.00 leaving $665.00; the price of the tanks was obviously $670.00, voucher #8085. I also wish to refer to this order for the above tanks to William Graver Tank Works East Chicago, Ind., for delivery on requisition and account as indicated on margin for the following two oil storage tanks 10 feet 6 inches by 29 feet 4 inches, ¼ inch heads and 3/16 inch shell, price $670.00 f. o. b. factory. That was signed by Harry Warner I don't recall who he is. The date as I understand by the reading of the entire document, it was shipped to the company in Vt. and Company car

1187 #506 and the following words Lincoln Gas & Electric Light Company, Lincoln, Nebraska 9/8/10 that is evidently the date of the order. And in connection with that I may also read a statement which appears with the above heading, Statement #2519 November 22, 1910, $506.00 frt. C. B. & Q. Chicago to Lincoln 551 at 1 cent per mile at $5.51. The 506 appears to be the car number that was mentioned in the shipping directions for those tanks. I call attention to Mr. Lea's report and mentioned as the cost price of those tanks which may be compared with the price mentioned in these bills. I find in Mr. Lea's report at page 55 in the department called "Net construction cost" the following entry: two steel car tanks diameter of each 10′ 6″ length each 29′ 3″ thickness of steel ¼ inch, foundation concrete and wood, tanks steel 25,000 pounds net construction cost $1,149.00". These I understand to be either the two tanks that were bought at $630.00 or the two at

$670.00 having been bought in 1909 and 1910 respectively. And following in this valuation a number of items for excavation and concrete, etc., making up the foundation which raises the total cost to $1,587.00 for those tanks. The cost of the steel alone is $1,149.00. Following agains there is the entry: "Two steel tanks diameter 10' 9" length 29' 3" thickness steel ¼ inch, foundation concrete and wood, tanks steel 25,727 pounds, net construction cost $1,158.00, there follows other items for foundation which raise the total for the tanks as a construction cost to $1,855.00. Those tanks are not involved in the valuation of the property as of January 1, 1907 because they were not then in existence, but they have aided me along with other figures that I have, in fixing a fair price per pound on steel tanks delivered here in Lincoln. The price per pound for those tanks figured out as I remember, I think is about 3.2 cents. I will confirm that however.

I value the last tanks I mentioned one of 8' in diameter and 24' long and one of 8½' in diameter and 30' long at 3.7 cents per pound in position, which is more than those tanks cost in Chicago
1188 and more than enough to cover the cost of bringing them here and setting them in position on the foundation. For the foundation I have taken the quantities given by the company and applied 40 cents per yard for the excavation and $7.00 for concrete.

On page 8 of exhibit "184" are a number of items as to works piping. That piping existed in 1907. It is impossible to find out what some of it cost because it has all been changed about gone and I have simply carried into this cost column the figures of Mr. Malone who testified here before as an expert from Denver who was there at the time and made an estimate on behalf of the company. That was not Robert Malone. These figures I have taken from the records of this case from Mr. Malone's former testimony, I just assumed those figures in view of the situation, I have stated that the things have largely disappeared from view. They were figures of the company and without stopping to pick them out individually I would say that they are on pages 236 to 242 of the printed record of this case as printed for the United States Supreme Court.

I have also taken the horses and wagons from the testimony of Mr. Malone in that schedule the item being $2,035.00, I have carried through both the cost and values column without changing as it is an amount that might have been invested in such property at that time and used by the company, and not having any definite information as to the condition of the wagons or — much they were depreciated, I haven't depreciated them any. I am not in the habit of applying any depreciation for horses but taking them for what they are worth and the condition they are found in.

Mr. Malone's items for office furniture and fixtures with some other items of office equipment and maintainence, found on page 420 United States Supreme Court Record in this case $3,560.00, and it appeared to me that the division of that at about half and half was all right, so I put in the cost of that furniture $1,780.00 or
1189 on*e* half of Mr. Malone's estimate for the whole think and inasmuch as that furniture was pretty well depreciated as far

as its use in that business was concerned, I depreciated it down to $356.00 as of the first of January 1907. It is my present understanding that that furniture has gone out of use, it was pretty near gone then. That finishes works equipment the division of the horses and wagons and office furniture into the works equipment isn't very accurate but the amount is small relatively to the other items and it has been added right in, and gives the total of $85,518.00 for the new cost of the works equipment, which is reduced by depreciation to a value of $63,801.00 on the first of January 1907. Those are the figures I have carried forward into exhibit "180" foll-wing the items for works equipment.

Continuing the explanation of exhibit "184" where we left off yesterday, we had just reached the distribution system of the gas plant the figures for which in the total cost and value are given on page 8 of exhibit "184". The distribution system is there divided under the following heads and the cost and values assigned accordingly: cast iron mains; steel mains; service pipes; meters; paving over cast iron mains; paving over steel mains; paving over service pipes.

Regarding the item of paving, I may as well explain here as anywhere that in making valuations, I am subjected to all the disadvantages of consistency. If I find paving over a main which somebody wants for the purpose of the gas business and has a right to use it for that purpose the question relative to the cost and value in my mind is whether or not the prospective owner and used of such main must lay it under paving like the ones he finds, or whether he can find a suitable place to lay his main without having to cut through the paving and replace it. If the prospective purchaser of the
1190 gas plant must lay the main under the pavement in order to carry on that business I think he will give more for mains that lay under paving. If present value is the test,—and I am trying to show here the value of this property to a prospective user who wants it and has the right to use it,—that test I applied yesterday in the case of the gas holder and purifying boxes and suggested the proper application to the purifying house itself, and I don't think any well advised purchaser of this gas plant would ever be willing to pay for the reproduction of the purifying house, the same way with the purifying boxes, they being of a type that cost more per unit capacity, the holders the same way, than equally efficient and effective holders of modern type but less cost. I don't believe that such purchaser would be willing to pay more than the cost of the present day holder and boxes less depreciation for those holders and boxes.

Now the same rule,—if we are going on the basis of value what somebody may give for it,—it seems to me the same rule applies to mains, if the main is under the paving and the main to carry on the business must be laid under paving, that is the crucial point,—and the prospective purchaser of this plant whose mind we have to look into to arrive at the figures for the cost and value will give more for a main under paving than one that isn't if he must lay the main under paving provided he doesn't buy it already there. On the other hand, the mere fact that a lot of mains are under paving would have no influence at all on the mind of the prospective purchaser; he wouldn't

care. So I have thought relative to this matter of paving over mains that the question really was, so far as value is distinguished from investment is concerned and to that extent if any: Would main have to be laid under paving if these gas mains were to be duplicated in such a way as to enable the business to be carried on as effective as it is now. To my mind the question of present value is one en-
1191 tirely divorced from the question of investment. If we are looking to see what has been invested in the public service property we take the cost of the property not as of the date when we take it but the actual cost that applied to that property when it was procurred by the company, and taking the investment for a moment as the possible basis of fixing the rate would seem to me any suggestion about the value added to the mains by reason of their being under pavement, would be entirely superfluous. Investment can not be considered only so far as it is still there and useful. The mere fact that it was there invested at some time and has since gone away wouldn't have any particular bearing.

If we are going to foreclose the investment theory and invoke the proposition that the basis of rates is to be the present fair value of the property I find myself obliged to look at everything from the standpoint of what I think a person who wanted to use that property and had a right to use it would give for it. That applies equally to the other parts of the equipment. The mere fact that equipment of a certain kind existed is not at all conclusive to my mind of the subject of present value. The question is, what equipment would have to be added to the business as well and what would be the cost to get that equipment.

I thought I ought to make that explanation because I have here ignored the paving over some of the mains obviously against all interest of my client in this case and by the same token I have considered the value of the gas holder and arrived at a conclusion of a value of it by considering what a new and sufficient capacity of holder of modern type could be bought for.

On exhibit "184" the footing for the cost of the distribution system in toto is $229,135.00 and for the value as of January 1, 1907, of the entire distribution system it is $178,890.00.

The mains of this gas plant in common with others while more or less similar in kind have been procured and installed at widely different periods of time so the computation about their cost
1192 and value takes a somewhat different form than it does in the more simple items of buildings and small pieces of machinery that was all constructed at a single date. Page 11 of exhibit "186," and in connection with exhibit "186" I call attention to exhibit "203" which is on page 25; I have adopted the process shown in exhibit "203" on page 25 to arrive at the quantity of mains that existed prior to the year 1903. Exhibit "203" is entitled "total gas mains in Lincoln January 1, 1913, per testimony of Mr. Brodnax, minus mains laid in Lincoln during 1903 to 1912 per gas company's reports, showing mains in January, 1903."

In exhibit "203" in one column is the various sizes of mains, in

the next the feet of mains as of January 1, 1913, per testimony of Mr. Brodnax as finally corrected, as I understand the corrections.

The next step was to take the records of the gas company as shown in those so-called gas reports for the quantities of mains laid each year beginning with 1903 and ending with 1912, of the different sizes, that is also shown in the next column of exhibit "203" and quantities so laid by the company from 1903 to 1912 inclusive are deducted from the quantities which Mr. Brodnax says existed January 1, 1913; and that deduction is taken by me to leave the mains that were in the earth January 1, 1903, as shown in the feet of each sizes in the righ- hand column of exhibit "203." As near as I can find the greater part of the large cast iron mains of the company were laid a good many years ago considerably prior to 1903,—if they were not the more correct way of computing the depreciation on the same would be to consider the cost of the mains as of January 1, 1907, the date of the valuation and set down those cost- as against the year in which the mains were procured or laid, to get the true and just age of the investment in mains. It happened here that the investment in mains was very large in the earlier years and has dwindled some in later years. That is true as to the investment
1193 per foot of mains,—having been the practice of the company in later years to lay generally small mains,—where it has a considerable quantity of large mains laid in the earlier years.

On page 11 of exhibit "186" the first bunch of mains of whose cost is to be taken, is the quantity of mains that were in the ground on January 1, 1903,—the company apparently began to lay mains of the cast iron sort about 1876 as per the corporate minutes and also from a contract in one of the books in account with the superintendent to lay the contemplated mains about 1875. I produce a contract on the blank page in the front of Journal "A" of the Lincoln Gas Company,—the first journal of the company,—dated April 9, 1875, and runs between the company and E. Lawson. It provides for the compensation of $45.00 per month to Mr. Lawson. Without reading all of it as it would be included in the exhibit, I will read this sentence: "His duty is to have the general supervision of the works and do all of the work with an assistant when necessary and also lay all of the iron mains which are in contemplation * * *" so that in 1875 they were at least contemplating some iron mains.

From the corporate minutes of the Lincoln Gas Company is found the following information and at a meeting of the stockholders in a meeting January 18, 1876, recorded on page 47 the following resolution was offered by D. C. Hull and on motion accepted: "Resolved, that it is the sense of this meeting that the present wooden main in use by the company should be taken out as soon as practicable and replaced with iron piping, and that the National Building Company who hold a judgment against the Lincoln Gas Company be asked to wait for the payment of the same until such time as the company can pay by the earnings of the company after payment has been made for the above repairs."

It is the intention to offer various extracts from these corporate

minutes relative to mains so while considerable more *more* is
1194 included in the minutes I will not burden the record by reading it now. I am merely coming to the point that the cast iron mains appear to date from 1876 and it is that quantity of mains which was laid between 1876 and January 1, 1903, that is dealt with in exhibit "186" opposite the entry "before 1903."

As shown by exhibit "186" the method of estimating the cost of mains is as follows: Each size of mains laid in a particular year, or laid before 1903 in the left hand column against the size of the mains is given the length in feet that had been laid and against that length in feet in the next right hand column the estimated cost per foot complete without regard to any pavement over it, the cost of paving being estimated in another place by a separate computation.

The cost per foot applying to each size of main is applied without variation to the mains laid in each year beginning with those laid before 1903 and running on down through to those laid in 1912. Necessarily so because the number of feet are taken as of January 1, 1907, and give thereby only one cost per foot as of that date. The cost per foot of mains is as follows: meaning mains laid complete in the ground ready for the transportation of gas, and these I now name are the cast iron mains which I have treated separately from the steel mains; 3 inch 37.7 cents per foot; 4 inch 40.2 cents per foot; 6 inch 62.4 cents per foot; 8 inch 82.3 cents per foot; 10 inch $1.9 per foot; 12 inch $1.379 per foot; 16 inch $1.928 per foot; 20 inch $2.838 per foot. This unit cost per foot of pipe includes everything in the completion of the main system, including trenching, leveling and leaving the mains complete as they were January 1, 1907, with the exception of paving.

The extent to which the large mains were laid before the year 1903 is shown by the footings for that year of feet and the total cost. Ex-
hibit "186" contains the footings of feet laid and total cost of
1195 mains laid in each year except as to the mains laid before 1903, as already explained that group of mains represent all that had been laid since 1876, not being able to separate them into different years they simply stand as one group and there is a footing for that group and subsequent to that there is a footing for each year showing total feet of mains laid and the total estimated cost thereof.

Prior to 1903 the footing of mains laid amounts to 107,177 feet and the total estimated cost of those mains is $62,978.87.

Referring only to the cast iron mains both as to length and cost. There was at different times a substantial amount of steel mains which will be estimated later.

The unit prices I have mentioned have been applied indiscriminately in each year down through this period of years from 1903 to 1907, and in each year,—except the series of years before 1903,—the feet of mains is shown in exhibit "186" and is the feet shown as laid in the gas reports of the company from 1903 to 1907.

The lightest year for laying of mains which is shown on exhibit "186" is the year 1906. The footing for feet of mains laid down to January 1, 1907, amounts to $127,213 feet of cast iron mains, and

the total cost estimated in the way I have indicated applying the same price to the mains laid in each year is $73,178.40.

We have now obtained in exhibit "186" the cost of the mains laid each year as of January 1, 1907. That is what those mains would cost in those years if they had cost the same as mains laid on January 1, 1907. We have simply divided that cost into the different groups according to the age of that investment in mains. The purpose being to make a fair allowance for depreciation. I used that unit of cost as of January 1, 1907, invariably, but instead of taking all the mains together and applying the unit cost indiscriminately whenever they were laid, I separated the mains into groups
1196 when they were laid and thereby getting the different sums which would have been incurred as the cost of the laying of those mains had the cost been just as I had estimated it to be on January 1, 1907. That gives me the dates of the investment in the mains and the depreciation we measure in terms of dollars so it is desirable to have the age of dollars rather than the age of the feet of mains on the average.

The process of computing the depreciation of the mains is shown on page 13 of exhibit "188", the footing showing the cost of the mains laid in each year on the basis of January 1, 1907, prices are carried from exhibit "186" into the first half of exhibit "188" which is entitled "Cost and Value of the Lincoln cast iron gas mains as of January 1, 1907." In that tabulation is given the year in which the mains were laid in the left hand column; then follows the total estimated cost of the mains laid in the respective years; then follows a column entitled the years old, that is, the age as of January 1, 1907; the next column to the right is entitled "percent depreciation" meaning on the mains laid in each year of the respective years, on the basis of 1% per year. I have not assumed that all of those mains were 17 years old that is those that were laid before 1903 on the average. Again explaining how that average was obtained, mains laid in the year 1902 which would be the first year before 1903 would be 4 years old and a little more on the first day of January, 1907, being scattered through the year 1902 it would be 4 years and some months old at the first day of January, 1907; that takes care of the figure 4 which appears in the column of years old. Now the figure 13 which appears in that column and is added to the figure 4 making 17 years is arrived at in this way; between 1876 when the company began to lay mains and 1902 is 26 years it is more than fair to the gas company to assume that they laid mains greater in length proportionately to the year than simply that they laid a proportionate feet of mains. The column entitled "depreciation" in exhibit "186", is arrived at by multiplying
1197 the percentage of depreciation of the mains laid in a particular year into the estimated cost of those mains which gives the dollars of depreciation for the mains laid in each year.

The right hand column entitled "dollars value January 1, 1907," is obtained by subtracting the depreciation so estimated on the mains laid each year from the estimated new cost of those mains. Taking the footing in the first tabulation of exhibit "188" the total

cost is $73,175.00,—that varies about $3.00 from the total cost shown in exhibit "186" and for the reason that in making these depreciation computations I don't commonly carry over the odd cents but simply carry over the dollars total cost estimated for the mains in each year which makes several dollars difference but that is immaterial in a case of this kind.

The total cost of mains as of January 1, 1907 (exhibit "188") is $73,175.00; the total depreciation estimated according to the actual age of the mains back to 1903 is $10,821.00 estimated in the way I have indicated; and the value as of January 1, 1907 is $62,354.00 representing the difference between the depreciation and the new cost.

In this connection threr should now be considered the figures set out in exhibit "189" on page 14 of the valuation folder.

Exhibit "189" is entitled "total cost in cents per foot of gas mains in Lincoln as of January 1, 1907" giving in detail the cost in cents per foot of the different sized gas mains that existed in the City of Lincoln. The exhibit includes both the steel and cast iron mains, but the cast iron mains are now only being dealt with at this time. The exhibit is headed in the different columns with the sizes of cast iron mains that existed in the City of Lincoln and is made up in two parts because too wide for the ordinary sheet of paper.

1198 The sizes of 3, 4, and 6 inch cast iron mains are treated in the upper half of the exhibit and in the lower half the 8, 10, 12, 16, and 20 inch and the figures that follow along down in each column relate to the respective sizes of the mains at the head of the column. At the left hand in the column of typewritten items the first word is "inch" meaning the inch sizes corresponding to the figures at the head of the column. Then comes the words "trenching and filling" those figures for trenching and filling refer to the entire estimated cost of removing the earth from the trench where the mains are laid, of replacing the earth in final form and of disposing of any fractional amount that needs to be disposed of, graded or hauled away.

The next item is "carting and laying" which refers to the handling of the mains from the time it leaves the car on the railroad tract to the time it is fixed in position in the trench ready to carry gas.

The next item is "total labor" and the entry in figures opposite those words represents the entire estimated labor on mains as measurer in cents per foot for each size of mains included in the plant, and is found by adding together the figures for trenching and filling and the figures for carting and *al*ying of the mains.

The next entry down the column "joining material and incidentals" and includes all the material used in making the joints in the mains,—mains ordinarily being supplied in lengths of 12 feet and have to be a joint made with often some incidentals, for instance a little piece of plank to lay under one end of a m*ian* in a wet place and various and divers amounts of material that may be required. This amount is intended to take care of that.

Footing up the above items in each column gives the next entry

which is "all except iron" including all of the minor quanti-
1199 ties of material for joints and otherwise, and all items of labor connected with it for taking the mains from the cars and getting them in the final position and in working order in the trenches.

The next entry which is "Pipe and 3% for specials" that entry is intended to include the entire cost of the pipe and all the specials used in connecting it,—all the valves and drips in connection with it. I have first computed the cost of the pipe at what I think is a fair weight and price per ton and adding 3% to that cost to cover the cost of all these specials used in connection — the pipe and also the valves and drips. That is f. o. b. Lincoln.

Adding now the cost of the pipe and specials to the other items gives the total estimated cost laid for each size of pipe which is indicated in the next to the last line of the tabulation.

It will be noticed that all these computations have been carried through to the 1/100 of a cent for the purpose of accuracy, because where you have a number of small items to add and leave off the 1/100 of a cent you make an appreciable difference on the whole main system. Quite a good many dollar- as shown by a loss of a cent being carried through to this point, when you get your final figure per foot of mains it only makes a triflng difference if you only take the next 1/10 of a cent and *and* either add a few 1/100s or drop them if the fraction is more or less than ½ a cent so that is done here; and the figures are opposite the word "used" in the left hand column, meaning they are the figures used in making the computation in the cost of mains. *A*t can be seen that these figures have been used by referring to exhibit "186" where those figures marked used are represented for each year as against each size of mains to compute the cost. The tabulation proving exhibit "189" that I have just explained is itself made up in a composite way of various quantities being exhibit "190" on page 15.

1200 Exhibit "190" is entitled "sizes of trenches and cost per lineal foot of trenching and filling for gas mains as of January 1, 1907," Exhibit "190" gives in detail at the left hand side the range in the size of pipes found in the Lincoln system beginning with the 1¼ inch and running up to the ancient 20 inch.

In the next column is the width of the trenches reasonably dug in the streets for the laying of such a main; which is set out in feet and tenths of a foot being more convenient to carry through the computation than in feet and inches and it is more common among engineers to figure it that way while architects and carpenters would figure it by feet and inches.

The next column headed "Feet size trench" is the feet deep that shows the depth to which I think the gas mains in Lincoln have been approximately laid, at least it shows a sufficient depth and they certainly are not deeper than this.

And the depth as to my knowledge derived from a great many basis of about the depth to which gas mains are commonly laid and is as good an estimate as I have been able to make on a fair depth on which to make a computation for the sizes of these trenches.

The feet depth as the column runs down is so increased as to allow substantially a covering of 3 feet of soil over the top of the gas mains that applies to all sizes, taking a 1¼ inch main which is hardly entitled on account of size to be called a main and the trench for it is dug 3 feet deep which gives almost a 3 foot covering as a 1¼ inch pipe wouldn't take up much vertical space in the trench. On the 2 inch the depth is 3.2 feet which allows the 2 inch pipe to be covered with substantially 3 feet of soil; and the 3 inch mains 3.3 feet; the 4 inch 3.5 feet allowing a full three foot covering and so on down the column until we get to the 20 inch there is an estimated depth of 4.7 feet for that trench; all of these depth- are to the bottom of the trench from the top of the ground if

1201 there were paving over the street that would be from the top of the paving to the bottom of the trench. My figures are sufficient to cover the laying of the mains and digging of the trench to the depth here set out below the bottom of the paving although that would be unnecessary but that is what the figures clearly cover. I mean by that if laid in a street that was paved in order to get sufficient cover I wouldn't go to those depths you would only have to go those depths minus these figures, my figures really cover these depths. It is really a small error of mine and not the figures of the gas company, if my figures for the total depth of the main *is* correct because I figured the cost of digging this deep in the plain soil and I have also figured apart from this another cost of laying under the paving to the depth that it is laid.

Exhibit "190" shows the width of the trench and the total depth of the trench in the soil for each size of main.

The multiplication of these figures together give the next column headed "cubic feet per foot" meaning the cubic feet removed from the trench for each linear foot of trench for instance, the first entry opposite the 1¼ inch size we have the feet wide 1.4 and depth 3 feet that multiplied together,—3 x 1.4 gives you 4.2 feet and multiplying that by the 1 correcponding to one linear foot of the trench gives 4.2 cubic feet and so on as to any quantity in that column. The last column in the table is the cost of removing and replacing, disposal and filling and settling the soil in these trenches; It is estimated here at 1½ cents per cubic foot as it originally lays in the trench there is 27 cubic feet to the yard and a half of 27 is 13½ so that amounts to 40½ cents a yard for dealing with that soil taken of the trench, the trenches are dug as I have indicated and run from 3 feet to 4.7 feet deep.

1202 My figures for digging the soil out of the trench and disposing of it are not radically different for digging similar holes in the ground for footings to buildings and things of that sort, which I assi*n*ged yesterday at about 40 cents. I don't think it cost any more to dig a trench down in the open gas yards than in a public street of like kind of soil and similar proportions.

That takes care of the cost of trenching filling only, the figures in the right hand column of Exhibit "190" are carried into Exhibit "189" opposite the entry of trenching and filling, and for those on the 2 inch size in Exhibit "190" we have $7.20 for that in Exhibit

"189," brought out to be added into the other cost per foot of laying the gas mains of that size. Exhibit "190" is simply the fundamental computation about the removal of the soil and the result of laying the mains. My information for making the conclusion about 1½ cents per cubic foot was the proper price for this kind of work has been arrived at from a wide range of sources, that and other labor costs compare to some extent, as I was going to show later. That labor cost as actually reported by the company as having occurred from laying those mains piecemeal from year to year, the company didn't report this labor cost for trenching and filling alone,—so in order to make a comparison with the company's cost for laying mains the other labor cost must be added to my figure for trenching and filling; and these costs for trenching and filling that I have estimated here correspond with the figures that I have from various sources and I will employ some of them in an exhibit showing just where it is from; it is a little troublesome to put them in the proper order of a tabulation and particularly approximate cost like labor cost, but I will show all of that later. My idea being to give absolutely every process that is used in arriving at those figures.

1203 Exhibit 191 page 16 of the folder is headed "cost of cast iron pipe for gas mains in Lincoln as of January 1, 1907." The exhibit takes for each size the cast iron mains from 3 to 20 inches in diameter, gives the pounds per foot that have been used in computing the cost of the mains,—I believe the pounds per foot would be more than fair to the company looking at the range of time during which those mains have been laid—and having in mind the history of gas pipe and the variations in weight that have occurred. I will explain that somewhat more fully after finishing with Exhibit "191" as to how the pounds per foot were arrived at and my reason for thinking they are ample and represent the weights of iron actually in the ground of the Lincoln gas system.

The column "pounds per foot" is followed to the right by the column "dollars per tone of 2,000 pounds," meaning here in Lincoln,—it is usually bought and sold f. o. b. cars at the point of delivery or where it is to be used, the seller usually makes his quotation to include the freight, and the way iron pipe in later years is invariably sold by the ton at the point at which the purchaser wants the pipe.

Having the weight of the pipe per foot and the cost per 2,000 pounds there is obtained by computation a cent cost per foot as shown in the next right hand column; that is a little matter of arithmetic. To those cent cost per foot is added 3% to cover the cost of the specials used in connection the pipes,—by which we mean special forms of castings such as "crosses," "T's," "L's" and various other shapes that have to be used at street intersections and other locations for joining and connecting the lengths of street pipes; to cover the specials and other iron and metal items that go into the pipe system which consist of some drips and few valves for shutting off the flow of gas in a particular portion of the pipe system, and that 3%, is

computed on the cost of the cast iron pipe on board the cars
1204 at the point of delivery, and from computation based on the actual experience for such specials, in a number of instances. I have arrived at the conclusion of 3% as a very ample charge for that purpose. I will be able to add an exhibit I think showing the actual cost of specials on very considerable lengths of pipe that have been laid in this city.

The cost for pipe and 3% for specials is shown in Exhibit "191" and carried into Exhibit "189" on page 14 and appears in just the same figures for each size, for instance, the 4 inch size, the cost of the pipe plus 3% is 28.01 cents per foot. To take another illustration the cost of the 20 inch pipe is $2.3175 per foot. And to explain the basis of the weight of pipe on which I have made these computation I call attention to Exhibit "217" on page 9 of the folder headed "Data considered," Exhibit "217" is made up for several parts, the part to which I first call attention is headed "pounds per foot standard weights cast iron gas pipe."

In general the history of cast iron gas pipe manufactured is about as follows:

Prior to about 1892 I am not aware of any standard being adop-ed for the weight of cast iron pipe by any association of gas engineers or gas managers, if there is such it has escaped my attention. Different makers varied more or less in the weights of pipes they furnished for gas purposes. It has always been the common practice to use a lighter weight of cast iron pipe for gas than for water, the rule being that among the requirements for water pipes it is required to have strength to resist internal pressure. Our water systems commonly have an internal pressure of water from 20 pounds to approximately 50 or 60 pounds per square inch, whereas the pressure in gas pipes is only a few inches of water pressure per square inch, the pressure may be run up to several pounds per square inch,
1205 but even that is very trifling to water pressure. So that in the water pipes we have considerable internal pressure as bearing on the strength of the pipes, whereas ordinarily in low pressure gas works the internal pressure has nothing to do with the strength requirements of the pipe. What we want is a pipe that will resist the external forces that might tend to crush or crack it,—a pipe that will resist for a good length of time the corrosive action of the soil and elements. And managers of gas plants thought there was no occasion for having such heavy cast iron pipes as are used in water systems. About 1892 as I remember the Western Gas Association an association formed of gas manager and engineers adopted a resolution recommending that gas pipe of a certain size be made of a certain weight per foot, that is all such an association can do, it can't force any manufacture- to make pipe of a certain weight and can't force any gas company to purchase it, but such a recommendation would have much weight with gas engineers. In 1898 the American Gas Light Association, at that time the largest and most influencial association in the country adopted a resolution as to the weight of gas pipe very close to that adop-ed by the Western Gas Association in 1892, and in Exhibit "217" under the heading of

"pounds per foot standard weights cast iron gas pipe" I commence with the left hand column and set out the weights of pipe that was recommended by the American Gas Light Association and its members to have used by gas companies in the year 1898. These pounds being pounds per foot and are as follows: for 3 inch pipe 11 pounds; 4 inch pipe 17.33 pounds; 6 inch pipe 25.5 pounds; 8 inch pipe 39.25 pounds; 10 inch pipe 56.1 pounds; 12 inch pipe 75.4 pounds; 16 inch pipe 110.5 pounds; 20 inch pipe 166.5 pounds;

The next column in the table gives the weights of so called standard cast iron pipe set out in the 1901 catalogue of R. D. Wood & Company of Philadelphia, one of the older makers, if not the oldest, of cast iron pipe in this country and a large and prominent
1206 makers of such pipes. The weights set out in the catalogue of R. D. Wood & Company run on almost every size somewhat below those recommended by the American Gas Light Association in 1898.

The next right hand column gives the pounds of standard cast iron pipe per foot as manufactured by the Addyston Pipe Company, more correctly termed the Addyston Pipe & Steel Co., of Cincinnati. These weights are set out in Kent's Mechanical Engineers Pocketbook was printed in 1895. Kent's Pocketbook is one well known by engineers as a reliable authority and when quoting figures from some source gives the source from which it takes the figures. Kent's Pocketbook for 1895 gives the weights on standard gas pipe as made by the Addyston Pipe & Steel Company at that time and those weights are here given in the column corresponding to each size, for instances, the weight of the 4 inch is 17.4 pounds; 6 inch 30 pounds 10 inch 50 pounds; and so on down through the column as there indicated. These weights set out in Kent's Pocketbook as credited to the Addyston Pipe & Steel Company have a particular interest in connection with the proper weights of cast iron that the Lincoln Gas Company has in the ground, and that fact is shown by the statements of the factory in the case of the Addyston Pipe & Steel Company vs. United States reported in the 175 U. S. 211 and extracts therefrom stating certain facts as to the Addyston Pipe & Steel Company are here made a part of Exhibit "217."

It appears in that case that the Addyston Pipe & Steel Company of Cincinnati, Ohio, Dennis Long & Co. of Louisville, Ky., Howard, Harrison Iron Company of Bessimier, Ala.; The Anniston Pipe & Foundry Company of Anniston, Ala.; the South Pittsburg Pipe Works of South Pittsburg, Tenn.; the Chattanooga Pipe Works of Chattanooga, Tenn.; one company in the State of Ohio, one in Kentucky, two in Alabama, and two in Tennessee entered into a combination about the price of cast iron pipe and were prosecuted under
1207 the Sherman act so called and so that got into the case a statement about these companies. As I understand it Addyston Pipe & Steel Company was really the leader and got up the printed matter relative to the price quotations that showe- what was being done and one of these list- of standard gas pipes as furnished by one or more of these companies got into the Kent's Pocketbook for 1895.

The following are in substance some of the facts on which the judgment of the Circuit Court of Appeals rested as stated in the records: "It was charged in the petition that on the 28th day of December 1894 the defendants entered into a combination and conspiracy among themselves, by which they agreed there should be no competition between them in any of the states and territories mentioned in the agreement (comprising some 36 in all) in regard to the manufacturing and sale of cast iron pipe.

From the minutes of the association a copy of which was put in evidence by the petitioners, *a*t appeared that prior to December 28, 1894 The Anniston Company, the Howard Harrison Company, the Chattanooga Company, and the South Pittsburg Company had been associated as the Southern Associated Pipe Works and upon that date the Addyston Company and *the* Dennis Long & Company were admitted to membership. The contract was let to Howard Harrison Company at Bessemier the $24.00, who allowed the Shickle, Harrison and Howard Company,—a pipe company of St. Louis not in the association, but having the same president as the Howard, Harrison Company at Bessemier to fill part of the order." This extract, part of which I have read from the Surpreme Court case, I think tends strongly to show that this group of pipe manufacturers were doing business together in this combination, and to my mind that they would be furnishing the same weights of pipe for the same price. It happens that the names of several of these companies which I have just read from Justice Peckham's statement
1208 appear repeatedly in the records of the Lincoln Gas Company as the company from whom they purchased their pipe as I will show by another exhibit. I was trying to indicate my reason for thinking the Lincoln Company bought this grade of pipe which was more largely this than weight I have allowed, and part of that reason is if they were buying pipe from those parties,—the leading member of that combination put out that weight of pipe at that time,—according to Kent and his Pocketbook.

My general view and information about the situation as to the weight of cast iron pipe, that prior to 1900, and particularly prior to the adopting by the American Gas Light Association in 1898 and the Western Gas Association in 1892 of standard wieghts for pipe is the weights were lighter than those adopted by those associations, otherwise I don't think there would have been any association to adopt and recommend. The tendency has always been in the associations to recommend a somewhat higher standard than that in use and to raise the general standard of con-truction, it is impossible that the associations would have adopted and recommended a lighter weight than that in use.

For the purpose of connecting the figures in Kent's Pocketbook with the weight of pipe here in Lincoln I call attention to exhibit "212" on page 9 of the "Cost exhibits folder." Page 9 contains simply the summary of figures representing the dollars of worth of pipe purchased in this as far as I could ascertain. Turning to page 10 exhibit "212" that exhibit shows, "amounts paid for cast iron pipe per books and bills."

In the exhibit in the left hand column is set out the names of divers pipe manufacturers know- to the trade as such and then follows designating all the dates by year at least and in some instances by the month and day, and then the price per ton obtained and the total cost of the pipe purchased in dollars.

1209 The names of the pipe manufacturers, under each year, in the early years appears in the book of the accounts of the company,—the ledgers and journals,—and in the later years all the bills we have been able to procure, it has been impossible to find any bills prior to 1901 but there are numerous entries in the construction account of the Lincoln Gas & Electric Light Company purporting to show purchases from these pipe manufacturers, in most cases there is enough in the entry to indicate that it was pipe,—where the entry was simply the name of the pipe manufacturer and dollars I have assumed that it was pipe. I am speaking of the pipe manufacturers whose name- appear in this list of vendors of pipe beginning in 1876 when the wooden mains gave out and run down through to 1912. That is the list I presume from whome a great portion of the cast iron pipe has been bought.

In the year 1880 appears the name of Taylor Jones and an amount of about $4,100.00,—I think that Taylor Jones was the maker and seller of cast iron pipe,—if I am wrong the entry against Taylor Jones in the year 1880 goes for nought.

In 1876 there was purchased, according to the books of the company, from Dennis Long & Company, one of the concerns that got into this difficulty with the United States $1,397.00 worth of pipe.

In 1884 we notice the name of Shickle Harrison & Howard Company,—there were two of those Harrison companies you will remember which have the same president and may be presumed to have conducted their affairs in the same way as to weights of pipes. Running down through the 80's the name of Harrison, Howard Company and Shickle, Harrison & Howard, Dennis Long & Company and the Chattanooga Pipe Company appear regularly. In fact they appear to include most all of the purchases of pipe that were made. Then I find the Lake Short Foundry in there for a purchase in 1884, but most of the purchases were from the concerns I

1210 have mentioned and the same thing appears right down into the 90's running down throught the years are found Dennis Long & Company; and Shickle Harrison & Howard occupying a very large space in the pipe purchase. In 1890 Dennis Long and Company there selling this concern some $8,314.00 of Pipe. In 1891 Shickle Harrison & Howard appear to have sold this company some $14,110.00 worth of pipe and it is not until we get down to the year 1901, and in later years than when the bulk of this cast iron pipe was purchased from this company.

Having shown from whom the bulk of this cast iron was purchased as indicated in exhibit "212" I now call attention to exhibit "210." Exhibit "210" shows the weights and length and weights per foot of cast iron pipe purchased by the gas company. This exhibit includes all the pipe purchased that we have been able to find in the books of the Lincoln Gas Company, and in their bills

beginning with their earli-st year down to the end of 1912, and a couple of bills in 1913 and we probably have in another all that has been bought in 1913. Exhibit "210" is not merely co-extensive with exhibit "212" which runs from 1876 down to date, whereas there is in exhibit "210" only one item that runs prior to 1901,—that entry is for 1892 and is found at the bottom of the exhibit,—that is due to the fact that the bills of the company have disappeared to 1900, you can't find them and the book entries are very meager showing usually the name of the concern from which the pipe was purchased and the weight of it and not giving the length per pound purchased so you can't determine the weight per pound.

I believe exhibit "210" shows a materially heavier weight of pipe on the average than the company has actually bought and put into the ground, because it covers purchases of pipe since 1900, with one bare exception and since 1900 a heavier weight of pipe on the whole has been in vogue due to the activity of the different gas asso-
1211 ci-tions than existed on the average before that.

In exhibit "210" there is shown the date of each purchase and — recoeded, the number of pieces purchased and the inch size. As to the word "pieces" it is piling pipe, very common to speak of an individual as a piece of pipe as now and has been laid in standard lengths of 12 feet; when you come to put them together they actually cover some more than 12 feet because they have a bell and socket joint so there are less of the length when it comes to connection them up and they are always dealt with on the basis of their laying length, so if you know the parts or pieces of pipes purchased you know the laying length and then all there is to do is to multiply it by 12, and that is how these lengths in most cases were obtained. The bills don't commonly state the length of the pipe in feet, they state the number of pieces and the amount paid per pound and the conclusion as to the length inevitably follows due to the fact that standard gas pipe is now 12 feet. Having the actual pieces of pipe per foot the entire length here, the weight would be a little less than here because your pipe would be 6 inches longer and you would have a greater factor to divide by, the pounds being fixed the weight per foot would be a little less.

There is given in exhibit "210" the number of pieces and inch size; the pounds total weight; the feet leng*ht* and the pound per foot resulting from the total number of pounds purchased and the feet in length. The purchase of the respective sizes of pipe have been combined to get an average figure for each size of pipe; for instance, here are recorded all the purchases we have found on the 4 inch cast iron pipe beginning with 1901 and ending with 1913 and the total weight of that 4 inch pipe is added together in one of the column- headed "pounds total weight" and the total feet of that 4 inch pipe is obtained by adding together the feet in these
1212 respective purchases, and the total pounds is divided by the total feet to get the average of 18.8 pounds per foot for the pipe of that period. I didn't expect to find and didn't find the lighter weight of pipe I believe exists in this plant because this record don't go back far enough, but I have put down here light or

heavy what I have found. These figures deal with more recent purchases since 1901, except one, that I will call attention to later.

For the 6 inch pipe the purchases ran from 1901 to 1910, and the total weight is obtained and the total feet of length for an average weight of 31.4 pounds per foot on the basis of these purchases and weights.

For the 10 inch*e* pipe I have only one small purchase which shows 55.8 pounds per foot; that purchase is dated 1910 when I should have ex*ep*cted the current weight of gas pipe to have been purchased.

For the 12 inch I was unable to find only a single length where I could get the weight that figures at 70.4 pounds per foot purchased in 1912.

The 16 inch pipe, the last entry in this exhibit "210," I got one of the purchases of the early pipe which I think would have been a light weight, and found 33 pieces of 16 inch pipe in the record as bought, and weighing 37,137 pounds; the length of those 33 pieces would be the laying length of 396 feet, resulting in 93.7 pounds per foot, a weight substantially less than that I have assumed for the weight of the company's pipe.

Again referring to exhibit "212" at page 11 I call attention to the date and parties concerned in that purchase of 16 inch pipe, which is the only purchase of cast iron pipe.

Going into the pounds and length that we have been able to locate in all the records of the company. Looking at the year 1892 we find the Western Gas Construction Company and seller of that pipe

1213 bought August 11th, the size was 16 inches, the pipe per ton $26.25, the total cost was $487.33; that is the only one that gives the length and weight of the cast iron pipe purchased prior to 1900 and occurrs in Ledger "B" at page 134 where the whole transaction to the extent to which I have indicated is set out.

Now referring to exhibit "217" on page 9 of the folder entitled "Data Considered" and to the right hand column entitled "Pounds per foot standard weight of cast iron gas pipe" that column is headed "Pounds per American Gas Light Association in 1905" and call attention to the fact that the pounds as set out in that column and adopted by the gas light association in 1905 are larger than the 3 usually used sizes of 4, 6, and 8 inch than the weights adopted by the same gas light association in 1898; and substantially larger than the weights shown in the catalogue of R. D. Wood & Co. and are larger in the majority of sizes than the weights shown in Kent's Pocketbook and there described as the Addyston Pipe & Steel Company pipe.

A comparison of the weights set out in these two gas li*hgt* association recommendations illustrates the movement I mentioned toward the use of a heavier weight of pipe, one recommendation being in 1898 and the later one in 1905.

Before leaving this subject of the weight of pipes, a somewhat important one, I call attention again to exhibit "217" page 9 of the folder "Data Considered" that table is headed "pounds per foot of iron gas mains" and included the inch sizes of mains from 3 to

20; the pounds per foot assumed by Mr. Lea as the weight of the gas pipe actually in the ground here in Lincoln in his valuation.

In the next column the weights assumed by Campen another witness for the company. The next column shows the weights assumed by myself in my testimony, which are the weights shown in Kent's Pocketboo*t* described as the Addyston Pipe & Steel Company who was in the combination with the other compan*y*'s mentioned and three names appear year after year from 1876 to
1214 1900 on the books of the Gas Company as the sellers of pipe.

I don't want to be understood as saying those compan*y*'s before the time of that combination, made a pipe as heavy as I allowed, but I wanted to make a fair conservative estimate as to the weight of the pipe on beh*l*af of the Gas Company and feel sure I have erred as against the City in assuming the weight of pipes that I have. I have assumed a greate*d* weight that actually exists on the average here in Lincoln undoubtedly the small amount they have bought in recent years is heavier per foot than the weights I have taken there is only a little of that heavy pipe, the great bulk of that pipe was bought before my record of the weights of same are shown,—was bought at a time when the records of the company wouldn't show the weights,—with the exception of that one instance of pipe in 1892. You will notice that Mr. Lea assumes 110.47 pounds per foot for the 16 inch pipe; and Mr. Campen found it was 108.3 pounds per foot and I have assumed 100. pounds per foot as the weight of that 16 inch pipe; and the only record of the company on that size of pipe shows a weight of 93.7 pounds per foot,—this is also the only record of the company that we have back of 1900 being the record of 1892,—I think I have dealt with it fairly with the company in assuming that all the other cast iron pipe on the average has a weight as great as that shown in Kent's Pocketboo*t*.

Now another thing about the designation of steel mains apart from cast iron pipe. In exhibit "187" on page 12 headed "Cost of steel mains laid each year as of January 1, 1907," the pipe now very commonly laid by gas companies is what is known as "black" or "merchants" pipe; it is a soft steel pipe that has mostly replaced wrought iri*o*n in the market because it is cheaper to manufacture and many engineers think it is as good as wrought iron, at least one manufacturer has put out a pamphlet in which he thinks it is better than wrought i*o*rn, it is largely used and in looking through the rec*o*rds of this company I have run across scarcely any
1215 if any bill that specifies genuine wrought iron pipe which is the way that wrought iron pipe must be designated in order to get it.

The point about wrought iron pipe that I have in mind in this connection is simply that if we had to estimate the reproduction of wrought iron pipe here in Lincoln on the basis of wrought iron it would be necessary to add 1 cent or more per foot, perhaps 2 cents to the price of steel pipe in order to get a fair price of wrought iron pipe; but finding the bills of the company showing regularly black pipe, and finding the entry in one of the company's record books

of steel pipe purchased I don't think any great amount, if any, of the pipe in the ground is of the genuine wrought iron I think it is of the black steel pipe sort which is cheaper than wrought iron and I have made my estimate on that sort of pipe. I so understand Mr. Lea to assume the steel pipe in his testimony and presume his price is for steel pipe. That has a bearing in this case here whether we shall charge several cents more per foot for this wrought iron pipe. Both the steel and wrought iron are commonly spoken of as wrought pipe, that is, they are not a pipe obtained by a casting process at all, but are obtained by a mechanical manipulation of the iron formed into a shape by suitable machinery and they have very similar characteristics. The steel pipe used to be a good deal harder when you tried to work your dies when cutting threads so you could tell that way, but now the manufacture of it has been so improved that I can't tell and those that work in it can't tell whether it is wrought iron or steel pipe. There is a minute structural difference, a structural rather than chemical although there is a slight chemical difference; the more accurate way to tell whether it is wrought iron or steel is by a certain test that brings out its structure. There is a small layer of slag between the layers of iron in the wrought iron pipe that doesn't exist in the steel pipe. You don't get the slag out of the wrought iron that you do out of the steel, it is not there, you can *you can* find it out by proper
1216 methods.

The cost of steel pipe as set up in exhibit "187" is separated into the cost for the respective years in which the pipe was laid in the same way as the cost of the cast iron pipe as shown by the records of the company. The cost per foot of steel pipe is multiplied into the number of feet of the particular size of steel pipe laid in the year to get the total cost of the pipe laid in each year.

The only size of steel pipe laid as mains by the company beginning with 1903 has been the 2 inch size, so that we simply have to apply the estimated cost of 2 inch pipe laid complete in the ground to the feet of 2 inch that has been laid in each year. A large quantity of 2 inch pipe was also laid before 1903 that is estimated in the same way by applying the same price per foot here adopted for the 2 inch pipe which is .098 cents for the pipe and main laid in the ground complete as of January 1, 1907. That gives in connection with a little 1¼ and 1½ inch pipe that is said to have existed prior to 1903, a cost for the steel pipe laid before 1903, of $26,338.39; and then following down through the years to 1906 inclusive, the total footing of the column of cost is $39,709.50 for all the steel pipe l*iad* up to January 1, 1907.

Exhibit "188" page 13 the second tabulation is headed "Cost and value Lincoln steel gas mains as of January 1, 1907."

This table sets out the cost of steel pipe on the basis of 1907 price for each year in which the pipe was laid, as indicated in exhibit "187" which carries those early totals for pipe laid into exhibit "188" where they are again set out under the heading "New cost January 1, 1907."

Next comes the column of "years old" indicating the age of the pipe.

Next the column of depreciation, which is figured at 2%
1217 corresponding to a life of 50 years for this class of pipe as distinguished from 100 years which was allowed for the cast iron pipe. The steel pipe has a much thinner wall than the cast iron pipe consequently at a given rate of corrosion per year it would last less if the corrosion were on it at the same rate and you would have a hole in the pipe in that the metal or steel corrodes at a faster rate, you can rust away more inches per century exposed to the soil than you can cast iron and 50 years is as good an estimate as I can make for the life of that pipe which results in a 2% depreciation.

The dollars of depreciation are computed by multiplying the percentage of depreciation into the cost of the pipe as laid in any one year to get the dollars in the column of depreciation.

And the column of dollars value at the right is obtained by deducting the depreciation from the cost of the pipe.

The footing of this column for the new cost of steel pipe is $39,704.00. That is the same footing figure carried by me into exhibit "184" as the cost of the steel pipe. And the footing for the total depreciation on this pipe down to January 1, 1907, is $9,354.00 which deducted from rest leaves a value of January 1, 1907 of $30,350.00 which is again carried into exhibit "184" under the heading "distribution system" on page 8.

Calling attention to exhibit "189" on page 14 how the cost of steel mains, made up of steel pipe, labor and materials to place in the ground is made up. The steel mains in Lincoln are composed of a small amount of 1¼ inch pipe and then of 2 inch pipe, almost all of the 2 inch size, and in showing that I will confine myself to the 2 inch size because the 1¼ follows it in form. The trenching and filling for the 2 inch steel pipe is 7.20 cents per foot; the carting and laying of that pipe is 1.80 cents per foot. It may be explained here that the laying of the steel pipe and particularly
1218 the joining of it is a shorter and cheaper process than that of cast iron. Steel pipe commonly comes in random lengths about 12 to 18 feet,—16 feet is a common length,—it is joined by screwing it together, it is a screw pipe. Those screw joints can be made very quickly and much cheaper than the cast iron joint between it.

Cast iron pipe joint which is commonly made of cement and what we call yarn or oakum hammered into place. They used to use lead, lead is still used in water works, but in the gas works the joint is usually made of cement. The joint *are* made by hammering this yarn and filling it up with a cement mortar that makes a tighter joint and one that gas managers prefer. Some lead joints are put where it is thought the pipe will be subjected to unusual strains, that is, a brittle joint, whereas the lead joints are made to give it strength. That gives the total labor of trenching and filling carting and laying of the 2 inch steel pipe of 9 cents per foot and there is added another ½ cent for miscellaneous material called

here "jointing materials and incidentals" the only join-ing materials would be a little red lead to put on the screw joints for each pipe coupling is screwed into the next pipe adding that general incidental expense of ½ cent to the 9 cents makes 9½ cents per foot for the steel pipe all except the iron. In dealing with the iron I have put in here 10.34 cents which is 3% on to the cost for the specials for the 2 inch size. That is 10.34 cents for the 2 inch size and specials added to the 9.5 cents cost makes the total cost read 19.84 cent- and there has been used in the computation the nearest 1.10 of a cent, namely 19.8 cents as the total and complete cost of acquiring the pipe into position and ready to supply gas in the trench, being done with the job everything except paving.

I want to say a word about my method of arriving at the cost of steel pipe, as such and cast iron pipe, also a word or two about the labor cost of the pipe, that is of laying the pipe and getting it into a main system.

1219 I call attention to exhibit "191" on page 16 of the valuation folder in a column of that exhibit is set down the price per ton which I have used for the several sizes of cast iron pipe.

Exhibit "191" is headed "Cost of cast iron pipe for gas mains at Lincoln as of January 1, 1907"; I am now attempting to explain the rule for adopting the price of 2,000 pounds per ton set out in this exhibit as follows; for the 3 inch mains $34.00 per ton; these prices are all f. o. b. Lincoln. 4 inch mains $32.00 per ton; and 6 inch to 20 inch mains inclusive $30.00 per ton. If we were trying to strike an extremely fine division of the cost we would differentiate a little between the cost of the 6 and 8 inch mains to the 16 and 20 inch mains, but I have thought these prices very fair to the company taken and applied as they are.

Explaining about the sources of information for the cost of cast iron pipe, in the first place cast iron pipe is sold in a pretty uniform way; the freight is usually prepaid by the seller of the pipe to the point where the purchaser wants to have it delivered, so that notices and contracts for cast iron pipe are almost invariably on the basis f. o. b. some point and the freight paid to that point by the person who furnishes that pipe.

The Trade Journals, a number of them, particularly the Iron Age, and the Engineer's New- have long compiled with what we call the open market quotations on cast iron pipe, which compiled records of the letting of cast iron pipe, in public bids, particularly by cities; that comes about in this way; in the first place the Journals have gotton into the habit along with the manufacturers of cast iron pipe of giving out quotations or what are called open market quotations on a mediate size of pipe, either 4 or 6 inch pipe f. o. b. for certain important points. For instance, you get weekly notices f. o. b. Tidewater, N. Y.; you will probably get a notice f. o. b. Chicago; and several other important freight centers. You will get notices

1220 on 4 and 6 inch pipe based on the purchase of one car load as so much for 6 inch pipe f. o. b. Chicago;—or whichever point it may be,—there are perhaps 4 or 5 of those point- at which quotations are commonly given in the Trade Journals. That infor-

mation is important as indicating the general swing of the market of cast iron pipe. It is not exactly uniform as to price at which you can buy if you wanted a good quantity of it, but if you merely wanted to buy a car load of pipe you can get closer to what you will have to pay by looking up the market quotations. If you want a good many cars, such as would be concerned in the construction of the Lincoln Gas system it is a very different matter. The buyer at wholesale gets a better price than the open market quotation published broadcast per car load of pipe. If you really wanted to find out what the pipe can be bought for in considerable quantities the thing for you to study in addition to the market quotations, which are always net cost and are helpful to giving an idea of which way the pendulum is swinging; is the record of actual sales of pipe are public bids made usually to cities. The municipal ownership of water works in this country is very extensive, the percentage of municipal ownership as applied to water are many time- as are applied to gas and even electric plants so that a great many municipalities are buying pipe from time to time and municipalities conceal their business you can always find out from a municipality what the price of pipe is that they have paid for it. Usually the municipality will advertise in the Engineering News that bids will be received on a certain date and are for so many tons of cast iron pipe. Anybody can go to the proper city official and find out about it. Trade Journals recognize that is valuable to engineers the country over collect and publish it and be comparing those bids of cast iron pipe who have the actual transaction. Bids are sometimes accepted and sometimes rejected but it represents the actual offer to sell and you will find those bids and contracts for cast iron pipe contain in that way always running
1221 distinctly below the market quotations for single car loads as published in Trade Journals.

I have relied very largely on those bid- and contracts for cast iron pipe as delivered to certain cities in this part of the Union, meaning the whole Mississippi Valley ranging through this part of the country.

To allow a far price on this pipe,—not here in Lincoln because the purchases of this company of this cast iron pipe at about 1906 and 1907 were very small so their purchases are not a fair criterion of what it would be paid per ton for cast iron pipe but would have been paid if the purchases had been large in quantity, like that to reproduce this system of gas mains here. The same is true of the Lincoln Water Works. Their purchases of pipe have been made piecemeal, to extend a main here and there, that is during the years 1906 and 1907, the years when we wanted to look for information as to what could have been done in the purchasing of pipe for the duplication of this gas system. The purchases regularly by the water department of this city are small and are not an adequate measure of the pipe at that time, they are too high. I collected quite an amount of information from the Trade Journals as to bids and contracts for cast iron pipe, made all the way from Minneapolis to New Orleans along both sides of the river to get a good representative basis. So that you can see just how the actual prices paid by the purchaser in

quantities compared with the $30.00 per tone I have allowed for everything in 6 inch size and larger, and $32.00 per tone on the 4 inch,—now a word as to prices of steel pipes. Steel pipe unlike cast iron pipe is more commonly sold f. o. b. the point of shipment. It is not sold by weight but by the foot. If you want to got through a process of mathematical gymnastics you can tell what you are paying per pound and it may be interesting for some purposes; it is sold from what is commonly called standard pipe lists. We had
1222 some of those lists introduced in evidence by the company. There is issued from time to time by the manufacturers a discount from those list-,—the list- themselves are not changed very often. There was a list in 1901, and speaking from memory, I think only one important change was made on any size of pipe used by this company between then and 1910. The discounts change frequently,—from week to week, or month to month,—it fluctuates with the price of steel products.

The most common and general quotation is for pipe f. o. b. in what is known as Pittsburg District. Most of the steel pipe is made in or adjacent to that district, which I understand to be a large territory in Pennsylvania *hw*ere many of the mills are located as to which the freight is equalized it don't make any difference whether the mill is northeast or southwest of Pittsburg. I think some of these plants even farther away are equalized and brought to the same basis as the Pittsburg District, but am not quite sure about that.

Unless you make a special contract for steel pipe you get your quotation f. o. b. Pittsburg you have to find out your freight rate to the point of shipment to find what it is going to cost you. Of course this plant has from time to time bought from the local supply house small quantities of pipe but it will be ruinous if you were building a plant to do that, I haven't considered that as of any particular value or indication of the fair price of pipe to be figured in reproducing this plant. I have thought rather that the price to be considered and used was what the pipe would cost f. o. b. Pittsburg plus the *g*reight *of* bring it to Lincoln. I have a letter stating the freight rate from Lincoln to Pittsburg on steel pipe and have figured my steel pipe on that basis and will show the details of that in an exhibit, showing the cost of pipe apart from the market quotation, in the Pittsburg District and the cost that must be added to cover the freight for bringing it here to Lincoln.

I also have some other cost of steel pipe here that have
1223 been purchased of particular companies in considerable quantities which I will put into the exhibit.

I haven't the bills for small quantities of steel pipe purchased by this company locally here giving particular indication of the actual cost of pipe if bought in large quantities such as would be necessary to replace this plant. I think however, that some of the bills of the gas company show as low a price as I have used in particular around January 1, 1913. When it comes to that valuation I think some of the purchases of pipes where they purchased a fair quantity say 2 or 3 miles, was about as low as I figured. I don't think I figured the

lowest price it could have been bought for but a price it could easily have been laid here for.

I call attention to the total ton-age of cast iron pipe in the Lincoln Gas Plant as of January 1, 1913 in Lincoln, it does not include the cast iron pipes outside of the city. These figures are for January 1, 1913 I mention here for I have none compiled for January 1, 1907. That wouldn't be greater than this because the amount of cast iron pipe since 1907 has been quite small relatively, I find taking it down to 1913, this plant contained on the basis of the evidence I have used, 1,828 tons of cast iron pipe. If you want to put it into pounds it is 3,675,653 pounds, which would make quite a pipe order and would have that bearing on the price that I have indicated the wholesale purchase usually has.

Now a word as to the cost of labor of installing the pipe here in Lncoln, referring to exhibit "212" on page 12 of the cost exhibit near the bottom of the page. If you will look at the years 1905 and 1906 you will see all of the purchases of pipe as of those dates that I have been able to find, which was very small, and in my opinion quite inadequate to base directly a fair price on.

In 1907 my recollection is that I was unable to find any purchase by the company in that year.

1224 The price paid in 1906 for some 4 & 6, inch pipe ranged from $30.60 to $32.35 per ton whereas I have allowed in Exhibit "191" for 4 inch $32.00 per ton and for 6 inch and larger $30.00 per ton of the price I have taken for pipe is somewhat lower than this price of 1906. A word in explanation the way that the price of pipe, as exhibited by the market quotations and actual sales of pipe ought to affect the company on the new cost of that pipe in the duplication of this plant as of January 1, 1907, I take then that the substantial purchaser of this plant,—the person into whose mind we are trying to see what the aggregation of things here forming the gas plant would be worth at that time, the first day of January 1907,—ready to purchase this plant must in the case of supplying like pipe which varies from month to month in price, I must look over the past year to see how the cost of pipe has been running and what the city and company have bought large bills for and take into consideration the present market price on the first of January and make the best forecast I can as to how I had better arrange for pipe purchases during the installation of the prospective gas plant, if he find he can not deal with the company by this one. As a practical man he is going to know that the first day of January people don't ordinarily put in pipe systems; he is going to come to the conclusion that the year 1907 will enable him to lay that pipe but he has no occasion for it the first day of January or February, in fact it wouldn't be at all until long in March. He is going to study the fluctuation in a past market and for-cast if he can what the price will be, and whether he had better make his contract immediately or the first of January or wait until the first of March and April because he is going to lay his pipe in the spring, summer and fall and not the dead of winter. By following out the history

of pipe price on the first day of January we know the price
1225 was a little high,—the price of the pipe curve run up into a real Pike's Peak the first part of January when nobody is buying pipe for delivery at that time. No considerable amount was being bought for delivery at that time because people don't lay pipe when the ground is 4 feet deep covered with snow. It is rather laborious as Mr. Campen found in his estimate. So the price of pipe runs up sharply in the last months of 1906 and having been a good deal lower on the average through 1906 than in the last days of December 1906 and the first days of January 1907 the reasonable purchaser in my opinion would have made his plans on the price of another swing of the pendulum, would have considered whether and how far the prices were going to fall before and during the time he would be laying that cast iron pipe. A reasonable man would not have closed up all his pipe contracts the first of January. If he had studied the curve and understands the way the pipe prices has varied and been varying during 1906, he wouldn't have made a contract for 1828 tons in the early days of January 1907, but would have held off knowing that he didn't need it to lay until along in the later part of March anywhere and would have held off to see what would happen with the market.

While we make this valuation as of January 1, 1907, that don't mean the plant has to be produced on that date one year would be ample for the reproduction of a plant like that one here in Lincoln I think the evidence of the company's witnesses applies a much longer period. If that is correct, by the same testimony much less would the prospective owner be justified in contracting for the entire amount of pipe over the year price on the first day of January, and in the middle of the year he could have bought decidedly below the price I have indicated.

I have found the testimony of Mr. George L. Campen of this company on labor cost interesting and I have compiled some of it and its analysis is shown in Exhibit "204" page 1 of the cost folder. If
I really understand Mr. Campen's testimony of assuming that
1226 anybody laying pipes can lay right on through the winter months the same as July smashing down through whatever feet of frost there was and laying the pipes as in summer. That appeared to me as extra-ordinary. I understood Mr. Campen to divide his cost for laying pipe in order I called in 10 months of the year and then at a cost quite different for piped laid 2 months a year and in Exhibit "204" I have set out his cost in detail as I understand his testimony for just the labor in laying the pipes during 10 months of the year, being that part of the year necessary to lay all the pipe there was in Lincoln and that any gas plant would consider laying any considerable amount of pipe in, of course it would call for the laying of some pipes through 3 or 4 feet of frozen earth and that was very unusual and limited in extent.

Mr. Campen made his estimate on the basis of 100 feet of pipe for each size so we simple have to move the decimal point two places to the left to get the price per foot of pipe for comparitive purposes.

The cost set down there — simply labor cost as I understand it from Mr. Campen's testimony.

Taking the 2 inch size in Exhibit "204" which is headed "labor cost of laying gas mains in Lincoln per analysis of testimony of George L. Campen in Lincoln Gas & Electric Light Company vs. Lincoln Record Age—"

I will state the items that have gone into Mr. Campen's cost of laying each size of pipe per 100 feet; hauling pipe at $1.00 per ton 0.18; foreman 0.66 laying pipe and digging bell holes 0.625 total on pipe and foreman 1.465; digging ditch 10 months in the year 4.50 backfilling 10 months in year 2.0 total on ditch 6.50 making total labor cost per 100 feet 7.96.

On the 2 inch pipe Mr. Campen's report gives the cost during 10 months of the year made up as I explained .0796 cents per foot.

My total on the steel pipe allowed for mains as appears in Exhibit "189" page 14 is 9 cents or something more than 1 cent
1227 higher than Mr. Campen's taking for 10 months in the year cost.

Taking the 3 inch pipe for 100 feet is .094 cents per foot; my figures for the same are .0992 cents per foot.

On the 4 inch Mr. Campen's figure for labor cost is .109 cents per foot and my figure is .1127 cents per foot.

On the 6 inch Mr. Campen's labor cost is .1477 cents per foot, my figure is .1488 cents per foot.

On the 8 inch size Mr. Campen's total labor cost is .1705 cents per foot; mine is .1911 cents per foot.

On the 10 inch size Mr. Campen's total labor cost is .2187 cents per foot and mine is .22 cents per foot.

On the 12 inch size Mr. Campen's total labor cost is .2695 cents per foot; mine is .2786 cents per foot.

On the 16 inch size Mr. Campen's total labor cost is .3634 cents per foot; mine is .3584 cents per foot.

On the 20 inch size Mr. Campen's total cost is .4629 cents per foot; mine is .493 cents per foot.

Calling attention further to the labor cost of the company in putting in these mains as per its annual gas reports, that cost will be found in Exhibit "205" on pages 3 and 4 of the cost folder. This exhibit is headed "Lincoln Gas & Electric Light Company, cost of mains laid 1903 to 1912 per annual gas reports." That exhibit is in the form of a tabulation covering the 10 years from 1903 to 1912 inclusive for the size of mains beginning with the 2 inch and then taking up the 4, 6, and 8 inch mains, those being all the sizes of mains the company shows in their reports as having been laid during this decade. By that process there is obtained at first a summary of the total labor cost of laying that main according to the company; the total material cost, which are not in particular concerned with here; and the resulting total cost; and the total feet of mains laid in each size during those 10 years.

1228 These mains were laid in relative small quantities during each year and it is not expected that any such average cost would result as might be had by making one job of it. Not only

these mains, but all the mains the company has got must be laid as rapidly as they could be in the reproduction of a plant the size of this one; at the same time they afford some interesting figures as to cost.

In the later part of page 4 of Exhibit "205" the summary is presented for the different sizes of mains representing the total amount laid of each size during the entire 10 years as a unit; the cost is still divided into the labor cost and the material cost, the total labor cost of laying the 281,076 feet of gas mains during that period was $33,123.70 and the total cost of the laying of said mains and furnishing the total of the mains in the ground according to the gas reports was $77,519.13, for all the sizes from 2 inch to 8 inch which the company laid during the decade.

In the last table on page 4 the cost charges mentioned are reduced to — cents per foot of mains laid with the following result as to labor: The 2 inch size .0968 cents per foot, that may be compared with my 9 cents per foot allowed for laying in the street mains in the plant. I am now making a study of the work orders to determine in part whether that figure contains any paving the company may have taken up and relaid under the instruction of the engineer. I will say that the figures I have mentioned purport to include all those found in the gas reports of all the labor expenses incurred in laying those mains. I don't mean from that to say that such charges as engineers' charges for the designing of those mains is included, but I take it that the gas reports do purport to show the total labor cost, what is the ordinary correct labor cost including that of the foreman in laying those mains.

If there was any additional cost for paving there is nothing
1229 in the annual gas reports to indicate that, I can find nothing and have looked with considerable care.

I want to have it noted that 24,458 feet of these 2 inch mains was laid; it is to be expected, therefore, if my estimates are fair and reasonable for labor, th-t the cost of the company on that large amount of mains, while not as low as my estimate of a systematic reproduction of the mains in town, still it would be getting down towards my cost and did because this labor cost is .0968 cents per foot and mine is 9 cents per foot.

Of the 4, 6, and 8 inch mains relatively very moderate quantities were laid; we find the 4 inch cost running up considerable beyond the cost I have estimated for all the 4 inch in the plant, the 4 inch labor cost is .1834 cents per foot as shown in the gas reports of the company; whereas my cost per foot of 4 inch main is .1127 cents.

The 6 inch cost per foot as shown in the gas reports of the company for this 10 year period, they only had 5,422 feet of 6 inch the cost for that is .1912 cents per feet; I have allowed .1488 cents per foot for the entire length of 6 inch mains in the ground which is again just what I should expect as I found the company had been laying a few hundred feet at a time. Had it been the same labor cost that I had estimated that the whole system could be reproduced for I should think at once that I had made a serious mistake somewhere.

During this decade the company laid only 3,672 feet of 8 inch mains the labor cost as shown by the gas reports of the company gives .2796 per foot; I have allowed on that main .1911 cents per foot. It is well also in comparing the company's cost with my estimate to compare them also with Mr. Campen's estimate; His estimate running for mains laid in the 10 months when the ground wasn't frozen here are a little less than mine. I have heard referred to and know about nearly ever since I came to Lincoln
1230 the first time a little contract that was entered into on the 11th day of September 1912 between the Nebraska Construction Company and Meeker and Dobson for the *alying* of certain water mains in the village of Dewitt, Nebraska. I want to call attention to it as having aided me in arriving at the price for the cost of labor I have arrived at and the figures set out in this contract for laying a relatively small quantity of mains. This is a water main laid in this locality with about 5 feet of cover whereas I have already stated in my testimony for gas mains a 3 foot cover is all that I believe actually exists on the average and I think it an ample cover for these gas mains. I will read the following extract that I have mentioned: "And it is agreed that the party of the first part agrees to pay the party of the second part in the letter above set forth, the following prices: 4 inch pipe laid per lineal foot 15 cents and 6 inch pipe laid per lineal foot 18 cents and 8 inch pipe laid per lineal foot 21 cents; for every hydrant set in place $2.50; for each valve set in place $1.50 it being understood that the above prices include the taking of the above mentioned material from the cars; the digging and filling of the trenches and the furnishing of all necessary lead and oakum together with all necessary labor for said performance."

If these prices are to be compared with the estimates I have made for gas mains they should be compared with those headed in exhibit "189" of "all except iron" that is, the joining material is included here as well as the labor of laying the pipe and I have included in my items all such iron or labor plus the joining and incidental material, such as might have been furnished by this contract in putting in the works; further it has to be remembered that these pipes had to be laid in trenches that were to the gas trenches here in about the ratio of 5½ to 3½ feet in depth; that is, the trench required to be dug for this pipe would be about 57% greater in depth than those I have estimated as necessary here in Lincoln, at 3½ feet
1231 deep on the average and the other trench at 5½ feet. The gas trench I have estimated to vary from 3 feet of the smaller pipes of the 2 inch size which makes up a great bulk of the plant 3.2 feet; I should think the depth of 3.5 would be the average depth to assume and use as an approximate figure in this computation. The depth of 5½ feet which is necessary for 4 inch water mains,—let alone the 6 inch that requires more,—I have estimated 3½ feet for the 4 inch gas pipes intending to have 3 feet of cover and allowing the half foot for the size of the pipe. The 4 inch pipe will measure a little under a half foot, a little under .5. Now all my prices here for putting in this work, the mains and all the rest of it, are

for the work completely in place and are prices which I don't doubt the work could be readily contracted to be performed for, just as the Dewit job was contracted to be preformed by the parties under that contract.

That includes contingencies and contractor's profit and all liability that arises from injury to anybody in the construction of equipment or trenches. The contractor usually has a regular bond in carrying out these constructions, whether it be for the construction of a gas holder or the construction of mains in the streets, he is bound to indemnify the owner of the property from any unusual injury resulting from his negligence. I suppose as a matter of law, he is liable whether he indemnified himself or not. That clause with almost no exception is in every well drawn contract so as to leave no doubt about it whatever. It is included and is there. Whatever his liability is at law the contract usually and uniformly contains a provision that the contractor is to be liable not only for any injury resulting to his own men, but any injury resulting to any person or property in connection with him as a result of his negligence in connection with the work.

Whether it would cost any more to lift a cubic foot of soil from a depth of 5 feet then from one of 3½ feet,—yet it costs
1232 more; that was strongly brought out here by a witness the other day he says the limit was 10 feet in digging gas holders. Whether or not the parties who had this Dewitt contract are Lincoln Parties,—yet Mr. Dobson is a pleasant acquaintance, I have seen and talked with him about this contract. Objection to the question whether *me* made or lost money on the contract was sustained.

I may say about the reservoir that if the contractor lost in any part of it it will be interesting and helpful to know on which part they made their money. I didn't suppose that they had much of a loss in 1912 and would take another loss on their hands in 1913 at similar prices, at any rate the reservoir contract confirms to my mind what they are willing to take for work in this locality.

Exhibit "193" on page 18 of the valuation folder I will consider with exhibit "195" on page 19. Exhibit "195" is the total estimated in detail headed "cost of 1¼ inch service pipe from main to meter as of January 1, 1907" the items in the exhibit include 50 feet of 1¼ inch pipe which is taken at 14.4 cents per foot, that 14.4 cents being the same figure found in exhibit "189" and the 1¼ inch steel pipe laid as mains. The figure 14.4 cents per foot for the 1¼ inch steel pipe laid as mains includes all the labor per foot on such pipe laid for the purpose but when we come to lay it as a service pipe, owing to the fact that you go to a special or extra amount of labor incidental to the laying of that pipe, an item of 50 cents is added to this detail exhibit "195" entitled "connecting into main" and is a labor item. The total here assigned in exhibit "195" to a 1¼ inch service is $8.588; the exhibit includes only 50 feet of service pipe and the 50 feet was arrived at in this way; by a study of the street map of Lincoln I learned that 50 feet was in my opinion an ample width to allow for the Lincoln Streets a few over run that

figure but a good many are 100 feet wide and quite a number
1233 run under that,—I have thought that if the estimate of the service includes service to the property line, which means a service for an average length equal to one half the width of the street,—it making no difference in what part of the street the mains lay,—I have thought that if the estimate included the cost of the service to the property line from the main it would include certainly all that belonging to the company, and that is the property I am trying to reach. I am not trying to value the property that belongs to the house holder, either inside or outside. That has been a subject difficult to value out and I want to give briefly what light I have on it.

Referring to the corporate minutes of the company, the original company operating here at page 24 of said minutes at a meeting of the directors held June 18, 1872 I find the following entry: "On motion of J. N. Cassel it was ordered that the consumer should be charged with the service pipe from the curb stone or outside of the sidewalk provided they make application before or whilst the mains are being laid down, after that time they must pay for pipe from the mains."

I have assumed that rather burdensome rule on the consumer has not remained in force to that extent, that is, to make them pay entirely from the mains; I think the company has paid some of it.

I call attention to exhibit "206" and particularly to the portion headed "cost of service pipe per gas reports." Wherein the years 1903 to 1912 inclusive appear, and the cost of service pipe as shown in the gas reports of the Lincoln Gas Company is set down; in the next column the total cost in dollars in each year charged to consumers for service pipe; and the total number of services laid from the main; and when I say laid from the main I mean just what that says no matter whether they went to the curb or clear to the meter; in
the right hand column is the total cost of services per service
1234 from the main that includes all so called stub services that only run to the curb and others that run to the meter. Referring to the average cost of those services in toto for the 10 year period there having been 5,749 services so laid from the mains, it appears that the average cost was $12.53, on the face of the reports that purpo-t to be the cost of the services clear to the cellar wall or meter or wherever they went to, I understand the meter. It appears that the total cost of the services, namely, $72,010.54 that $33,789.15 was charged to the consumer, which leaves a cost apparently borne by the company for service pipes during this time of $38,221.39.

Now dividing these costs respectively to the consumer and the company by the number of service pipes laid, at appears that the average cost to the company per service from the main was $6.65 and the average cost to the consumer per service to the main was $5.88,—those two figures together make the total cost per service on the average of $12.53.

I conclude from that exhibit for the 10 years' operation that the policy set out in the corporate minutes referred to although somewhat changed, still required the consumer to pay for a large share

of the service pipe to the extent here set out. I got these figures charged to the consumer from the gas reports, as to the cost of service.

Bearing on the question of who has paid for the services that have come in, I refer to page 165 of the printed record of this case in the appeal to the Supreme Court of the United States; I find on page 165 in the testimony of Homer Honeywell the following answer: "We have charged the construction with the amount we put into the services and credited the construction back with the amount the consumer pays us; or we charged construction with the amount of money we actually put in from the main to the lot line."

1235 The consumer pays from the lot line into his house and for making the connection. I understand from the testimoney I have just referred to that Homer Honeywell was at the time he gave that testimony and many years previous connected with the Gas Company and was at that particular time the manager of the company. So that the average cost, according to those gas reports during this decade which it bore itself, shows $6.65 per service, which I have estimated in exhibit "195" at a cost of $8.588 per service, meaning thereby the 50 foot service set out, but not the entire service that runs to the house and is connected with the meter I think the consumer paid for part of that, and it is all the property of the company as near as I can judge from the records I have read.

As to Mr. Lea's estimate for the cost of the service,—I haven't that figure in mind. I remember distinctly however, that in cross examination he claimed to have estimated the cost of reproducing the cost of the entire service both in the private land and in the public street. Calling attention in this connection to exhibit "196" to the heading "cost of one 1¼ inch service from main to curb as of January 1, 1907." The cost of a service of 1¼ inch steel pipe 23 feet long running from the main to the curb there being some such services.

In this connection I want to bring out simply to point out some difficulties that have arisen. I have seen the use of curb boxes to connection with what is called a curb cock in a service pipe. I don't know what proportion of the services have such a box so connected. Briefly described a curb cock box is a cast iron barrel about 3 feet in length and say 3 inch-s in outside diameter, the bottom fits over a little cock or valve underneath the ground, the top of the barrel when in condition has a cast iron cover the object is to have the cover removed when necessary to turn off the supply of gas in

1236 proper cases. The installation of such boxes in connection with the ordinary service pipe is entirely unnecessary and the fact that the company has discontinued that practice is quite in accord with good practice. When you come to the large public buildings down town it is desirable to have a curb cock and curb box that will allow access to the cock so that in event of a fire or other catastrophy that large service pipe can be shut off. I approve of such boxes in the business district but don't approve of them generally for each gas service running into dwellings. As to the

value of those boxes it complicates the situation because I find that a great number of the boxes are out of repair entirely and more or less filled with dirt so as to be entirely useless and valueless. There ought to be made some allowance on account of those boxes in the business district that are more useful or necessary and I don't think a figure for their cost should be added or brought into the value here. I will try to have as good an approximation later as to the number of these boxes that have a right to appear in the system.

I return to exhibit "193" setting up the cost of the services dealt with year by year as laid just like the mains, beginning with the services laid before 1903 the number of such services which I have taken as existing before 1903 is 2,911, that number of services has been multiplied by the cost of $8.58 as for a 50 foot service giving the total cost of the services that existed before 1903 as $24,976.38; the total cost of services laid to the meter in each succeeding year is estimated in the same way giving the total cost down to January 1, 1907 on this basis of $45,834.36. The total cost for each year as just found are carried into exhibit "194" and set opposite each year there; the years of age of the service pipes are taken to be the same as that of the mains to which they are connected. The percent of depreciation is taken as 2½ for the service pipes and the total found in the column headed "per cent depreciation." That
1237 per cent of depreciation is computed on the cost of the services as laid each year; that on the cost of the services laid prior to 1903, namely $24,976.38, computing the depreciation gives 42.5% amounting to $10,614.00 and leaving the value of $14,362.00 in those services. Each following year is dealt with in the same fashion so that the result is the footing in "194" gives as the total cost of service pipes $45,834.36; the total per cent of depreciation 24.9; the total dollars of depreciation $11,435.00; and the total value as of January 1, 1907, $34,397.00. These figures are then carried forward into exhibit "184" as the cost and value of the service pipes of the company.

Coming now to the paving as it exists over the mains, as it would have to be cut and replaced if new mains were laid to replace those that existed as of January 1, 1907 as that is the property I am talking about.

Exhibit "197" is headed "Cost of paving over mains relaid," the first column of that exhibit is the inch size of mains existing under paved streets. The next column the feet in width of the earth trench in which the mains are suppose- to be laid, being the feet of width that has been previously dealt with in estimating the cost of laying mains. The next column headed "Paving cut feet wide, and square feet, per foot of mains," that is, you have that width and multiply it by one to get your square feet per foot. The width of the paving has been increased over the width of the earth trenches as appears in exhibit "197" by the addition of .4 of a foot in each case, which is ample for the purpose. That is a .4 of a foot is added to the width of the dirt trench to get the width of the paving that must be dealt with; the final column of exhibit "197" is headed "Cents cost cutting and repaving per lineal foot main at 25 cents per square foot of pav-

ing" and resulting in the figures of 47½ cents per linear foot of 2 inch mains to 77.5 cents per linear foot of 20 inch mains that
1238 must be laid under paving.

Now as to that phrase "must be laid under paving" I call attention to exhibit "213" headed "feet from curb line to lot line on all paved streets in the City of Lincoln September 1, 1913."

Exhibit "213" sets out in detail the names of the paved streets and parts of said streets on which the paving lies between which streets; the length in feet of said paving between said point, the feet in width of street; the feet in width of the paving in the street; and the feet from the curb to the lot line of the street; that is *said* out in detail for every piece of paving supposed to exist on September 1, 1913 in the streets of Lincoln. The results of exhibit "213" are consolidated in exhibit "214" which is headed "total length in feet for each district from the curb to lot line on all paved streets of the City of Lincoln"; and shows in one column the length of the paving; the next column the corresponding number of feet in the street from the curb to the lot line for that length of street where the paving lies. For instance, for 1,800 feet of paved street in the City of Lincoln the distance from the curb to the lot line on either side of that paving is only 11 feet; for 2,257 feet long of paved streets the distance from the curb to the lot line is 15 feet. I am picking out one or more important numbers. For 24,040 feet long of paved streets the distance from the curb to the lot line is 20 feet; for 24,620 feet long of paved streets the distance from the curb to the lot line is 25 feet, these distances from the curb to the lot line are outside of the paving the unpaved portion on either side of the paving and for 51,150 feet long of paved streets the distance from the curb to the lot line is 30 feet on either side, that 51,150 feet is just about 10 miles; for 22,740 feet long of paved streets the distance from
1239 the curb to the lot line is 35 feet; the highest distance is 45 feet of which there is only 820 feet long of paved street.

Referring to exhibit "215", being information obtained by me from the city engineer's office in a form that I had requested, there is shown a length of 39,080 feet in the so called business district of the city where the sidewalks are supposed to extend from the lot line to the curb and where, therefore, no mains would be laid outside of the paved street, because in contemplation at least, they would have to cut the sidewalk paving which would probably be undesirable.

The point I am making is that the greater portion of the mains along paved streets can be laid in the unpaved portion of those streets. I don't express that as an opinion in the so called business district where the ordinance, as I am told, requires the sidewalk paving to come to the curb so I have found out how much of it is in the so called business district.

By that I mean it could be laid there, I don't dispute anything the company has said about the location of its mains; I am simply pointing out that they would be laid in the other place cheaper, but I am not going to lay it in the business district under the sidewalks because the ordinance don't allow it. I expect to subtract the 39,080 feet from the grand total, I do that precisely.

Exhibit "216" is a tabulation made up at my request in the city engineer's office and the first part reads: "The following is a list of the streets where the water mains are laid between the curb and the property line and also a list of the streets where the water mains are laid directly under the curb." Then follows the heading: "Water mains outside of curb," meaning thereby as I understand it water mains between the curb and property line in the unpaved portions of the street. The length of such mains and the streets and
1240 portions of streets where they exist being stated as here shown to be 39,070 feet. I may say that I got tract of this information by finding that the water gates were commonly or in many streets projected off in the park space.

The water system includes, as I learned nothing smaller than 4 inch pipe and from that up so that we undoubtedly have in this park space in addition a large amount of 4 inch and 6 inch pipe at least, not to say anything of any larger sizes whereas the great bulk of gas mains now laid under paved streets, is 2 inch pipe, next to that the 4 inch size. I will not suggest that anything larger than 4 inches should be laid in the parks, it is a very different thing to lay and use and get out to the 2 inch pipe or even 4 inch pipe in that park space than it would be to lay 10 or 12 inch or larger in such space. For all practical purposes the district where the larger gas pipes are would coincide with what I call the business district, that will appear later.

Continuing with exhibit "216" it appears also that in addition to the 39,070 feet of mains that lay entirely outside of the paved portion of the street, there is another 33,880 feet that lay in what is called under the curb, I understand that to be just under the edge of the curb so that in digging down straight past the curb you can reach the side of the main and with sloping the soil under the curb get all around the main.

Being firmly impressed that anybody reasonably advised who attempted to reproduce such mains as are in the City of Lincoln would *aly* them outside of the paved space and I was helped by finding that the water system had been laid in a substantial part in just that way.

I want to refer to some of these drawings. Exhibit "222" is a blue print showing a portion of "B" Street from 13th to 14th, here is the paved street 30 feet wide that leaves on either side from the curb to the lot line 35 feet the street itself is 100 feet wide, the row
1241 of small dots indicates the location of the trees. That is a sample of one of the streets with wide park spaces. It is one thing in the duplication of a gas plant to believe that the city authorities would require or permit the paved street this narrow strip of paving in the street to be cut when they have in this city millions and tens of millions of perfectly accessible and good grassy spaces on either side of the paved streets in which the mains might be laid. Of course, the thing hasn't been done the mains have been laid when the paving wasn't there and the paving was laid over them, I certainly shall never be the first one to say that any well advised person would cut up the streets to allow 2 inch mains to be laid therein when they could run through the park space with greater facility.

Coming again to exhibit 198 under the heading "Feet of mains to

be relaid under paving in 1907" at the left hand is the size of the mains; the next column is headed "Miles under paving per Malone"; meaning the miles that Mr. Malone who appeared for the company as a witness as shown in the printed record of the case as his testimony as to the length of the mains under paving in 1907. Those miles are simply reduced to feet in the next column which is headed; "Feet under paving in 1907"; the original testimony there dealt with miles. I have taken his average and reduced to feet. The next column is headed; "Per cent to be relaid under paving" that shows the per cent of the total length now under paving that is to be, or would be in my opinion, with reasonable necessity relaid under paving for this gas system if the gas system was to be duplicated and what a prospective purchaser of this plant who wants such a plant would reasonably contemplate as the amount he would have to lay under paving if he didn't buy the existing mains.

Now I want to deal with the mains of 6 inch and larger as shown in exhibit "198", of those that were under paving in 1907
1242 it is assumed would be relaid under paving. The 20 inch mains were not then and are not now under paving but the 16 inch mains were then under paving, according to the testimony of the company I assumed they wouldn't be relaid the reasons are I think they are mainly in the business district, that is one reason.

Coming to the 4 inch mains,—the 6 and 16 inch mains don't give the total length sufficient to cover the business district last year, but I haven't it definitely limited to the business district in 1907, I have assumed that it was about the same as in 1913, it certainly couldn't have been any greater, so I have allowed enough 4 inch mains in connection with the larger sizes to equal the 39,000 feet in that business district where the sidewalks are laid from *crub* to property line: then I have allowed enough more 4 inch mains to represent 20% of what would lay outside of the business district and in that way I get the 45,834 feet. That 20% represents what I consider a fair allowance for the amount of that 4 inch main outside of the business district that might reasonably be expected to be laid under paving due to one cause or another. If you lay your mains in the park you have got to cross even at the street intersections anyway and taking the paving at 30 feet and the block at 400 feet there is a small percentage there, and for various other causes, as shown by my tabulation you will run into some cases where the width of the park space is narrow to run into that and then the trees might bother so you wouldn't think it advisable to run there and better to cut the paving; so I have allowed 20% as laid under paving, the combination of the 4 inch I assum- would be relaid in the business district and 20% of the remaining 4 inch, that for various causes would have to be relaid under the paving, makes up the 33% of the 4 inch mains which I estimated you would have to lay under the paving.

Now coming to the 2 inch mains, to estimate it that 20% of that would have to be relaid under paving it being considered
1243 that of all the 39,000 feet of the mains in the business district is of the larger size. If that is not correct it is in favor of the

company because if part of the 39,000 feet must be covered by 2 inch mains it don't cost as much to relay 2 inch mains as 6 inch mains.

Taking the quantities in the right hand column and arrived at that as I have indicated we have the feet of each size of mains to be relaid under paving as of January 1, 1907, which amounts to 47,572 feet. In exhibit "199" the feet of each size of mains is carried over from exhibit "198" and the cost per foot of mains is carried from exhibit "197" and we get as a result the total cost of paving over mains. The sum of that total cost ov mains is carried back into the distribution system and there set up as the cost of the paving.

I would suggest that the remainder of the testimony as to the value of 1907 which deals with a little service and meters is just of the kind that applies to 1913.

Mr. ALTON D. ADAMS, a witness for the defendant, having been previously sworn, resumed the stand for examination in chief.

Examination in chief by Mr. Foster:

I have made a valuation of the Lincoln Gas & Electric Light Plant in the City of Lincoln as of January 1, 1913. Exhibit '231" is that valuation arrived at by me.

The total value of the Lincoln Gas Plant used and useful for the supply of gas for the City of Lincoln is found in exhibit "231" and the footing of the column at the right hand side of the page; the amount of the value of the plant is $415,745.00; the cost of procur-
ring here a like plant or equivalent plant to that employed in
1244 supplying gas to the City of Lincoln on the first day of January 1913 I estimated to be $551,500.70; the total depreciation to be deducted from that cost is $135,827.00 leaving the value on the first day of January 1913 of $415,745.00.

This is subject to a reduction for a portion of the plant as yet undetermined, which should fairly be allowed for the supplying of gas to places outside of the corporate limits of the City of Lincoln, a portion of the generating capacity and other parts of the plant that actually lie in the City of Lincoln and used to some extent to make and supply gas outside of the City of Lincoln. For instance, the water gas generator at the Lincoln plant generates all the gas when the benches are all running part of that gas is carried outside of the limits of Lincoln and sold; a deduction from these figures in so far as the property employed in supplying Lincoln is concerned must be made for the gas that is sold outside of the city limits. That deduction has not been made and when I finish up my testimony in this case I will make that deduction.

I have made a comparison between the difference between my valuation as of January 1, 1907 and as of January 1, 1913 and the construction account of the company for the same period.

It appears that if from the value which I found for the Lincoln Gas Plant used and useful in the City of Lincoln on January 1, 1913, namely, $415,745.00 there is deducted the like value for said plant on January 1, 1907 of $279,915.00 there remains $135,830.00 rep-

resenting the increase in value which I find from January 1, 1907 to January 1, 1913. By reference to the construction account testified by Mr. Wiggins in this case I find that on January 1, 1913 the sum total of the construction account of the company as to its gas plant was $784,307.00, and on January 1, 1907 the construction account of the gas company on its gas plant was $573,870.00 showing an
1245 increase between January 1, 1907 and January 1, 1913 of $210,473.00, in the construction accounts as they appear on the books of the company relative to the gas plant. This $210,437. increase in the construction account is $74,607.00 greater than the increase in value that I have found relative to the gas plant, namely, $135,830.00.

The difference is to be accounted for in several ways as follows: in the first place there is the fact mentioned in my former testimony that only by extending and enlarging the property can you maintain the value that exists as of any particular date, a hard physical fact that we can not escape from. The plant the company had on January 1, 1907,—its individual pieces and parts have been shrinking in value,—and the extensions of the property and its enlargements have necessarily gone in part, one any proper view of depreciation, to offset the shrinkage in value of the parts that were there on January 1, 1907; and as I have computed the depreciation in a like method on both dates, if that shrinkage in value by reason of depreciation, is reflected in my figures, and if the construction account has been carried along by charging everything to construction that represented an enlargement or extension of the plant, I should expect that the increase in the construction account would substantially exceed the increase in value which I found. I am not testifying now just how the construction account has been carried along, I am not ready to deal with that matter yet but I say if the account has been carried along during this period from 1907 to 1913 by charging the construction with substantially all the enlargements and extensions of the property that would necessarily result, as far as the construction account is concerned,—with larger figures in book value than I should find in estimated value. Owing to the fact that I should depreciate the property during the period from 1907 to 1913 at the rate at which I place the property
1246 as depreciating during the period, and so that the part of the extensions that have been made during that period, as to their value, would simply go to offset the parts there were there on January 1, 1907.

There is another reason to be mentioned in connection with the difference of $74,607.00 that appears between my increase in value and the increase of the construction account; that is the difference in price. The prices of pipe, which remains a very substantial element in the value of gas property have declined since 1907 and I am using in the valuation of the property as of January 1, 1913, a lower price for pipe than I used in the valuation as of January 1, 1907. That might account for a little of the difference, but ought not to account for much of it because the company has been buying along at the market prices and only charging it up at those prices.

I assume that, I don't testify positively beyond that, if they were so, it wouldn't make much difference but still there should be a difference. Unless the price of pipe after 1907 fell at once to the price of January 1, 1913, whether the company would have charged into its construction account pipe at a somewhat higher price than I have taken at January 1, 1913, assuming that is,—if properly taken at the market price of January 1, 1913.

A further substantial part of the difference between my valuation as of January 1, 1913, and January 1, 1907, as compared with the increase in the construction account, is due to the fact that within that period a large portion of the investment of the company in additional gas plant has been for the supplying of places beyond the limits of the City of Lincoln. Large extensions in pipe have been made into University Place and Havelock, a desirable device has been installed for the supplying of gas entering into that of a con-
1247 siderable scale; and a holder has been erected at East Lincoln, undoubtedly to my mind,—for the purpose of carrying on that supply outside of the corporate limits of Lincoln. I have eliminated the holder, mains and extensions of the plant from this total of $415,745.00 as my valuation of 1913; I have only valued the property used and useful in supplying the gas here in Lincoln. I haven't figured the outside at all.

Exhibit "258" is entitled "Gas plant in Lincoln, University Place and Havelock" the said exhibit represents a map of the City of Lincoln and the municipalities of University Place and Havelock. In the City of Lincoln which is bounded by the outer broken line on the map and whose wards are bounded by the inner heavy broken line is shown the location of the existing gas plant as of January 1, 1913. The location of the plant which was opened about the year 1890 by the Gas Company,—said location being indicated by a heavy square simply on the map,—on the map is also indicated by a heavy circle what is know- as the East Lincoln Holder being the 100,000 cubic foot gas holder erected by the company in 1910; in each ward of the City of Lincoln as indicated by the broken lines of the map is a figure for the population as determined by the Federal Census of 1910 showing the population of each ward in the city; running from the location of the East Lincoln holder is shown the location of a 4 inch gas main extending out into University Place and Havelock and passing either near or through what is known as University Place; also outside of the corporate limits of the City of Lincoln.

The wards are represented by the large numbers 1, 2, 3, 4, 5, 6, and 7, on the face of the map adjacent to the figures for population.

1248 This Exhibit "258" has been prepared to assist in showing the reason for excluding the East Lincoln Holder from the property necessarily used for the supplying of gas in the City of Lincoln itself. It is obvious that the 4 inch main, as well as other mains and other gas properties, lying outside of the City of Lincoln in Haverlock and University Place is not property used or useful in the supplying of gas to the city of Lincoln. It happens, however,

that the so called East Lincoln holder is actually located within the city limits of Lincoln. It has appeared to me that the 100,000 cubic foot holder so located at or near the boundary of the City of Lincoln is not at all necessary to the supplying of gas in the City of Lincoln, and in my opinion never would have been put in that location had it not been for the desire to furnish a gas supply in University Place and Havelock. Some of the more important reasons leading to the conclusion are as follows: The East Lincoln holder is situation on the opposite side of the city from the gas manufacturing plant where the gas is made and where the other holders of the company are located.

It is situated in Ward 7 where the population in 1910 according to the Federal Census was 6,103.

It happens as appears from the face of this map, that other wards of the city of as great a population, and as great or greater distances from the gas manufacturing place are not provided with any district holder. Take Ward 6 where the population is 6,571 its distance as appears from the map, is substantially as great from the manufacturing place as in Ward 7. Take Ward 1 a large part of which is at a greater distance or as great distance at least, from the gas manufacturing plant as Ward 7, it is not provided with any district holder. It is stated to me that there is no gas supply in a part of Ward 1 where the population is 6,571 and if contrary to my opinion it is necessary to set up gas holders around the different parts
1249 of the city that happen to be distant from the gas plant where a gas supply has to be rendered and it is just as much reason to put a gas holder out in Ward 6 and almost as much reason in Ward 1 as in Ward 7.

In my opinion there is no necessity and no reasonable need for a gas holder apart from the gas plant in any ward of the city.

Furthermore, if the so called district holder was really erected in Ward 7 for the purpose of supplying that portion of the city it is reasonable to suppose it would have been somewhere in the central part of the population and not out on the edge of that ward and on the city limits, the population is very scattering; most of the population is no where near the holder. The service would not be as effective from some other point in Ward 7 as where it is located for the municipalities, they are too far away by the same token if it is necessary to have a gas holder out near the consumer in Ward 7 that ought to be out somewhere near the middle of the population and not set out in one sparcely settled portion.

In connection with Exhibit "258" there are some events which need to be noted in the order of their occur-ence. As appears on one of the exhibits of the company a report was had by it from an engineer as to an increase of the gas pressure of the city for the purpose of better supplying the east side of the city, which would include Ward 7 that report was dated July 22, 1908, it says nothing about the erection of an outlying holder in Ward 7 or any portion of the city but does recommend an increase in the pressure and an adjustment of the street valves so that the pressure may be directed particularly into the east side of the city. That was July 22, 1908, at

that time as far as I have learned from the records of the company, the company was making no substantial use of service gov-
1250 ernors and I assume was not putting gas on to the city with the pressure that has since been adopted in general. A service governor may be explained as a device connected on to the service pipe, entering the premesis of each consumer, usually next to the meter, and intended to reduce the pressure of the gas as it comes from the street main and through the service pipe and before it get-into the house pipes the object being usually to enable the gas mains to have the gas sent through them at a pressure substantially greater than would be suitable for use in the house. A service governor enables any pressure that may exist in the street mains to be reduced to any predetermined amount in the house pipes of the consumer, so that instead of 2 or 3 inches of water which are good for a consumer at his burners,—that is usually measured by water,—the gas company may operate it at 10, 20, 30 or 40 inches of water in its street mains thereby increasing the carrying capacity of the mains of a given size and length, so that the use of service governors is on the increase very decidedly and the use of higher pressure in parts at least of street main systems,—is rapidly increasing over the country. The service governor is not always adopted as the device to make such increase practicable. We obten have what is known as district governors. It is not necessary to go into that now, but at any rate these service governors are what enables a substantial increase at which the gas is forced through the system began to be bought by the company in the early months of 1909 before there was any gas supplied to University Place or Havelock, and after this report of 1908 which called attention to the fact that in a certain portion of the city the pressure wasn't great enough.

Having adopted the use of the service governors it was open to the company to largely increase the pressure in its mains so more gas would flow, and so that the pressure in parts of the city where it has formerly been low, could be put up to any reasonable
1251 figure that might be desired.

I judge that the pressure has been increased at the plant sufficiently to enable a satisfactory pressure to be delivered to the consumers all over the City of Lincoln. I don't think the pressure existing at the plant would enable sufficient gas to be delivered to Havelock and University Place at times of maximum demand without a good deal more investment in the pipe system than has been made out there, Of course, if we have a lot of big pipe it will carry at low pressure but if you want to carry an equal amount through small pipe you must have a high pressure.

Pressure has this bearing, particularly with mains constructed and the service pipes connected as they are in the greater part of the gas system here; as you run up your pressure you increase your leakage. That is the disadvantage here in Lincoln, it represents a constant loss of the manufactured product the company has to sell, other things being equal it is desirable not to increase the pressure beyond the point necessary to get your gas through the system.

Whether to that extent the East Lincoln holder is a benefit in the

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way of saving or reducing leakage.—only this far, if you are taking into account the supplying of University Place and Havelock which are outside the city limits, I find no reason to suppose that the pressure isn't sufficient to satisfy the consumers in the City of Lincoln, with no more expensive leakage than they are having. As to whether it is not beyond the point to which they are now leaking, that is a point I am going into later.

The distance from this East Lincoln holder to the end of this main in Havelock is rather greater if anything than from the holder to the gas works. There is a long distance to be traveled by the gas to get out into this suburban territory and it means a very
1252 substantial investment in the suburban territory and a further investment in the limits of Lincoln or else the erection of that holder. The holder erected in East Lincoln might better, insofar as the service of this suburban territory is concerned, be located out there in suburban territory instead of being put out in the City of Lincoln by putting it on the edge of the city brings it in the city limits and that may be the object.

Here is a report recommending to the company an increase in the pressure in 1908 and here was an increase in pressure put into the mains and the adoption of service governors in January and February 1909 and then we come to June 29, 1910 when the contract for the tank for that East Lincoln holder was let. Now up to June 29, 1910, there had been no gas sold in University Place and Havelock no mains had been extended as far as I am able to learn from the records of the company but in September 1910, 2 or 3 months after the contract for the East Lincoln holder was let, the order was given to extend the mains out into University Place and Havelock. During the year 1910, it appears from the records of the company, that 16,103 feet of 2 inch mains and 18,500 feet of 4 inch mains were laid in University Place and Havelock. The first mains laid in those municipalities following right on the heels of the East Lincoln holder, which to my mind was erected for the purpose of enabling the service to be rendered out in University Place and Havelock, and for no other main reason. Gas was sold in 1910 from those mains running out there, according to the reports of the company.

Furthermore before that there had been sales of gas at the State presume, furnishes another reason for the erection of the East just beyond the East Lincoln holder. It is called College Farm according to exhibit "N" of Mr. Lea's testimony. Gas was supplied in 1905, and it increased from 1905 up to 1908; in 1908 at the State Farm 1,295,400 feet of gas was sold. From that point
1253 the volume of gas sold in the State Farm decreases and in 1910 only 1,032,400 feet were there sold. That decrease I presume, furnishes another reason for the erection of the East Lincoln holder. I infer the reason for the decrease in the consumption of gas in this district beyond the city limits was because of the unsatisfactory service due to the lack of pressure, I don't know of any other reason that would account for it. That would be my inference from the lack of information. Particularly that I notice

that in 1911 after they got the East Lincoln holder up the sales of gas in the State Farm jump up to 1,280,600 feet again. And in 1912 was up to 1,477,100 feet. So that there was a decline in the consumption of gas at the State Farm from 1908 to 1910 and after 1910,—in the latter part of which year the East Lincoln holder was erected,—the consumption of gas at the State Farm went right up again as we would expect after the bad service had been changed to good service and inadequate pressure had been changed to adequate pressure.

Taking the facts I have stated, in connection with the dates I have pointed out, the decline in the consumption of gas of the State Farm with the desire to serve University Place and Havelock, were to my mind the moving reasons without which the East Lincoln holder would never have been erected.

The erection of the East Lincoln holder was of no substantial benefit to the territory served within the corporate limits of the city one that might not have been readily obtained by an increase in pressure, a little greater increase in pressure.

The East Lincoln holder is substantially as far away from Wards 5 and 6, which are in population equal to or greater than Ward 7 as it is from the gas plant itself. It is on the edge of Ward 7 and in a location where the population is very sparse, it is right next to the outlying municipalities of University Place and Havelock into which the service was first run since the East Lincoln
1254 holder has been put up.

Further reasons along the line I have indicated are drawn from the study of the so called skeleton map of the Lincoln Gas Company dated in 1911 being the latest copy I have been able to procure whether said map is numbered as an exhibit previously I don't know. I will say this as to this skeleton map, we are making up the map in which the sizes of the larger mains will be marked, and which I think is the purpose to make a photograph of and a permanent copy showing as this map shows but not so clearly, that taking a line running east and west from the gas plant if I have the points of the compass right the weights of the larger mains is on the east side of that line. Here is the East Lincoln holder the size of the mains on this skeleton map is supposed to be indicated by the width of the line, they are set up and drawn at 1/128 of an inch to equal an inch and the drawing of the line we have put to scale that way, which is a very delicate matter and not entirely satisfactory unless executed with great care, so I thought it would be plainer for the court and all the parties to have the sizes of the larger mains marked right on the map and we are preparing a map with that in view on which the East Lincoln holder later can be located, and it will appear from that map, as appears from that skeleton map, that drawing an east and west line from the gas plant the weight of the larger mains are on the east side of the city rather than on the west, whereas the greater population and volume of gas is undoubtedly sold on the west side of the city. I mean by the "weight," I refer not to the pounds of the mains but to the size. If we had a large main in one district and a small one in another we would say we

have the weight where the mains were of the larger capacity or size and I am not referring particularly to the pounds. The map last referred to is plaintiff's exhibit "78."

While the skeleton map exhibit "78" is not entirely satis-
1255 factory as the corresponding exhibit we propose to compare because it does not show the location of the East Lincoln holder or the gas plant, still it does bring out by reason of the heavy lines and their location the fact that the east side of the city has in its outlying parts more large mains than the west side of the City.

I have my directions wrong. To state that again the skeleton map shows the size of the mains greater on the northeast side where the East Lincoln holder is, than it is on the Southeast side. Whereas the population is just the reverse. There is more population in the Wards 5 and 6 on the south side than in Wards 3 and 7 and to my mind the arrangement of the mains, a substantial part of which was run out about the time this East Lincoln holder was put up is designed as is the East Lincoln holder it is in part to further the supply of gas beyond the limits of the City of Lincoln. We have a comparitively heavy line of main running out to the northeast corner of the City of Lincoln, we have a district holder located in the northeast corner of the city; and we have extending from that northeast corner another substantial set of mains to as great or greater distance from the East Lincoln holder as that holder itself is from the gas plant, namely, Havelock and University Place. The gas plant on this skeleton map would be located at the end of the main marked 20; that is marked for the 20 inch main although the gas plant is not represented on there that is where it is.

I think I have now answered the question as to my reasons for excluding the East Lincoln holder from the property necessarily used and useful for the supplying of gas in the City of Lincoln. I might add that there is some machinery located at the East Lincoln holder that participates to increase the pressure of gas and send it out at an increased pressure into the mains to University Place and Havelock, and I assume also into some of the mains here in northeast Lincoln that supplies gas for themselves. In places of the size of
1256 Lincoln and much larger the preva-ling and good practice is to get your holders concentrated at your gas manufacturing plant. In very large cities, or where you have a very large service area with a large demand, like New York and Chicago, you will find holders scattered around but in a city like Lincoln with its population and area there is no occasion, nor is it common or good practice, to scatter your holder over the service area. You are obliged to incure a large operating expense and keep somebody out at your holder to steam it up that usually implies the use of a steam boiler somewhere, at either the holder at the plant or in East Lincoln. There was a time 25 years ago in the history of gas making it was thought good practice to sprinkle your holders around over the service area. It is an antiquated custom, I could point to a dozen such holders that have been abandoned and no longer in use, the custom is entirely moss grown, and everybody recognizes now that

the place to put a holder is at your gas manufacturing plant you can get steam and keep them from freezing and give them suitable attention without unnecessary operating expenses.

There is a kind of a situation in which the holder becomes reasonable and is now common, namely, holders for the supply of gas far removed from the gas plant and not for the supply of the city in the midst of which the gas plant is located, a mile or two or three for the supply of far removed places owing to the greater economy of manufacture, it is increasingly common to supply several of the smaller municipalities from a single gas manufacturing plant. These municipalities may be anywhere from 5, 10, 15, 30 or 40 miles apart, the gas in such place is made at one central plant favorably located for the carting and material, etc., and is transmitted through pipes by high pressure to these outlying stations, often in such cases as that it is advisable to erect an outlying or district holder, in some one or more of these places far removed a number of miles from the gas plant. The reasons that underlie the
1257 principle are about as follows: Suppose you have a gas manufacturing plant in "A" and you want to deliver and supply gas in another municipality at "B" 20 miles away; the demand for gas during the different hours of the day is irregular, it must be supplied much faster during some hours than during others of the 24, so that with a given pressure in your mains to force the gas from the works to the municipality 20 miles away, if you depend on your mains alone to supply the gas for that municipality as fast as it is wanted there you will have to have a main of much larger size and greater cost than you would if the gas supply were spread over the 24 hours of the day evenly. If you have a gas main 20 miles long and you can substantially reduce the size of it be putting a gas holder at the far end, it often is the case you will save more than enough in your main by erecting that gas holder 20 miles away to more than pay for the gas holder. And you will have the further advantage and a greater certainty and assurance of the supply at the distant point, if you have a few hours' supply of gas stored at that point. So that in connection with high pressure transmission of gas it is not uncommon to find the use of holders anywhere from 10 to 30 miles from the plant for the purpose of saving in the cost of the main that would otherwise be necessary, because in that way you could make a 2 inch main do the work that a 4 inch main might be required for otherwise; and you make more secure the supply of gas in the distant community, because if you take 20 miles of mains it is quite possible to have something happen to it and the shutting off of the gas supply is a serious matter and one that is desirable to avoid if possible. The distance from the works to the East Lincoln holder measuring on this map in an air line is about 9 inches, the fairer way would be to measure around the square it don't make any difference what street you measure on. Measuring around
1258 the streets I make it about 11.7 inches or about 17,000 feet from the gas plant to the East Lincoln holder and 17,000 feet is a little over three miles. The distance of the line beyond the East Lincoln holder according to my hastily made figures which are

given subject to correction it is 25,000 feet from the East Lincoln gas holder to the end of the 4 inch main in Havelock that would be substantially 5 miles.

Explaining how I arrived at my total valuation of $415,745.00 of the Gas Company's property January 1, 1913 as shown by exhibit "231,"—in a general way I will say that the valuation of the gas property used and useful in Lincoln for the supply of gas has been arrived at as of January 1, 1913 in the same way and by the same processes that were employed in arriving at the value of the gas plant in Lincoln as it existed January 1, 1907. The land actually used and useful for the supplying of gas in Lincoln is the only land valued,—just as it was in 1907,—for that reason all the Peck's Grove property has been excluded from the valuation, because such part as is used for the gas business is, to my mind, used for the main purpose of supplying gas in Havelock, University Place and the State Farm, and it would not be used were it not for rendering a supply in those places. That Peck's Grove property is also used in part for the electrical supply. There is a bank of transformers and electrical lines on the property not at all necessary to the supplying of gas in the City of Lincoln. Speaking of the property on which the gas holder is actually located, and the property across the street has no signs of gas anywhere on it, and I don't see where it would be required so far as the gas supply is concerned so that the only land valued is the land actually occupied by the works in block 79 and half of M Street lying along one side of the block 79, which I understand has been vacated by the city. While I notice there is considerable property piled up on block 76 as a matter of storage, I
1259 don't understand they own that. If they pay rent for it it undoubtedly appears in their operating expenses. I valued block 79 together with one h*lf* of M Street in front of it as the land useful for supplying gas in Lincoln.

The buildings located on that land which are estimated in exhibit "231" cost for their reproduction $28,135.00 and have a value as of January 1, 1913 of $19,903.00. Those buildings are valued in the same way and the same figures were used that were used as of January 1, 1907, my opinion being that there is not enough change in the cost of constructing the buildings between January 1, 1907 and January 1, 1913 to affect the validity of any of these values I have made on the buildings.

The valuation of the buildings is only partly mine; it has been arrived at in this way; by taking the quantities of brickwork, stone work and excavation testified to by Mr. Lea and applying thereto 40 cents for excavation per cubic yard; $15.00 for the brick work per thousand, for brick laid in the wall; and $7.00 for any concrete in position per cubic yard; that is the same process that also applied in 1907. Aside from the items I have mentioned, the figures testified to by Mr. Lea for the cost of all the parts of the buildings, except concrete and stone work, brick work and excavation, have been assumed as correct. On those excepted items I assumed the quantities but applied a different unit price, I applied the unit price which I think is proper, and added to those quantities arrived at by my unit

prices,—that is the cost of the quantities that Mr. Lea has given taken at my unit prices,—is added to the cost of the other parts of the buildings as testified to by Mr. Lea to arrive at the cost of the buildings. I have then depreciated the buildings to arrive at their value according to age in the way that was extensively set out
1260 in my former testimony which I need not here repeat.

I have taken all the buildings that Mr. Lea shows as of January 1, 1913, all that the testimony shows as existing and brought them into my figures and have applied my own unit prices to a substantial part of that building construction as it existed January 1, 1913, and the results of the process are set out in detail in exhibit "236" on pages 14 and 16, and the value of the buildings is shown in exhibit "231" on page 1.

The works equipment as shown on exhibit "231," all of the items of equipment enumerated in the testimony on behalf of the company have been dealt with; in the main I have put my own price on the pieces of equipment, and in a few instances of minor equipment I have assumed the cost testified to on behalf of the company.

The foundations for all of the masonery have been estimated on the basis of the quantities testified to on behalf of the company in the testimony of Mr. Lea; and the quantities of the foundations, excavation, concrete, brick work and stone work have been estimated as to their cost on the uniform prices of 40 cents per cubic yard for excavation and the disposal of the material so excavated; $15.00 per thousand brick laid for all brick work; $7.00 per cubic yard for all concrete in position. Those figures don't apply to the old 50,000 cubic foot and the 200,000 cubic foot gas holders. Those holders were in existence on the first day of January, 1907, and were formerly valued by myself as of that date, and I have explained that in the valuation of the 50,000 and the 200,000 cubic foot gas holder I had used as a process by which to reach my conclusion as to the value the cost of holders of equivalent capacity but of different type, as of January 1, 1907; that different type of holder does not require the excavation of nearly so expensive a character as the so called masonery tank holder, which is represented by the
50,000 and 200,000 cubic foot holders down at the plant,
1261 so that I have not had occasion to assume the quantities of excavation and masonery testified to on behalf of the company for the 50,000 and 200,000 cubic foot holders, having estimated on a kind of holder that does not require so much excavation or masonery work, but requires more steel work. The costs that I have allowed for the various items of machinery at the works including the holders have been properly made sufficiently large so as to cover any fluctuation or change in prices between 1907 and 1913, and the same costs have been used for the various items as of 1907 and 1913. As far as there has been no charge of costs assigned to those items of equipment all foundations have been estimated in the same way and at the same amount, and the cost of the items of equipment, but the water gas machines or coal gas benches has been set down the same in each year.

A substantial number of items of equipment has been added

during the period between 1907 and 1913, each and every one of those items has been included, unless it has been omitted by mistake, that is covered by the testimony of the company as of January 1, 1913. The valuation as of January 1, 1907 fails to include a large part of the property that now exists at the works, because said property has been added since January 1, 1907, notably two 7′ 6″ water gas machines, and the 500,000 cubic foot holder, and some other substantial items of property.

The works equipment estimated cost as of January 1, 1913 is $160,069.00; the depreciation is $38,065.00 and the value as of January 1, 1913 is $122,004.00. The real estate is the same as in 1907 with the correction as made in the verbal statement. The land now stands at a cost and value of $2,625.00 I having included in this $2,625.00 the half of M Street vacated along one side of the block 79 occupied by the gas works; the exhibit showing the valuation as of January 1, 1907 did not include that half of M Street in it, not having been called to my attention that the street
1262 was vacated, and I added it in my verbal testimony as of that year.

Now on the distribution system the estimated cost as of January 1, 1913 is $324,659.00; the depreciation is $80,644.00; the value of January 1, 1913 is $244,015.

In the case of the meters in the distribution system the same costs and prices have been applied as of January 1, 1913 that were applied as of January 1, 1907, the difference being that a much larger number of meters to be dealt with on January 1, 1913 so the estimate of cost and value of meters in 1913 is much larger than in 1907, but the unit prices used are the same for both years, having been no change in the price of meters during that period that would make necessary any change in the costs that I have estimated. In the matter of service governors, their use has almost entirely spring up in this plant since 1907. No service governors were included in the valuation of 1907 for the reason that I don't understand that any then existed in the plant. Whereas now there is a large number of service governors and they have been included in the valuation as of January 1, 1913.

Service governors began to be applied to considerable extent apparantly in the early part of 1909.

The paving in the distribution system has been dealt with on the same basis in 1913 as in 1907, except that the amount of paving is much greater in 1913 than it was in 1907, and the total cost is increased over the services and over the mains. The same costs for excavating in the streets and for the laying of the mains that were assumed as of January 1, 1907 are assumed as of January 1, 1913; those costs of excavating and laying mains have been taken at a figure at which the work might easily have been let by contract at either period and being sufficient for the entire period or any part of it.

1263 The cost of the pipes themselves both steel and cast iron pipe, a different rule has been followed: namely, certain prices per tone for cast iron pipe and per foot for steel pipe, were

taken as of January 1, 1907 and certain other and lower prices for the cast iron pipe and steel pipe are taken as of January 1, 1913, because the price of both those sorts of pipe was a little lower in 1913 than it was in 1907.

Arrived at in that way there is shown in exhibit "231" a total cost of $515,488.00 to replace all the parts of the plant necessarily used in the supply of gas in Lincoln, except the expense for engineers and loss of interest, and some minor incidental expenses, which are covered as the similar expenses in 1907 were covered by adding 7% to the aforesaid costs. That 7% amounts to $36,084.00 which would in my opinion, have been very ample to cover those items of expense, namely, engineering, interest and some minor expenses. That engineering, etc., added in to the cost of the total already mentioned makes $551,572.00 for the total cost of replacing that portion of the gas plant supplying gas in the City of Lincoln.

The engineering and interest charge of 7% is the same way in the depreciation, that is, engineering and interest costs depreciation just like all other costs, and is applied in the same way in arriving at the total value, so that the total depreciation with engineering, etc., included is $135,827.00. And the total value as of January 1, 1913 is $415,745.00.

Concerning the depreciation of engineering, etc., the engineer like the ditch digger helps to put the plant in position so that it can be used; when the plant is gone the service of the engineer, like the ditch digger, is gone. You have got to get another engineer if you want to put in another plant, so the engineers themselves just what everybody else does when the whole thing is wiped out

his service goes with it, in the end that they are all effaced
1264 together. There is a theory that I have heard of to the effect
that notwithstanding the decay of physical things the value of the service that went to designing those things was still stalking about somewhere. I haven't been able to understand that yet and have never accepted that yet; I don't think it is true.

Explaining what affect the squaring of numbers has in the conclusions reached in a valuation of this kind,—well I would say, that far reaching results like valuations like this, depend to a great degree on the failure of the mind to properly grasp the true import of variations in quantities, if the quantities are very small in themselves. On a certain principle as to the squares of numbers, I remember that James G. Blaine used to illustrate as he thought of the excise tax on tobacco by figuring out to his hearer how little it amounted to on every pipeful. Notwithstanding that a great many millions of dollars are annually collected on that tax. So that in valuing a large piece of property if you cut it up into its most minute sets of units, making each unit very small for instance, just the number of cubic feet that goes in as a foundation, or by the way of excavation under a piece of machinery. Two engineers may differ very considerably in their statements as to the quantities involved without attracting attention. Each quantity is stated to be only a few yards or cubic feet or pounds of steel, but if the quantity stated by one engineer exceeds the quantity stated by an-

other by a large percent provided the quantity itself is quite small, it often escapes attention.

The result of the differences in their prices between engineers works out, in a sense very much like the squares of the prices to which I have referred, for instance, the square root of 2 is 1.4 or 1.41 I think so that if two engineers working at a piece of work divided into very small units or basketful/s of this kind of
1265 construction,—to use a rough illustration,—and one engineer taking the excavation for example thinks the quantity is represented and takes it to be represented by 1.4 and the other engineer takes those unit prices for that kind of work as represented by 1. and as a result their valuations are going to be as 2 to 1 on that property. Sometimes it is a matter of wonderment that people could be so far apart in their final results and I think that is the way it comes about. What appears to be quite a moderate difference in unit prices plus what appears to be quite a moderate quantity in extent of value will give a very large difference in value because your valuation is the result of multiplying the quantity into the unit price.

Exhibit "232" is entitled "Age and depreciation Lincoln Gas Place as of January 1, 1913." This exhibit shows the annual depreciation percentage on the buildings, works equipment and the distribution system. Also the total depreciation in such percentage; and shows the dollars of annual depreciation on each of the classes of property, and on the entire property, referring to the totals of per cent the annual depreciation on the entire property is 1.9%; the total per cent of depreciation on the property is 24.6%; those are the percentages of depreciation up to January 1, 1913 on all of the property. That percentage, like the annual being computed on the basis of the cost of the property in every instance.

The dollars of annual depreciation as here computed is $10,914.00. In stating the annual depreciation I confine it clearly in the use of the word "total"; this is the annual depreciation on the entire equipment.

Exhibit "233" is headed: "Age and depreciation of Lincoln Gas Plant as of January 1, 1913", the same heading has been carried on to both of these tabulations, they may be considered parts of the same tabulation.

1266 Exhibit "233" sets out the assumed years of life; the per cent of annual depreciation, the age in years; and the per cent of total depreciation; for each item of property in the gas plant, beginning with the buildings and running down through the works equipment and distribution system. On the last page of exhibit "233' there appears to be omitted the heading "distribution system", which should exist over the parts of the tabulation beginning with the words "cast iron mains" I would not change the items at all but would simply make that portion of the exhibit a little clearer.

The method followed in preparing this table as to each kind of equipment has been to ascertain the year in which it was constructed or acquired and thereby determine the age as of January

1, 1913. Then to settle on the life of such a piece of equipment in this plant as nearly as might be, and divide that life into 100 to get the per cent of annual depreciation. For instance, if the life was assumed to be 50 years,—as in the case of the steel mains,—the annual depreciation would be 2%; then having the years hold, the per cent of annual depreciation is multiplied by that number of years of age to get the total depreciation in percentage; the total percentage of the depreciation, and that relation runs entirely through exhibit "233", namely; that the annual depreciation is multiplied by the years of age of the property to get the percentage of total depreciation, that is, that percentage of annual depreciation is multiplied by the years of age to get the total depreciation.

In exhibit "233" is district holder equipment," that was put in there with the idea that there might be added on some item in this valuation a valuation for that equipment on the supposition that the court might not think the position taken by the witness was sound in excluding that property. In other words I didn't consider it at all a part of the gas plant that serves the City of
1267 Lincoln, but of course I don't know what the Master and court will do with the matter, so those figures about the age and life as applied to the district holder equipment are put in to be used in connection with the set should it be added showing the value of that district holder. If such a set is not added before the testimony is closed here these figures have no bearing one way or the other, if such a set should be added such figures would have a bearing, that can be applied to any cost on that holder and other equipment, that is my opinion of the way the depreciation would work on that holder and equipment.

Exhibit "234" is a statement of the dollars of annual depreciation, the dollars total depreciation, computed on the Lincoln Gas Plant, also including the year in which each item was built or acquired, as to the buildings,—the district holder house being omitted,—and the dollars of annual depreciation is $452.78 on the building. And the total depreciation figured on those buildings is $8,216.00.

On the works equipment that existed on January 1, 1913 the total annual depreciation, including that on office furniture and fixtures, figuring that as part of the works equipment, is $2,579.69; and the total depreciation on said works equipment as of January 1, 1913 is $38,057.

The year in which each piece of works equipment was acquired is stated in the margin.

As to the various mains, meters, and service pipes shown on the last sheet dealing with exhibit "234" and forming a part of that exhibit, the annual depreciation for the entire distribution system is $6,160.00 and the total depreciation from its construction down to January 1, 1913 is figured at $80,624.00.

The method of arriving at the depreciation on the mains, services, pipes and meters, which are like in kind and vary widely
1268 in age and year of acquisition has been to take each group of such article according to the year in which it was acquired or constructed and deal with the age of that group first and then

with an average age for all the groups in obtaining the final depreciation.

Exhibit "235" is headed "Cost and value of the Lincoln Gas Plant as of January 1, 1913" and contains for each item of plant used and useful for the supply of gas within the City of Lincoln the cost of procurring, constructing and installing in complete working shape each item of plant, or an equivalent item so procurred or constructed. Said value being obtained by deducting from the said cost the depreciation shown in exhibit "234" for that item. For instance, as to the land, the first item in exhibit "235" only block 29 containing 90,000 square feet and one-half of M Street in front of block 79 containing 15,000 square feet are considered to be land used and useful by the company in the gas supply of Lincoln. That land is valued for reasons sufficiently set forth in my testimony as of January 1, 1907 at 2½ cents per square foot. For the entire group of buildings, not including the buildings at the distirct holder the estimated cost is $27,617.00; and the value $19,401.00; for the works equipment the cost is $153,550.00; and the value $116,267.00. On taking one half of the cost of the office furniture and fixtures, as testified by Mr. Lea the costs of the works equipment with office furniture and fixtures added in is $160,069.00; and the value of same is $122,004.00. The reason I take one half of the office furniture and fixtures is that the company has a large electrical as well as a large gas business, as nearly as I can see the furniture and fixtures are used indiscriminately and as far as I can judge to about the same extent in one line of business as the other, and I thought as near as I could come to it, was to allow each line
1269 of business one half of what that furniture and fixtures is said to have cost.

I have been through most of the items of works equipment in my former testimony, but I think I did not mention the 500,000 cubic foot holder, the largest single item in the works equipment. That holder was erected I think, in 1908. My method of valuing each piece of works equipment was to take the quantities of excavation for foundation given in the testimony for the company and apply the unit price of 40 cents per yard for excavation; $15.00 per thousand for the brick work and $7.00 per cubic yard for the concrete or rough stone work to get the cost of the foundation and the cost of the complete piece of equipment erected on the foundation and inclusive thereof I have fixed at what I thought was ample and sufficient and added the cost of the foundation so found to the cost of the piece of equipment found thereon in position and condition to operate.

Now in the case of the 500,000 cubic foot holder I think that the fair price of such a holder with all inlet and outlet pipe, which are very commonly although not always included in the contract, would be $75.00 per thousand cubic feet of capacity. That is, that being the cost of the holder erected in position and tested, complete and ready to handle gas on a foundation furnished by the company. That amounts to $37,500 and on top of that I have computed the cost of the foundation that the company's testimony shows exists

under that holder at to quantities amounts to $4,037.00 according to my figures, and that is the way the total cost of that holder is arrived at, which I find to be $41,537.00.

That is a good example of the process that has been followed as to each piece of machinery in the main, with the exception of the old holders and the old water gas machines as to which I sufficiently explained my process at a former hearing.

1270 The paving over the mains as shown on exhibit "235" of which the cost of the said paving is for the cast iron mains $25,254.00 and for the steel mains $9,264.00.

I would like to say a few words more in explanation of the way those figures were arrived at, and would like to refer to some photographs that I have had taken of the streets here in Lincoln illustrating the condition which as I think, warrants my estimate and assumptions that the mains if reproduced would be laid largely not underneath the paved streets but in the so called park space at the side of the streets. I refer again to the folder entitled "Data considered" and to exhibit "214" which shows the distances from the curb to the lot line along 213,340. linear feet of paved street in the City of Lincoln, being as I understand it, all of the paved streets that existed in Lincoln September 1, 1913. On page 5 of exhibit "214" taking the 30 foot distance from the curb to the lot line as one of the medium distances there are 51,150 feet, or almost 10 miles of streets, that have that distance on either side of the paving between the curb and the lot line. It appears that only about 15,000 feet of 3 miles of streets have less than 15 feet between the curb and the lot line among this entire length of paved streets in the City of Lincoln, and it is this wide and comparatively unobstructed park and open space along the paved streets that leads me to the certain conviction that it would be folly to require the mains to be laid down through this paving in case the mains were reproduced here in this city. In other words the question about which I am expressing an opinion as to whether or not in case of a reproduction of this plant a person would be required to cut through these paved streets when this ample park space exists on either side. I am clearly of the opinion that it would be inadvisable and would not be required to be done.

The photographs of streets to which I have referred are numbered exhibits "259" and "264" inclusive and show a view along

1271 the paving and the park spaces at either side of the paving in various Lincoln streets.

The streets concerned are for exhibit "259" Eleventh Street looking north near Wood Street. Exhibit "260" B Street looking east towards 20th. Exhibit "261" shows 15th Street looking south near D Street. Exhibit "262" is Q Street looking west from 12th Street. Exhibit "263" is a view looking west on D near 20th.

In exhibit "261" there is shown in addition to a substantial park space at either side of the paving a park space running along the center of 15th Street near D. I don't recall the distance that this park space follows the street, if it follows it far enough the park space itself which divides the paving into two equal parts might be

used in case any obstruction existed in the space between the curb and the lot line. The park space in the center of the street is not continuous, but as I remember on some of the streets a distance of 18 or 20 feet between the grass plots in the parked space in the center of the street, so that the side space between the curb and the lot line would be preferable to laying the mains down in the paving, or down through the paving all the way because the parked space takes up much the greater length of the street. The parked space of exhibit "261" and all of the park spaces of similar kind that I remember to have seen in Lincoln, are little if any incumbered with trees or shrubbery, so they could be used for laying mains so far as any physical hinderance is concerned. The park space I was referring to was in the center of the street.

In looking into this matter of laying mains between the curb and the lot line in the event of the reproduction of a plant like this one, I have endeavored by inquiring of local authorities and I have been informed that there is no legal hinderances. Whether informed by the present city attorney,—exactly, and the best legal authority I know of, outside of the other attorney in this case. I know
1272 the ordinance introduced in evidence but I was not able to comprehend that it limited at all the laying of mains in park spaces.

Exhibit "242" shows the "cents cost cutting and repaving per linear foot mains at 20 cents per foot", dealt with.

Exhibit "243" shows how the "Total feet to be relaid under paving" in the event of the reproduction of the main system here is arrived at. On the left hand side of exhibit "243" is shown the size of the mains in inches running from 1¼ in. to 16 inches, that being the range of sizes now said to be under paving; in the next column follows the feet of mains of each size now under paving according to the testimony of Mr. Lea, as I understand it, amounting to 188,000 and some odd feet, the addition of that column is incomplete here, but the thousands of feet which are the main part of the addition is 188 that is now under paving; and the company has to which I now express an opinion is how much of that 188,000 feet if reproduced or paralleled would necessarily or reasonably be laid under existing paving.

To solve that question I have assumed in the first instance that what is known as the business district of Lincoln, and which is defined to be, to some extend, by an ordinance as the business district, which was set out in detail in the valuation in the cost folder and gone into in my former testimony amounts to 39,080 feet of mains that would have to be relaid under paving in the streets; those relaid mains would include all of the 16 inch, the 12 inch, the 10 inch, the 8 inch, the 6 inch, and a portion of the 4 inch mains.

Now as to the remainder of the 4 inch and the mains of 2 inches and less in diameter I am of the opinion that no more than 20% would be reasonably placed under paving. It requires only a very moderate space to put down these 4 inch and particularly the 2 inch of which 95,884 feet is said to be under paving; but in my
1273 opinion not more than 20% of the remaining 4 inch and all of the 2 inch and a very small amount of 3 inch,—about

306 feet,—and all of the 1¼ inch should not be placed under paving. That allows for the crossing of streets where mains though laid in park spaces would have to cross the paving underneath and would allow for the smallest part of the lengths of the paved streets where the park spaces is so narrow and so incumbered with trees that it would be inadvisable to attempt to lay the main there. So that my purpose is to lay a few hundred feet of the 4 inch mains and 80% of the 2 inch and 1¼ inch mains and 67½% of the 4 inch mains in the park space between the curb and the side walk. Or to put it the other way: I propose to lay only 20% of the existing 1¼ to 3 inch mains under paving; and 32½% of the 4 inch mains under paving and all of the mains of larger size under paving. All of the mains of large size that are now under paving, I am talking only about those under paving now.

This is decidedly easier to lay a small pipe like the 2 inch which makes up the bulk of this length to find a place between the curb and the lot line where it can be conveniently laid as it is for 6 inch mains of the Water Department which are laid in this same space as shown in one of the exhibits included in the folder on Data Considered.

Mr. Foster: Mr. Adams has been informed that there is no law or ordinance that requires these mains to be laid under paving or kept out of the park space.

(Witness continuing:) In the matter of paving over service pipes, as will appear in an exhibit later than "235" which I am now explaining, I have allowed for paving over all the services that are assumed now to be under paving.

In the matter of service cocks and boxes I haven't allowed by way of estimating for the reproduction of anything like the number of service boxes and cocks as there are now in the City of Lin-
1274 coln for two reasons: The first and more important reason is, that such service boxes and cocks are not generally used in other places and are not considered to be necessary by gas men, or by me in particular, and are not shown to be considered necessary by the practice of this company in not putting them in their recent services as shown by their recent service card records. The box which is simply a small cast iron pipe set vertically in the ground reaching from the side walk down to the service pipe is simply a means for getting at the service cock which is simply cut into the service pipe for the purpose of shutting off the supply of gas by turning the cock when occasion requires it to be cut off from the outside. The better opinion as to the use of such cocks and necessary boxes for the cocks to make them accessible is in the case of a good sized public building where you have a good sized service pipe 2 inches anyway, running into a public building where a good many people go and that the additional safety to the public by having an outside cutoff for the gas is worth the expense and trouble of putting it there and keeping it in repair. On the other hand in the case of supplying private houses the practise is certainly against the idea of going to the expense and trouble of installing such service boxes and cocks, and the trend of that practise is well illustrated by what is being done by this company with these service boxes and cocks. For some reason

unknown to me what were at one time being installed are not now being installed here, as is also shown by the so called service cards of the company which are a record of what is installed and connected with each service when it is put in.

That is one reason for cutting down the allowance for service boxes and cocks. Another substantial reason is that all over the city the service boxes which give access to the cock which alone make their value have fallen into a state of disrepair that renders them worthless even if it were necessary to cut off the supply of gas; this cast iron barrel that runs down to the service pipe, say about 3 feet long
1275 has an internal diameter of 2½ or 3 inches and has a cast iron cover at the top usually fastened on with a screw when it is in place, but I have found they are very commonly not in place. I have found by sticking my little 6 foot pocket rule down a little way into the box that the box was very often filled up with dirt and rubbish sometimes I could see the dirt packed in the box nearly to the top. If you get that box full of dirt it is of no use whatever, you could dig up the service pipe before you could dig the dirt out of the small cast iron barrel, and property in that condition is of no use even if it was necessary to have it there for that use.

So I have given the cost and resulting value as near as I could arrive at it by a fair estimate as to depreciation for only 20% of the number of service boxes and cocks that exist in the city. Ordinarily in the installation of a gas plant your service pipes running to buildings of a character that would make service cocks desirable would be much less than 20%,—not over 10%, ordinarily,—but this is a matter of some difficulty and is bound to be one of contention and I feel like making the largest possible estimate that I could as to the number of these cocks and boxes that could be considered in arriving at the value of this plant and I have set it down at 20% of the number. I have set it down at 20% without any greater pretense, my whole belief is that anybody installing this plant today who is well advised, would never put in 1/5th of the boxes and cocks as exist here today. I am not counting the stages of delapidation, a great many of these here are not in condition to operate anyway. They are no good.

The service governors I have given the new cost at $13,375.00 and their value at $12,677.00.

The cost of the service boxes and cocks I have put down at
1276 $2,472.00 that being 1/5th of the total number, or what I consider the cost to replace 1/5th of the total number of service boxes and cocks; and the value of the service boxes and cocks is $1,854.00.

Exhibit "236" from pages 14 to 16 inclusive gives in detail the computation as to the cost of the respective buildings in the way I have already described.

Exhibit "237" shows the length of each size of cast iron mains that had been laid by the company before the year 1903, and the length laid by the company during each subsequent year down to and including 1912; to those respective lengths are applied the cost per foot, which I believe to be fair and ample for the installation of

those, and a figure at which they could be readily installed for in complete and good shape by contract if desired to do it that way. Also the cost of installing those cast iron mains in each year; we have the figure for the cost of those mains as installed in each year to which we can apply the proper percentage of depreciation. That cost is on the basis of the price on January 1, 1913, and the amount is set down as against each year when the respective pipes were laid; as bearing again on the age of the cast iron mains I refer to exhibit "237" where it appears that the cost of the cast iron mains laid by the company before 1903 was $56,954.92, and shown in the same exhibit on page 18 the cost of all cast iron mains laid by the company in the city to January 1, 1913 was $71,897.64.

In a similar way the cost of steel mains as laid in each year on the basis of the price of January 1, 1913, set out in exhibit "237½" on page 19. For the mains laid before 1903 the total cost of the steel pipe is $24,741.51 whereas the cost of all steel mains down to January 1, 1913 is estimated to be $59,026.47.

Exhibit "237 A" on page 20 shows the way in which the depreciation of the cast iron mains is figured; the depreciation
1277 being computed at the rate of 1% per year on the age of the mains according to the years in which they were laid. The estimated cost of the mains for each year being treated as one sum and depreciated according to the age of that investment as of January 1, 1913. For instance, the mains laid in 1903 are 9 years old and the investment made in those mains was 9 years old on the first day of January 1913, and the mains laid before 1903, having in mind the fact that the company began to lay its cast iron mains in 1875 or 1876 the age is taken at 23 years, being made up of 10 years,—the period from 1902 to 1912, plus 13 years or one half the difference between 1876 and 1902. The 23 years for the age of the mains that were laid before 1903, those that were laid in 1912 were not computed as having any age and no depreciation is deducted from their estimated cost.

As showing how important this matter of the age of the mains is, as affecting depreciation, in exhibit "237-A2" that the computed depreciation on mains laid before 1903 is $13,099.00 whereas the total depreciation on all the cast iron mains laid by the company in the City of Lincoln up to January 1, 1913 is only $13,865.00.

Due to the concentration of the greater part of the cast iron mains at an earlier period in the history of the company the most of the depreciation on those mains applies to those that were laid before 1903. By this process shown in exhibit "237-A" the figure for the value arrived at for the cast iron mains is $58,027.00.

The steel mains in exhibit "237-B" on page 21 are treated by the same process of depreciation, except that the percentage of annual depreciation for the steel mains, and believed to be fair to both the consumer and the company, is 2%; the cost of said steel
1278 mains as of January 1, 1913 is $14,369.00 and the value $44,652.00.

Exhibit "238" on page 22 is an important one in this valuation as it sets out the way in which the unit price per foot of mains,—both

of steel and cast iron,—is arrived at: giving the unit price for trenching, filling, carting and laying, meaning thereby, all the labor that is performed directly on the pipe from the time it is taken from the cars to finally becoming a part of the main system. The item for joining material and incidentals, and the allowance for specials which is taken at 3% on the cost of the pipe itself, that is, cost of the pipe as iron on the cars, and arriving at finally and adding together the cost of these various items at a figure which is used for the mains per foot. The unit figures for the 1¼ inch, of which there is but very little pipe, is 13½ cents; laid complete in the system and ground; 2 inch 18.6 cents; those two sizes are the steel pipe; 3 inch of cast iron pipe 30.1 cents,—all the larger sizes are now cast iron,—4 inch 36.7 cents; 6 inch 56.2 cents; 8 inch 74. cents; 10 inch 90.6 cents; 12 inch 1.235 cents; 16 inch 1.722 cents; 20 inch 2.529 cents.

The allowance for specials includes the drips and valves in the main system and the price set down here for labor, includes all of the labor that went into the system taking it as it runs,—because there are some points of difficulty,—the streets are a little bit harder in some places than others, various obstructions are encountered, sometimes the pipes of the water works, sometimes railroad crossings or street railway track to be gone under,—but my allowance is one which would cover in the aggregate and on the average the passing of all those obstructions and is ample in my opinion for that purpose.

Exhibit "239" on page 23 shows the size of trench in width, the depth of the trench and the cubic feet of earth that must be removed in digging the trench, and the cost per linear foot on the
1279 trench on the basis of 1½ cents per cubic foot removed for each size of mains from 1¼ inch to 20 inch; all these figures are as of January 1, 1913.

Exhibit "240" on page 24 deals with the important question of the fair price of cast iron pipe in this system as of January 1, 1913 and shows the estimated price per ton to be for the 3 inch $30.00; 4 inch $28.00; for the 6 inch and larger sizes $26.00.

That price is based on numerous records I have of actual purchases of pipe along here in the Mississippi Valley and purchases of pipe by various companies, also to some extent making the proper allowance on the market price of pipe as published in the Trade Journals, which is always above the price found at which large quantities can be purchased for in an actual trade. The pounds per foot is also set out in this exhibit "240," the pounds being the same as used in the valuation of January 1, 1907 and being the pounds shown in Kent's Pocketbook for the standard weights of cast iron pipe as made in 1896 by the Addyston Pipe Company and their allied companies. The weight per foot here set out, is in several sizes a little under what the pipe weighs that the company has purchased in the last few years when its purchases of cast iron pipe have been in the aggregate small as compared to what they were in earlier years. On the other hand these weights of pipe are substantially larger than I find applied to the earlier pipe purchased by the company, and in one instance where I got a purchase of pipe by this company in the year 1892. These weights here are substantially

greater than the weights there shown. These purchases of pipe are fully set out in the cost exhibits that were explained at the last hearing.

Exhibit "241" is intended to show the feet of mains existing January 1, 1903 in the Lincoln Gas System; the number of feet of each size of mains as of January 1, 1913 is obtained by taking the feet for the respective sizes,—upon the corrected testimony of Mr. Brodnax for the company in this proceeding,—and deducting there-
1280 from the amounts laid in Lincoln during the period, making an allowance also for the amounts that have been laid outside of Lincoln, as appears in the testimony of the company. I got the figures in the first instance for the mains laid in Lincoln during the period from 1903 to 1912 inclusive, from the reports of the company in its so called gas reports, or New York report. That report purports to show all the mains laid; and there has to be deducted from all the mains laid those outside of Lincoln in order to get the mains laid in Lincoln. Exhibit "241" shows the mains laid in Lincoln from 1903 to 1912 inclusive; and deducting the length of those mains laid in Lincoln from the length which it appears from the testimony of the company existed in Lincoln January 1, 1913, that computation is taken to give the feet of mains that existed in Lincoln January 1, 1903 and they were therefore laid before the year 1903.

Exhibit "245" on page 27 shows the cost of service pipes as of January 1, 1913, existing in Lincoln, and is computed by taking the service pipes that were laid before the year 1903 the number of which was 2,911, and the service pipe laid to the meter in each following year and multiplying the number of said service pipe in each year by the unit cost of $8.13 per service pipe. In that way the total cost of service pipes laid before 1903 is computed to be $23,666.43; and the total cost of all service pipes down to January 1, 1913, is $69,458.98.

Exhibit "246" on page 28 carries forward the cost of service pipes as of each year, that is, the cost of the service pipe as of January 1, 1913, and laid in each year, from Exhibit "245" and applies to their cost in their respective years a percentage of depreciation computed on the basis of the age of service pipes laid in the respective years of 2½% per annum on the cost of the pipe. That computation results in a determination on January 1, 1913; of $13,607.00 for the
1281 pipes laid before 1903; there appears on the face of the exhibit that the service pipes of 1911, which are taken as one year old and on which a percentage of 2½% of depreciation is applied. The dollars of total depreciation to January 1, 1913, on the service pipes that existed before 1903, amounts to $13,607.00 and the total estimated depreciation amounts to $19,013.00 and leaving as contrasted with the cost of the service $50,926.00 for the value, the cost being $69,939.00. In the figures last given are included 124 stub services which existed on January 1, 1913, and I take as the depreciation $19,013.00 for the services that run to the meter $50,440.00 and for all of the services $50,926.00, there is an item of $486.00 added to both the cost and value for the stub services.

A stub service is a name that is sometimes given to a service that

runs from the main to a point inside the curb so that you can connect them without cutting the paving. I don't depreciate that as the property is nearly new as near as I can judge.

Exhibit "247" sets out in detail and in the same form but not the same cost, as was set out for 1907, the cost of service pipes.

Exhibit "248" shows the estimated cost of one of the short or stub services that simply runs from the main to a point inside the curb line so as to get it out from under the paving.

Exhibit "249" is a compilation taken directly from the so called gas report of the company showing the number of services each year and the number laid.

Exhibit "250" is a compilation based on Exhibit "249" which was the number of services laid to the meter each year and that being the number that has been used to compute the cost of services laid in each year.

The practice of the company, as I understand, is to lay before a street is paved a number of short service pipes, sometimes
1282 called stub services, they pass from the main to a point inside the curb line. At a later date those short services are extended to the meter on the premises of some consumer, and in treating all the service pipes for the purpose of depreciation I have disregarded the age of those short pipes, that is, if they existed in the ground several years as mere stub services before they were extended to the meter I have disregarded that period of time and have not considered them in stating the age and computing the depreciation of the services, owing to just the way the records are it is a little easier to figure that way and it would make no material difference, as far as any assumptions there is about it it is in favor of the company.

Exhibits "251, 252, and 253" show the way in which the paving over the services in Lincoln as of January 1, 1913, is computed. The feet of mains under paving is determined to be 190,037, on the basis of the testimony of Mr. Brodnax as corrected. That gives a percent of mains under paving, taken as a percent of the whole length of mains in the City of Lincoln 41.4 percent, and the percent of services is taken to be the same percent of the total number of service- in Lincoln as the total feet of mains in Lincoln under paving is to the total length of mains, namely, 41.4% of 8,660 services.

It is estimated that it would be necessary to cut and remove 12 square feet of paving for each one of those services that were laid and at 25 cents per foot that would amount to $3.00 per service, on all would amount to $10,656.00 and that depreciated,—the cost depreciated,—at 27.1% which is the percent of the depreciation on the services taken as a whole and amounts to $2,886.00 leaving $7,764.00 for the element of value that the existence of paving over services possess in Lincoln and adds to this service and to the man who wanted to use such service for the gas business.

1283 Back of that computation lies the assumption, which I suppose is unquestionably the correct one, that the element of value added to the service pipes by the existence of the paving shrinks pro rata to the shrinkage in value of the service pipes, for

when the pipe is half gone one half the life the paving adds to it, irrespective to the condition of the paving is gone; because the company has not laid the paving and hadn't to keep it in repair, and to the man who would put in a new service pipe he would have to put in the paving whose cost would be distributed to him over the life of that service pipe, if the pipe is an old one one half of whose life has elapsed you could only afford to give one half of the cost to put the paving over the new pipe.

The cost of the meters as purchased in each year and the meters that existed before 1903, is shown in Exhibit "254," the meters are taken at 40% from list, that being the price at which they can be bought in large quantities and such as necessary to reproduce the number of meters here in this plant. The total cost of those meters is $44,936.00 as of January 1, 1913.

Exhibit "255" shows the depreciation and value all of those meters; the depreciation of meters is computed at 2½% annually and the cost of the meters purchased in each year is set down as against that year in Exhibit "255." The age of the meters is given according to the year in which they were purchased just as shown in the gas reports of the company, except as to the meters purchased before 1903, they are assumed to have on January 1, 1913, an age of 10 years representing the age they would have if purchased in 1902 pluss 13, the age that they are assumed to have on the average in 1902; making a total of 23 years; the depreciation on the meters existing before 1903 as so computed is $13,366.00; and the depreciation on all the meters computed by a like process is $16,262.00.

Then the $16,262 deducted from $44,936.00,—the cost of
1284 the meters, leaving a value of $28,674.00 for the meters alone as of January 1, 1913.

These meters must be landed here in Lincoln and erected in position and some small material must necessarily be used in the connection of those meters; some minor material that the consumer wouldn't pay for as a part of his house pipe ordinarily, although I have in mind the testimony of Mr. Honeywell about the consumer paying the cost of the connection; but I am assuming that the company did pay and does pay the cost of the immediate connections to the meter and I have assumed that cost at $1.40 per meter which on 8,326 meters would amount to $11,656.00 which brings the cost of the meters and connections up to $56,592.00.

Now the connections go with the meter so far as the depreciation is concerned and figuring the same percentage of depreciation on the meters and connections that was arrived at for the meters, namely, 36.1% there is found a depreciation of $20,429.00 on the meters and their connections, which deducted from the $56,592.00 gives $36,162.00 as the value of January 1, 1913, of the meters and their connections, and in that connection and in particular with my estimate of $1.40 to cover the freight, material and labor of setting per meter, I call attention to Exhibit "264."

Exhibit "264" is a photograph which I had recently tak*ne* of a bank of 13 meters which exist in what is known as Melick Court

at the corner of 13th and K Streets in Lincoln. This photograph was taken on November 6th; there are at that point where the photograph was taken connections for several other meters, but 13 meters are shown in the group and looked at as a fire risk it is a very bad installation. I am not concerned particularly with that but I am concerned with the cost and quality of the meter connections that are shown there in that photograph, and that quality is one
1285 without taking into consideration the other elements of cost of getting the meters from the point of shipment to its position in a consumer's residence, shows that $1.40 is all together too much if they are all as poor as those connections there. The connections there are of the old fashioned lead pipe, the newer style more commonly installed is simply composed of short pieces of ordinary gas pipe cut to suitable lengths and dimensions for installing and are connected up to the meter. I make this explanation particularly because there are a number of types of meter connections. Some connections are made by supply houses that make and sell what they call a standard meter connection, other companies make up their own out of gas or lead pipe or what not, taking the information I have been able to get the $1.40 I have allowed is more than ample to take care of the cost of the connections in addition to the freight and cartage already set out. To look over 8,000 meters and see the style of connection of each one is almost an impracticable job in a valuation of this kind, and one that would take a great deal of time, and in making up the $1.40 to cover the cost of meter connections I had to assume that the style and cost of meter connections came within certain limits and the additional information that I have gathered since then tends to make me lower it rather than raise it, but those are the figures and I haven't changed it. $1.40 is ample and sufficient for all such connections and certainly for such as are shown in the photograph I would have to reduce that a little in connection with that cost for setting meters. The relative cost of ordinary gas pipe connections as compared with lead pipe connections the gas pipe connections are somewhat cheaper and made in such quantities as they would be made in the duplication of the property here, the whole thing, the material and labor and all would be cheaper than the lead pipe connection. The lead pipe
1286 on the meters here as far as they are used like on the installation of 13 meters has a very considerable variation in the size and weight and consequent cost, they vary in length and diameter but the whole thing is not an expensive installation.

Exhibit "256" is a statement of the cost of service pipes, dividing that cost between the labor and material for the years 1904, 1907, 1908, 1909, and 1912,—those years being selected because there is set out in the gas reports of the company the total of material and labor cost in those years,—then follows the cost per foot for the labor and materials; the cost per foot for the service pipes installed and the labor cost on that pipe is 9.6 cents per foot on the average for the series of years being the highest in 1912 from 1 to 2 cents higher than in the preceding years.

Exhibit "256" shows the cost of setting meters as given in the

gas reports of the company including also as I understand it, the cost of removing meters. The reports gives only the figure for setting and removing, or at least that gives the figure headed "cost of setting meters", and owing to the way the figures are given in connection with the number of meters removed as well as the number set and from the knowledge of the way in which the work must be done the setting and removing being oftentimes, although, not always, a contemporaneous process; I am of the opinion that this cost set out in exhibit "257" amounting to $12,588.41 on 28,922 meters set represents also the cost of removing meters and that on the average is 43.5 cents.

The defendant offered in evidence the exhibits 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 193, 195, 197, 204, 205, 206, 201, 203, 210, 211, 212, 213, 215, 216, 220, 219, 222, 229, 230, 199, 217 together with exhibits numbered from 231 to 264 inclusive which were received in evidence.

1287 Mr. ALTON D. ADAMS, a witness for the defendant, having been previously sworn herein, was recalled for further examination in chief and testified as follows:

Examination in Chief by Mr. Foster:

I have made an investigation of the company's operating expenses, and the investigation has been concerned directly and particularly with the so called gas reports of the company, one of the record books found by me in their office and of which I have had the use. Whether those are the gas reports of repairs and operating expenses offered in evidence by the company,—I am unable to state. I have seen some of these volumes of reports in the court room and they have been referred to by the company and also by myself in the course of these proceedings but whether they have been offered or not I am not clear. I have seen the reports for the years 1903 to 1912 inclusive. Those reports are set out in very considerable detail in the statement of the company as to its expenses of operation and income in the manufacture and sale of gas. The first step in arriving at my conclusion was to copy the reports of the company entire for a very large part for the years 1908 to 1912 inclusive, and to resort to the printed record in this case for the years 1906 and 1907, and parts of the same figures for the years 1905, 1903 and 1902, and then to resort to the original copies of the report in the books of the company for the figures during the entire period from 1903 to 1912 inclusive.

For the purpose of my criticism of the company's operating expenses I have made a re-arrangement of the items shown in the company's reports, that is shown in exhibits "272" to "319" inclusive in the folder entitled "Lincoln Gas & Electric Light Company income and expense per the gas reports, and estimated income
1288 and expense per Alton D. Adams." The purpose of making this rearrangement included in the exhibit mentioned was to bring out more clearly to my mind the expenses of the company in the various operations connected with the manufacture and sale

of gas, partially for the purpose of comparing more readily the expenses of this company with others in the gas business. The general plan followed in classifying the expenses has been to obtain from the gas reports the amounts expended by the company in each year in the first instance, for material and labor, directly involved in the manufacture of gas. The next instance the salaries of officers, general office expenses, and distribution expenses, that have been brought together and classified by those so as to make a distinct group of expenses from those that are directly concerned at the works in the manufacture of gas.

Another group of expenses made up from the report is that of repairs and renewals as charged by the company; and still another item of expenses is that of taxes which I have treated or compiled separately from all the others. The reasons, briefly, for separating the expenses into these groups are about as follows: The labor and material involved directly in the manufacture of gas are matters that come directly back to the market price of materials and the market of labor. They are factors in the total expense of gas making over which the company has, only in a minor way control; that is, the company can operate the works economically or uneconomically in a way, but as a rule a company will naturally buy its materials as cheaply as it can, and it will hire its labor concerned in the manufacture of gas as cheaply as it can; so that when we found in reported gas expenses so much for material at the works and so much for labor at the works we can as a rule conclude that that money was actually and necessarily paid under the condition the company was operating, for the material and labor concerned.

That is not true in some other departments of expense that
1289 might occur in the expense report of the gas company. Take for instance the salary list, the office expense, the amount of expense incurred in an effort to secure an additional or larger volume of business. Those expenses are very largely within the discresion of the company. The company may pay its officers one salary or another and within pretty wide limits. Those salaries may not be just what is necessary to get persons who are competent to officer the company and manage its affairs.

Passing from that group of expenses to the so called "repairs and renewals" we are again at a point where a company may and does, as a matter of practise in a great many companies, exercise the widest latitude for the amount of charges for the annual expenses so called, and it is not at all an uncommon thing in gas accounts to find long extensions of large mains, gas holders, gas making machinery of various kinds, charged into repairs and renewals. On the other hand you will find the repairs and renewal items of some expense accounts of some gas companies very low, just barely enough to get just the actual repairs,—putting on the patches to keep the gas system generally in working condition. So that if one has to judge whether repairs and renewals have been the shrinkage in value on a plant or not, it is necessary to separate it from the other expenses and see how much is charged to that item. It is specifically possible that, in many times a repair may be a large extension to

the plant of a company, it may offset by its value a good deal of shrinkage in the other parts of the plant during a period of time. So that the repair and renewal item, being particularly within the control and discresion of the company as to the amount charged, it is necessary to separate them from the other so called expense item. Exactly opposite item is that of taxes. The tax exaction is one made by the government and if it proves to be legal
1290 there is no escape from it. So if we are comparing two companies as to operating expenses, it is of course, necessary before we can reach any certain conclusion as to their relative operating expenses to get at and separate the tax item. One might pay a tax of 10 cents per thousand and the other pay 2 or 3 cents, and so the tax item has been separated.

Now in a general way the expenses of the Lincoln Gas & Electric Light Company in its gas business have been classified by me in these exhibits on the line indicated, mainly to get the money reported as paid by the company for materials used in making gas: to get at the money reported as paid for labor at the gas works concerned in the making of gas, and then to get at the money reported as paid under each of the other heads that I have mentioned.

I found in looking over the expense reports of the company that the company records under quite a large number of headings,—more so than those of many gas companies with whose accounts I am familiar,—and as recorded by the company the expenses do not naturally bunch or group themselves in the way that I have indicated. In other words the company has saw fit to adopt another grouping than that I have indicated. I have so re-arranged the expenses set for each year in order to get under the respective groups the items that I considered belonged. Then again, another variation that I have made and thought proper from the company's form of reporting its expenses, has been in the dealing with the gas residuals, and the so called lost and unaccounted for gas. It is possible and perhaps illuminating and helpful to some purposes, to charge up in an expense sheet the cost of the coal and oil to make the gas and the cost of the labor necessary to charge that coal and oil into gas and the charge into the expense sheet the alleged so called cost of the coke that results from making a part of
1291 the gas and to charge into that expense sheet the so called cost of gas that may be lost and never reaches the consumer, although the money paid for the coal and the oil and the labor pays for everything that the oil, coal and labor produce, and the coke for instance, and the gas that was lost on the way to the consumer and never reaches him were all paid for at once and are charged for themselves when you charge for all the labor and all the coal and all the oil.

I have been accustomed to consider and do consider cost to be money paid or the equivalent of money paid, I consider it improper to charge up in the cost sheet the cost of coal and oil and labor to make gas and then charge also in that sheet the alleged cost of certain coke which results from the coal, oil and labor. That method of charging may be helpful for some purpose if you go on and credit

your coke out at the same time you put it in some other account but it does not and can not represent the cost of making gas, namely the amount of money that you have got to spend to make so much gas. If the coke is charged in at one price and then credited out at a different price the account would be permanently falsified,—I do not mean to suggest here that that has been done,—I am only calling attention to a number of the difficulties which may arise in attempting to make a double charge and then getting rid of it by charging it off or giving credit for it. In the manufacture of coal gas, and to an extent in the manufacture of water gas, there are certain products called "residuals" necessarily produced and they are just like the hides that come from the beef animal or the wool on the sheeps back, you do not have any particular cost to these items. The cost is the price paid for coal, oil and labor, the result is gas, coke and tar, and we can not separate any particular part of that cost and say it was the cost of tar or the cost of gas and it is customary in gas accounting to deduct the value of the so called residuals that
1292 are made in connection with the year's operation from the cost of the gas operation, more commonly from the cost of the material and labor involved in making gas and then call the remainder "cost," or words of that equivalent meaning, of making gas. That is the arrangement I have followed in dealing with these accounts, but any alleged cost ascribed to water gas tar or coal gas tar or coke is purely ficticious. I think I have described in a general way the method I have followed in dealing with and setting up these accounts and the exhibit "72" to "319" inclusive include and exhibit simply what I understand to be the correct meaning of the gas reports of the Lincoln Company. The figures as set up by me do not in amounts exactly agree in all respects with the footings exhibited by the company, but that is due to a difference in dealing with the figures or else to some arithmetical error in dealing with them, and such small difference as appear I do not now assume to say to which they may be due.

Exhibit "272" is entitled "Expense for material and labor making gas per reports of 1905 M feet of gas sold 143,690." The letter M is used with the meaning "thousand" the feet being 143,690,000, or 143,690 thousand feet of gas sold in the year 1905. This exhibit "272" is the type I have followed in classifying the labor and expense items involved in making gas from the year 1905 to 1912 inclusive, having been my practice in each year to set up against the item of expense in these the accounts which I understand the gas reports of the company show were actually expended for those items in each year; the amount, as against some of the items are not those that appear directly in the company expense, for instance, in exhibit "272" take the matter of generator fuel for water gas, that is in that exhibit is followed by no figures, no sum being set down for that, the reason for that as I understand the complete gas report, of the company for the year 1905, all of
1293 the generator fuel used in making water gas was the product of coal and labor that is already charged into the expense account, that generator fuel was coke, and the fact in the year 1905

was that the company made more coke than it needed for water gas purposes and apparently used in the manufacture of water gas simply a part of the coke that is made, so I have not made any addition charge or entry in my classification and in the account for coke expense the coke is already paid for then in the price of the coal and labor that produce the coke.

That is in that particular year. Of course if the company bought the coke to produce its water gas as it is now doing, as I understand, and as it did do in later years then the coke becomes a legitimate item of expense; but if in the year 1905 we charge in an item for coke into the expense account we have got to make a credit and take that charge out again before we get through, or we have charged as a part of the expense of producing and selling gas not only all the coal and labor necessary to produce that gas, but also the alleged cost of some coke that that same coal and labor produced. In the same way in 1905 the item of bench fuel represents simply the amount reported by the company as paid for coal used for bench fuel in that year and not any alleged cost of coke used by the company, for bench fuel because that same coke, if any, was a part of the coke produced by the coal and labor that was already charged in the expense sheet.

Dealing with the materials involved in the manufacture of gas in this way, I have added together all the materials so involved whether they were immediately concerned in the production of coal gas or in the production of water gas, the final result was the production and sale of 143,690 M feet of mixed gas, and I have included in the materials here all the sums which I understand were actually paid for the materials according to the report of the company which amounts to $58,988.51, or about 41.06 cents per thousand
1294 feet of gas sold.

The next group of items considered as shown in exhibit "272," is that of labor directly concerned in making gas. That does not include labor of general supervision, that is it does not include a portion of the general salaries of the officers, superintendent and manager of the company, but includes merely the workman and foreman at the works whose time is put in at the work supposedly, and is involved directly in dealing with the manufacture of gas there. The expense of labor in 1905 as found in this way and set down here against the item used by the company to classify its expense is $7,689.10, amounting to 5.35 cents per thousand feet of gas sold in that year. Adding together the above mentioned items of labor and material gives a total for the year of $66,687.61 or 46.41 cents per thousand feet of gas sold for material and labor used in making that gas.

That 46.41 must be noted results from the division of the entire labor and material expense of conducting that gas plant during the year by the amount of gas sold out of that, which was produced and does not therefore, reveal the whole truth, because in addition to producing so much gas which was sold, there was also produced a certain amount of coke and a certain amount of tar so that that $66,687.61 is not the cost of the gas as sold only, but the joint cost

of the gas that was sold and the coke and tar that were made, and at a later stage in getting at what we will conveniently call the cost of materials and labor required to make these three joint products and that will leave us what is conveniently termed the net cost of gas at the works, that is the net cost of the materials and labor necessary to produce the gas, coke and tar.

Exhibit "273" shows the expense for materials and labor making gas per report of 1906 thousand feet of gas sold 155,663. As already stated the compilation of the material and labor expense for all the years from 1905 to 1912 has been along the same line so that
1295 it will perhaps be sufficient if I simply read the footings of each class of expense.

In 1906 the total material expense was $74,603.10, amounting to 48.55 cents per thousand feet of gas sold. The expense of labor of making this gas was $11,451.46 amounting to 7.45 cents per thousand feet sold and the combination of these two expenses;—namely, the material and the labor expenses,—amount to $86,054.58 or to 56. cents per thousand feet of gas sold.

Exhibit "274" shows the expense of material and labor per report of 1907, thousand feet of gas sold 179,366; the total expense for material for 1907 per this exhibit is $76,413.70, amounting in cents per thousand feet sold to 42.61 cents. For labor making gas during 1907 the sum total is $14,201.31 amounting to 7.92 cents per thousand feet of gas sold, and the total of the above named items, material and labor, is $90,615.01 amounting to 50.52 cents per thousand feet of gas sold.

Exhibit "275" shows the expense for material and labor making gas per report of 1908, thousand feet of gas sold 195,391. In 1908 the expense of material making gas $70,632.81 amounting to 36.15 cents per thousand feet of gas sold. In this same year of 1908 the labor expense in making the gas was $13,441.70 amounting to 6.88 cents per thousand feet of gas sold. The total of these material and labor items for the year 1908 is $84,074.51 amounting to 43.03 cents per thousand feet of gas sold.

Exhibit "276" shows the expense for material and labor making gas per report of 1909, thousand feet of gas sold 204,284. In this year the expense for material was $64,402.18 amounting to 31.53 cents per thousand feet of gas sold. Expense for labor in connection with said material in the manufacture of gas is $8,481.64, amounting to 4.15 cents per thousand feet sold. Total of above material and labor items for 1909 is $72,883.81, representing 35.68 cents per thousand feet of gas sold. In this year it is to be noted that
1296 the item of generator *fuel* for water gas comes in at a large amount, namely $19,469.24; the reason being that the company had to buy in this year a large amount of coke for the manufacture of water gas, it having made very little coke and very little coal gas.

Exhibit "277" shows the expense for materials and labor making gas, per report of 1910, thousand feet of gas sold 210,169. The expense for materials in 1910 was $60,856.59 amounting to 28.96 cents per thousand feet sold. The expense of labor in connection with the

said materials in the manufacture of gas was $7,419.52, amounting to 3.53 cents per thousand feet of gas sold. The combined total of these material and labor items for 1910 was $68,276.11, amounting to 32.49 cents per thousand feet sold.

Exhibit "278" shows the expense for materials and labor making gas per report of 1911, thousand feet of gas sold 227,268. In 1911 the expense for materials was $60,372.22, amounting to 26.56 cents per thousand feet of gas sold. Expense of labor transforming this material into gas was $6,539.53, amounting to 2.88 cents per thousand feet of gas sold. The total of the above material and labor for 1911 is $66,911.75, amounting to 29.44 cents per thousand feet sold. This is one of the years when no coal gas was made and the labor item is correspondingly small, the fact being that in the manufacture of coal gas the labor item per thousand feet is much larger than in the manufacture of water gas, and it makes a very noticeable difference in this particular item whether coal or water gas is manufactured. In 1911 the labor item was 2.88 cents per thousand feet sold.

Exhibit "279" shows the expense for materials and labor making gas, per report of 1912, thousand feet of gas sold 234,386. This is the last year whose operations are used in the analysis I made here.

The total expense for materials is $71,706.56 amounting to
1297 30.59 cents per thousand feet sold. The expense of labor for 1912 in connection with the manufacture of gas is $7,447.27, amounting to 3.18 cents per thousand feet sold. The total material and labor items amount to $79,153.84, or 33.77 cents per thousand feet sold.

Exhibit "280" deals with the net residuals produced by the company in connection with its gas operation and manufacture during the years 1905 to 1912 inclusive. By the "net residuals" I mean, the residuals that remain after the gas making operations are complete; that is, the company in the course of its gas making operations during the year makes certain quantities of coke, part of that coke is used up after being made by the company in connection with the manufacture of gas as a fuel, the total of the amount of coke made in the first instance by the company minus the amount which is subsequently used by the company in carrying on the process found leaves the net amount of coke, or coke that the company has to sell and which it does not itself use in carrying on the gas operation.

The residuals dealt with here in these series of years 1905 to 1912, are coke breeze which is merely the small fine broken coke, of which comparatively a small amount of this breeze is produced, coke being a brittle substance it breaks up a bit and some small stuff is produced which is called "coke breeze" which is not as valuable as the larger pieces of coke, and the coal gas tar and the water gas tar.

Coal gas tar is a produced directly in connection with the manufacture of coal gas; and water gas tar so called, directly in connection with the manufacture of water gas.

In determining the net residuals, the practice followed by me as shown by exhibit "280" and which I consider to be a fair and proper one, is to find out the net amount of the residuals made by the company of each kind and then compute its value on a fair basis. It is

often necessary to do that in figuring up the expenses of the
1298 gas company for the reason that it not infrequently happens that a gas company does not find it convenient or expedient to sell all of its material produced within a particular year within exactly that period. So that at the end of the period it may have quite an amount of those residual materials on hand, or it may happen the other way that in the next year it sells more residuals than it produces. It would be incorrect to credit any year's gas operation on material and labor paid for in some other year and charged into the expense of some other year. In like manner every year's operation should be credited with the fair value of what that year produced, gas, coke or tar, whichever it may be. In the Massachusetts system of accounting that is even carried so far as to require the value of the gas in the holder at the end of the year to be stated and carried into the expense computation, and if a company happens to have a little more gas in its holder at the beginning of a year than it has at the end of its year why the cost of that excess amount of gas is fairly and properly the difference between the two amounts, if properly and fairly figured into the cost of the year's operation under consideration. The amount of gas on hand is usually a very small item compared with the amount of coke on hand in a coal gas plant, or might run into a very large amount, but the amount of gas on hand would be relatively a very small item.

Exhibit "280" is made up of a column of years running from 1905 to 1912; a column headed "net residuals"; a column headed "tons or gallons", under which the tons of coke or breeze or the gallons of tar of each sort is put; a column headed "unit value" in which is put a figure which is believe- to fairly represent the unit value of the residual under consideration for the year in question, at least is not believe- to be too high a figure. It happens that the residuals in connection with the operation of this company do not run into vary large amounts, which is apt to be the fact with a combined coal and
1299 water gas plant, because when they are making coal gas they often make only a moderate amount more than is necessary to produce the residuals that can be consumed;—particularly the coke that can be consumed;—in the water gas machinery. The residuals of tar of one sort or another, is always present. In selecting a unit value for these residuals I have — guided largely by the price the company states in its reports which it has obtained for the residuals sold or by which it has charged such residuals into its expense report, unit value. Proceeding in that way the value of residuals for the year 1905 is estimated to have been $7,306.31; for 1906, $11,690.42; 1907, $10,386.00; 1908, $4,795.77; 1909, $3,491.07; 1910, $2,727.70; 1911, $3,956.85; and for 1912 $3,335.79.

Exhibit "281" represents expenses by the gas report of the company for the year 1903 and includes all expenses, except material and labor making gas, repairs, renewal and taxes, the thousand feet of gas sold in that year was 98,343. The classification of which exhibit "281" is a type, includes, as stated in the headings that I have read, all of the expenses except material and labor making gas, repairs, renewals, and taxes. These various expenses *and* included by the

company under 18 headings, I have for convenience grouped them here in Exhibit "281" finally under the two headings: "Total salaries and office expenses" and "Total distribution and general expenses".

The total salaries and office expenses includes,—following the companies' headings,—reading, meters, collection and clerical salaries, collection office expense, delivery of bills, outside collections, general clerical salaries, general office expense, executive salaries, general supervision of coal gas, general supervision of water gas, the promoting of new business. The expenses which I have selected are combined under the heading, "Distribution and general expenses"
1300 are per company's report: "street department expenses, meter department expenses, gratuitous work, legal expenses, incidental expenses, rent collection office, rent of executive". The heads which I have just read as from the company's gas reports follow right down through the years on years from 1903 to 1912 inclusive and the classification adopted by my as to salaries and office expense, and again as to distribution and general expenses, also follows down through the series of years from 1903 to 1912 inclusive. Now taking the expenses that I have called "salaries and office" in the year 1903 amounts to $15,623.92, or 15.89 cents per thousand feet of gas sold. The distribution and general expenses in 1903 are $6,033.10 amounting to 6.13 cents per thousand feet of gas sold. The total of the above items of expense is $21,657.02, or 22.02 cents per thousand feet sold.

Exhibit "282" shows all expenses, except materials and labor making gas, repairs, renewals and taxes and for the year 1904 when 117,429 thousand feet of gas were sold. For the salaries and office expense in 1904 the total is $26,073.85 amounting to 22.02 cents per thousand feet sold. The total distribution and general expenses in 1904 was $5,666.48 amounting to 4.83 cents per thousand feet sold, and the total of the above items of expense was $31,740.73, or 27.03 cents per thousand feet sold.

Exhibit "283" shows all expenses, except materials and labor making gas, repairs, renewals, and taxes, for 1905, when 143,690 thousand feet of gas were sold. In this year the total salaries and office expense amounts to $27,062.85, or 18.83 cents per thousand feet sold. The total distribution and general expense amounted to $6,126.31, or 4.26 cents per thousand feet sold. The total of above expenses in 1905 was $33,189.16, or 23.10 cents per thousand feet sold.

Exhibit "284" shows all expenses, except materials and labor making gas, reapairs, renewals and taxes, for 1906 when 153,663 thousand feet of gas were sold. In 1906 the total salaries and
1301 office expense was $26,119.09, amounting to 17. cents per thousand feet sold; and the total distribution and general expense was $6,785.90, amounting to 4.42 cents per thousand feet sold; making a total of the above expenses for 1906 of $32,904.99, or 21.41 cents per thousand feet sold.

Exhibit "285" shows all expenses, except materials and labor making gas, repairs, renewals and taxes, for 1907, when 179,366 thousand feet of gas were sold. In 1907 the total salaries and office ex-

pense was $28,583.13, or 15.94 cents per thousand feet sold; and the total distribution and general expense was $8,329.76, amounting to 4.64 cents per thousand feet sold. The total of the above expenses for 1907 as reported was $36,912.89, or 20.58 cents per thousand feet sold.

Exhibit "286" shows all expenses, except material and labor making gas, repairs, renewals, and taxes, for 1908, when 195,391 thousand feet of gas were sold. In 1908 the total salaries and office expense amounted to $30,252.02, or 15.48 cents per thousand feet sold. The total distribution and general expenses amounted to $9,814.71. or 5.02 cents per thousand feet sold; and the total of above items for 1908 was $40,066.73, or 20.51 cents per thousand feet sold.

Exhibit "287" shows all expenses, except materials and labor making gas, repairs, renewals and taxes, for 1909, when 204,284 thousand feet of gas were sold. In 1909 the total salaries and office expense amounted to $34,149.47, amounting to 16.72 cents per thousand feet. The total distribution and general expense was $12,687.59, amounting to 6.21 cents per thousand feet sold. The total of the above items of expense in 1909, was $46,837.06 amounting to 22.93 cents per thousand feet sold.

Exhibit "288" shows all expenses, except materials and labor making gas, repairs, renewals, and taxes, for 1910, when 210,169 thousand feet of gas were sold. In 1910 the total salaries and office expense was $41,633.90, or 19.81 cents per thousand feet sold.
1302 The total distribution and general expense was $17,301.29, amounting to 8.23 cents per thousand feet of gas sold. The total of all above items for 1910 was $58,935.19, representing 28.04 cents per thousand feet sold.

Exhibit "289" shows all expenses, except materials and labor making gas, repairs, renewals, and taxes, for 1911, when 227,268 thousand feet of gas were sold. In 1911 the total salaries and office expense was $45,715.95; or 20.12 cents per thousand feet sold. The distribution and general expenses in 1911 was $23,973.67 or 10.55 cents per thousand feet sold. The total of above items for 1911 was $69,690.62 or 30.66 cents per thousand feet sold.

Exhibit "290" shows all expenses, except materials and labor making gas, repairs, renewals and depreciation, for 1912 when 234,386 thousand feet of gas were sold. In 1912 the total salaries and office expense was $46,529.20, amounting to 19.85 cents per thousand feet sold. The total distribution and general expense was $26,415.79, amounting to 11.27 cents per thousand feet sold. The total of above expenses for 1912 was $72,944.99, or 31.12 cents per thousand feet of gas sold.

All expenses, except materials and labor making gas, repairs, renewals and taxes for the period of years 1903 to 1912 inclusive, are collected on exhibits "302" and "303." Now skipping through exhibit "302," because that exhibit further illustrates expenses except materials and labor making gas, repairs, renewals and taxes of which I have been considering the details in the respective years. Exhibit "302" gives the total in dollars for these expenses in each year, thus the salaries and office expense in 1903 were $15,623.92, in 1912

they were $46,529.20; the distribution and general expenses in 1903 were $6,035.10, and in 1912 $26,415.79. Combine the salaries and office expense with the distribution and general expense giving total of above expenses in 1903 of $21,657.02, and in 1912,—skipping the intervening years,—the total is $72,944.99.

1303 Exhibit "303" gives a better idea of the way all expenses, except materials and labor making gas, repairs, renewals and taxes have changed with the increase in out-put of gas in Lincoln, because in exhibit "303" these items of expense have been reduced to cents per thousand feet of gas sold in the respective years. In exhibit "303" the thousand feet of gas sold each year is set down in the column next to the years; that is, in 1903 under "thousand feet of gas sold," we find 98,343; and in that year the salaries and office expense was 15.89 cents per thousand feet sold, the distribution and general expense was 6.13 cents per thousand feet sold, and the total of these expenses was 22.02 cents per thousand feet sold.

Coming down now to 1908 when the gas sales had increased to 193,391 thousand feet, the salaries and office expense was 15.48 cents per thousand feet sold; and the distribution and general expense was 5.02 cents per thousand feet sold, making for that year a total of 20.51 cents per thousand feet sold.

Coming now to 1912,—skipping the intervening years,—when 234,386 thousand feet of gas were sold the salaries and office expense amounted to 19.85 cents; and the distribution and general expense to 11.27 cents, making a total for 1912 of 31.12 cents per thousand feet sold, which is the largest total in cents per thousand feet sold for any of the years in this period from 1903 to 1912, a little larger than the preceeding year of 1911, for all of those items which I have enumerated.

I have included under the same heading in the different years the same items, per the gas reports of the company, that clearly appears from these tabulations, and I have endeavored to make it clear as I went along. The point I make is that the cost per thousand has risen from 1903 to 1912 about 9 cents, taking these same items as shown under the heading on exhibit "303," namely, all expenses, except materials and labor making gas, repairs, renewals and taxes,

1304 taking those items described by the sentence in each year it shows an increase in cents per thousand feet sold from 1903; dealing with those items alone, and just what those items are as classified by the company, as shown by the exhibit that I have already described in detail for each year each item that I have dealt with as coming from the company's report is set out under the name that it appears under in the report, in other words I say the company's records show that the cost has increased from 1903 to 1912 as to these particular items from 22.02 cents to 31.12 cents, these figures are in cents per thousand feet sold. Whether it would increase if you include labor and materials, would say this is following the two items right down throught the years. I am endeavoring to pick out the material in the most convenient logical way and it is not quite possible to follow that in compiling this document.

In connection with exhibits "302" and "303" just described I call attention to exhibit "304." This exhibit is a tabulation of six columns and is necessarily split into two halves.

The exhibit shows the expenses of operation of the Lincoln Company per its gas reports for the years 1905 and 1912 inclusive, in dollars, under the following headings: "Net materials and labor making gas," "Salaries, office and general expenses," total except "repairs and taxes." Then passing to the half of the table which is on the lower part of the sheet, "repairs and renewals, taxes total expense." The column at the head of the sheet is headed: "Total, except repairs and taxes," shows that in 1905 this total of all the company reports itself as having been spent, except for repairs and taxes was $92,570.46; and that total gradually increases,—skipping the intervening years,—in 1912, when it was $148,863.04.

Turning now to exhibit "305" it appears that in 1905 when the thousand feet of gas sold was 143,690 the total expense reported,—except repairs and taxes,—was 64.46 cents per thousand feet sold; and in 1912 when the sale was 234,386 thousand feet, the total expense except repairs and taxes, was 63.51 cents per thousand
1305 feet sold.

Turning back to exhibit "304" in the lower right hand column it appears that in 1905 the total reported expense was $104,643.53, and in 1912 $175,836.64. Reduced to cents per thousand feet sold the total expense for 1905 in exhibit "305," was 72.83 and in 1912 it was $75.02 per thousand feet of gas sold.

I may say in explanation as to all expenses, except "Materials and labor making gas, repairs, renewals and taxes" that an inspection of the several exhibits covering the years 1903 to 1912 inclusive,—being numbered exhibits "281" to "290" inclusive,—will show the items where the greater increase of expense has occurred. The items set out in these exhibits "281" to "290" and the items with their headings taken directly from the gas reports of the company. I have simply changed the location of the items and added them together and set them up in a different way to get my totals for different groups of items; for the purpose of proving, whether the expenses were provident or not in my opinion. In other words, I want to compare the reported expenses of the company in its gas department with the expenses of other gas companies, and in order to do that it was necessary to classify the expenses along the lines that the expenses of other companies are conveniently classified, and that resulted in the classification here exhibited. As an illustration in the change of the amounts of items during this period I will just mention one or two. In taking for instance as illustrating where an increase was made, the item of executive salaries in exhibit "281" for 1903 that item appears as $3,470.88, the items of executive salary in the year 1912 as shown in exhibit "290" is $8,917.30; in that way any item changes as it appears in the original gas reports of the company can be traced right through these tables I have made.

Taking another item "new business" in exhibit "281" for 1903 the amount there expended for that proposition is $5,578.97; and

exhibit "290" for the year 1912 for promoting new business
1306 is $19,692.64. And so I might pick out other large prominent items and follow them through from year to year, it can be done with any of those items.

I call attention to a number of exhibits which illustrate certain charges in operation and some of the data that was used, particularly in connection with the compilation of the material expense of making gas, such an exhibit is exhibit "291" being entitled "Feet of coal and water gas made yearly, from the gas reports." This exhibit "291" covers the years 1905 to 1912 inclusive and shows for each year the feet of coal gas made; the feet of water gas made; the total gas made in feet. It also shows in the right hand column the percent of coal gas made to the total make. The substance of the exhibit is brought out by this percentage column, which shows that in 1905, the first year here considered the coal gas was 35.58% of the total make. Coming down to 1908 it was a little less 25.6%. 1909 *at* was 8.98%; and since 1909 no coal gas has been made, so that all the make has been water gas beginning with 1910.

Exhibit "292" is entitled "Coke residual and bench and generator fuel per gas reports." This exhibit shows for each year from 1905 to 1909 inclusive the tons of coke residual produced in the manufacture of coal gas by that company, also the tons in a separate column of the fine coke called "breeze," which was relatively a small amount. In another column it shows the coke used for bench fuel; in another column the tons of coke used in the water gas generators in each year from 1905 to 1912 inclusive; and in the right hand column of that table for the year 1905 to 1907 inclusive there is shown the number of tons of net coke residual. That net tons of coke residual is obtained by deducting from the tons of coke residual that the company made the amount used under the benches as fuel and the amount used in the water gas generator, leaving the net tons which the company had for sale or whatever it chose to do with it.

1307 Exhibit "293" is entitled "cost of coke purchased for water gas," with entries through the years of 1908 to 1912, being considered that prior to 1908 the make of coke was sufficient to supply, and doubtless did supply, the water gas generators with what coke they required. The tone of coke used in the generators less the coke made, is shown in one column of exhibit "293"; the price per tone used as the cost of that coke in a column headed "price per ton," and finally the sum for each year representing the cost of the coke to the company. This cost of coke for each year in exhibit "293" is the cost that has been added into the expense of materials at the works,—to get the cost of materials at the works. In other wor*k*s exhibit "293" represents what I understand to be the amount of coke that the company had to buy and use in its water gas generators, and the cost of that coke,—and that is all the coke that I thought proper to add to the cost of materials so far as the water gas operations were concerned as to the price per ton used for the coke in exhibit "293" I refer to exhibit "294" where the tons of the coke actually used in the water gas generator, as figured into its expense

sheet, is also set out under the column headed, "total expense," and resulting from those two columns is a third column headed "dollars per ton expense." This expense for coke for the water gas generator runs back to 1906 in fact I assume it runs back to 1905 but I didn't get that figure when I came to make up this statement, and as I did not require it in exhibit "293" I did not go back after it to fill in exhibit "294." In 1906 and 1907 per exhibit "294" there appears substantial figures, namely, $13,000 and $14,000 in 1907 as the expense of the coke in the water gas generator. Notwithstanding the fact that I concluded that the company made all the coke that was used in the water gas generators in those years, those figures result,—I take it from the practice in keeping the gas report account,—of charging in the coke that was made in the actual gas process
1308 to the expense of making water gas; and then making subsequent deductions or credit for it, whereas I have stated what I consider the preferable method, for the purpose at least, of showing the actual expense or money paid for the gas material of only charging that coke when they have to buy the same. The main purpose of exhibit "294" is to get at the figures per ton for coke bought and the figure has been obtained by dividing the total expense for coke, so called for the water gas generator, by the total amount of coke said to have been used there, resulting in the dollars per ton expense. Those dollars per ton expense have been applied in exhibit "293" so far as I conclude that the company bought any coke for those water gas generators. It appears to me that a little was bought in 1908, 135.66 tons; and so on down to the years 1910, 1911, and 1912 when of course the company was buying all the coke it was using not making any coal gas in those three years named.

Exhibit "295" shows the price per ton paid for coal per the gas reports in several years. I have set up this price per ton as throwing light on the value of "breeze" or small fraction of the coke produced which is broken up and quite fit for steam making purposes. That coke "breeze" was taken in computing the value of the residuals remaining each year at $2.50 per ton. It will be noted that the cost of steam coal here was a little higher than that in the years where the price is noted. Then in exhibit "296" there is set out the number of gallons of coal gas tar, the amount credited for coal gas tar as a residual in computing the expense of making gas per the reports of the company, and the result in cents per gallon at which that coal gas tar was credited. Those cents being under the column "cents credited per gallon." The final or right hand column in the table was the cents received per gallon of coal tar as stated in the reports of the company. The residuals I have computed at more
1309 nearly the figures for the cents received per gallon with the cents the company credited the coal tar per gallon; although I have not absolutely followed either set of figures. The figures I have taken have been followed, the amount received being I think in each case a little under the amount received per gallon as reported by the company.

Exhibit "297" shows the gallons of water gas tar made and the expense credited for the same per the gas reports. Those credits I

have followed in making up the statement for the annual value of residuals made.

Exhibit "298" shows the pounds of coke per thousand feet of water gas made, and the gallons of oil per thousand feet of water gas made, giving the total tons of coke used and the total gallons of oil used. In the earlier years, particularly in 1905 and 1906 the consumption of coke per thousand feet of water gas made was substantially greater than in the later years; for instance in 1905 it was 45.55 pounds per thousand feet of water gas made. In 1912 it was 30.44 pounds per thousand feet of water gas made. Some change in the figures is to be expected with the improved water gas equipment that the company has installed between 1905 and 1912 cutting down the necessary consumption of coke per thousand feet of water gas made. Then as to the gallons of oil, it appears that there has been a drop as between 1906, 1907 and 1908, of between 4 cents and 5 cents a gallon of oil used per thousand feet of water gas made.

Exhibit "299" sets up in dollars the total cost of materials and cost of labor making gas, the net value of residuals, as I have computed that value, and the value of materials and labor less residuals which might, and often is called, the "net cost of materials and labor." In 1905 this net cost of materials and labor was $59,381.30 and in 1912 it was $75,918.05. The meaning of these figures is brought out more clearly by exhibit "300" entitled "expense of ma-
1310 terials and labor making gas, in cents per thousand feet sold." This table covers the years 1905 and 1912 inclusive and shows the thousand feet of gas sold yearly and then in cents the materials and the labor, the value of net residuals, and the materials and labor less residuals per thousand feet sold.

Comparing 1905 and 1912 in the matter of materials, there appears that in 1905 the materials used in making gas were actually costing 41.6 cents per thousand feet sold; and in 1912 30.59 cents per thousand feet sold,—in the period from 1905 to 1912 a drop of between 10 and 11 cents in money actually paid for materials.

Then in the "cents labor" which in 1905 was 5.35, there is a drop to 3.18 cents, or about 2.2 cents between 1905 and 1912. That is all the change that appears to be in the price of labor in those years, whereas there is a change of over 10 cents in the price of materials. Of course, those cents per material per thousand feet of which I speak, the meaning of those figures, that if each other expense had remained the same the cost of gas per thousand feet in 1912 would have been between 10 and 11 cents less than it was in 1905; just on the decline in the cost of the materials alone; whereas it appears wherever the labor went, and however the saving was affected, there is a difference of only .2 or less than .2 cents in the saving of labor between 1905 and 1912 per thousand cubic feet.

Comparing the "cents material and labor less residuals," or another way of putting it is "Net cost of labor and materials to make gas," as shown under the same heading in the company's reports between 1905 and 1912, in 1905 it was 41.33 cents and in 1912 it was 32.39 cents. The total saving was not quite as great as the saving

in materials alone for the reason that you had a net value of residuals in 1905 of 5.08 whereas that net value of residuals in 1912 was only
1.38 for the reason that in the water gas process you do not
1311 get near the residuals that you do in the coal gas; and the
coal gas process in 1905 gave a larger net residual value than the water gas gave in 1912, nevertheless there is in the cost of labor and materials a saving of about 9 cents in a series of years, the saving being in favor of 1912.

Exhibit "301" is entitled "total expense as stated in gas reports and as determined by gas reports by Adams."

The stated expense in gas reports for the years 1905 to 1912 inclusive is the final round statement of expenses as appearing in the report. That is, I have simply taken and put into that column the final round statement of expenses as appears in the reports. I have not obtained the figures for stated expenses here shown by any addition, or anything of that kind. I assumed that it was obtained by the same additions and subtractions in the reports of the company.

Now expenses per Adams I have that down for the years 1905 to 1912, the figures for expense which I think the report directly and thoroughly shows, treating in a proper way the value of the residuals produced. In the final column of exhibit "301" appears what I have called "excess of stated expenses." In 1905 this excess was $778.42, that is the company's round final figure for expense was $778.42 greater than the figures which I obtained by reclassifying the company's items insofar as I think they are proper items, and adding them up. The amount of excess of stated expense varies in exhibit "301" from year to year, the much the largest year is 1907 when the company's statement of expenses, that is, their round final footings for expenses,—was $4,776.76 more than I make the addition of the proper items; Whereas in 1912 my addition of the items were $262.15 more than the company sets down for its total expense. It is possible that some of these differences are due to a
mistake in reclassifying or readding a very considerable num-
1312 ber of items, but think they are in part, in the main, the
affect of the different treatment of residuals in the company's expense report and by myself; that is, I think that the company in charging into its expense report coke which it had itself manufactured,—well, that cost nothing in one way,—coke that was paid for when the coal and labor were paid for; I think they get the coke into the account and in getting it out again there might have been some mistake made; and the same would be so in a lesser degree on the tar. I don't think the company has credited as much for its coal tar as it actually sold coal tar for in the years when the credits were made per gallon and I think these differences are in the main due to that different treatment of residuals; but I say that maybe somewhere a mistake in addition has been made. If we had treated the residual items exactly alike and no mistake in addition had been made there should be no difference in the expenses found by my re-classification of the items, and found in the compan-'s original footings, because I am in purporting in this testimony that I am

now giving you to vary the company's expenses from what it has itself shown, I am merely undertaking to say what I think the reports fairly considered do show on their face. Of course if the company has added in some coke they ought not to add, or has not allowed enough for some tar, I am attempting to correct it, as I assume the company might correct it if their attention was called to it, but I am not putting in here at this time any estimate of my own about operating expenses the corrections that I have attempted to make are made by the facts I found in the reports, they are based on the facts I found in the reports. In other words I am merely testifying now as to what I think is the fair meaning of the figures and statements in the report itself and the differences, except for the one year 1907, are pretty small; it would not figure up very much except in the case of 1907 where it is $4,776.77.

The next exhibit is "306" and is entitled "Gas income and
1313 expense per gas reports."

This exhibit shows the years 1905 to 1912 inclusive the reported gas income of the company. This total expense as I have found by reclassifying and re-adding, the items,—which varies a little,—from the totals set out by the company, being a trifle greater in 1912. That is my expense being a trifle greater in 1912 for some reason, and somewhat less in the other years. In the right hand column of Exhibit "306" is the difference between the gas income and the expense as I have found it, giving what I call the net earnings. From Exhibit "306" these net earnings were in 1905 $68,975.50; in 1906, $60,262.96; 1907, $78,628.69; 1908, $98,657.09; 1909, $111,804.69; 1910, $108,402.53; 1911, $116,169.19; 1912, $106,326.47.

It is to be remembered that these are the net earnings which I understand the reports of the company to show, they are not my estimates of the net earnings at all, excepting in so far as I have slightly varied some items in connection with the residual account.

I have now explained sufficiently perhaps all items entering into expense except repairs and taxes. The taxes I have taken just as reported by the gas company, they are set out in dollars total Exhibit "304." According to that exhibit in the column marked "taxes" the amount for same in 1905 $2,112.00 and in 1912, was $15,260.00 a gradual increase during the period.

In Exhibit "305" appears which appears that the cents taxes in 1905 was 1.46 cents and in 1912 was 6.51 cents. I haven't varied that item at all as I understand it from what appears in the company's reports.

This leaves for explanation in the company's reports the item of reported cost of repairs and renewals. On account of the importance of the items I have set out the total of those items as gleaned
from the expense report of the company for each year under
1314 the headings there given. The repairs and renewals occur in the expense reports under the headings of "buildings, gas benches, water gas generators, other machinery, mains, service pipes, meter maintainence, and meter setting and removing." These repairs and renewals are set out as entered in the books of the com-

pany in the gas reports of the company, from 1903 to 1912 inclusive, in Exhibits "308" to "319." In Exhibits "310" to "319" inclusive the reported repairs and maintainence of the service part of the Lincoln Gas Place, as charged in the gas reports, are set out for each year. In Exhibit "309" the totals under each heading for each year are brought together so as to give the total amount charged to repairs and renewals in each year, beginning with 1903 and running down to 1912, including the setting and removing of meters which the company charges as expense for repairs and renewals during the period beginning with 1903 and ending with 1912, $104,246.08.

(NOTE.)—Exhibit "308" was withdrawn from the testimony by the witness.

This amount of $104,246.08 including $19,965.26 for the setting and removing of meters, and the total amount of repairs and renewals without the setting and removing of meters is $84,280.82. Explaining how this trouble occurred will say the company reports its expenses for repairs and renewals in connection with various accounts in the body of its gas reports, and also gives a summary near the end of the report of expenses for repairs and renewals. The summary does not agree with the addition of the figures selected from the prior portion of the report, and the conflict of figures that has just arisen between Exhibits "308" and "309" was due to the fact that I was quoting by mistake in part from the summary of repairs and renewals as it appears near the end of each
1315 annual gas report and in part from the addition of items of repairs and renewals picked out from the prior portion of the report. In dealing with repairs and renewals as the difference between the sum of the items under this heading in the different parts of the gas reports and a summary presented at the end is small. I have chosen to deal with the items actually selected from the several parts of the gas reports where they are charged to the operating expense.

Beginning with 1903 the amounts charged to repairs and renewals in total each year are as follows: 1903 $5,912.21; 1904 $8,544.68; 1905, $9,961.07; 1906 $11,555.67; 1907, $12,920.67; 1908, $8,915.99; 1909, $9,104.01; 1910 $10,721.04; 1911, $14,898.14; 1912, $11,712.60; total $104,246.08.

Reduced to cents per thousand feet of gas sold for the years 1905 to 1912 the figures are as follows: 1905 6.93 cents; 1906, 7.52 cents; 1907 7.20 cents; 1908 4.56 cents; 1909 4.46 cents; 1910 5.10 cents 1911 6.56 cents; 1912 5.00 cents. The total for the period of years 1903 to 1912 reduced to cents per thousand feet I will have to give at a later hearing I haven't the figures reduced.

It appears from these figures that the charge of the company has varied from 4.46 cents to 7.52 cents for repairs and renewals so called per thousand feet of gas sold. The charge made by the Lincoln Company, or any company, for so called repairs and renewals is merely a part of all of the sum that is necessary to keep up the value of the gas plant. The amount charged as repairs and renewals, or if the single word is used "repairs" alone, it may readily be more

than necessary to offset the shrinkage in value of the property. No words that I know of in the gas business are used so loosely and used with so little exactness of meaning as the words "repairs" and "renewals." Taking a gas company as a whole it is obvious that some sum whatever it may be is necessary to be expended on it as a structure year by year to keep it as valuable as it is or was at any particular time.

1316 Whether in these reports there should be no depreciation,—I was not trying to state what should be but what is, or what does happen. Whether with these repairs made from year to year the plant still maintains 100% of its value,—it all depends on the specified things that are d*onw* and paid for under the title "repairs," and that is just why this expression "repairs," or "repairs and renewals" is so slippery and uncertain until we get down close to the matter and examine the things that were done and paid for called "repairs." Let us take a gas property that is not extended or enlarged at all in a particular year and no complete unit of it, as a machine of some, kind, a length of mains or a gas meter is replaced; no unit is added by way of extensions or enlargements during the year. In a case of that sort there would be undoubtedly small items of expense to be denominated "repairs" that must be done and made on that property; there would be a screw loose and a small patch to be put on or, perhaps a diaphra-m to be put in the ammeter, perhaps a retort to be put in a gas bench, etc., on down the line, but at the end of the year we should have simply the unit structure; machines, mains, etc.,—that we had at the beginning of the year with no additions to them, and no one of them would have been replaced entirely. That is perhaps an illustration of a simple bare case of repairs, as such. It is very seldom that the treatment of gas property stops there in the way of repairs and renewals, but if it does stop there the property so treated necessarily has shrunk in value during the year. It is impossible to keep up the value of any physical structure to any given plain of value assuming an even range of prices of materials and labor, except by enlarging that structure. It is impossible to do it in any other way, that is, to enlarge that structure by adding some new gas meters or running another mile of main, or building a new holder, or putting in a new building, and you may put into the value in the cost of

1317 that new structure that may add enough*t* to offset the shrinkage in the value of the rest of the structures otherwise you can not keep up the value of the structure as a whole. The additions may offset the shrinkage, they may go much further than that, and often do more than offset the shrinkage; and those extensions bring us right in the heart of the matter, that the thing, called "repairs" and the thing called "renewals" are generally very much mixed and the best we can do in considering whether the gas property is of any particular date,—and I want to emphasize the point that we must select the property as of some particular date,—if we are going to show whether its value is being kept up or not; the sum expended on gas property as of any particular date, whether called repairs or renewals has all to be considered in toto; and what

we have to do is to find out if it is big enough,—basing our judgment on experience and any particular factors of that case,—to keep up the value of that structure as a whole; or if it isn't. When we find that a gas company in a particular year has charged and expended a number of thousands of dollars for things called "repairs" it does not at all follow until we investigate and find out what was done with that money, it does not follow in the first place that the value of the structure has been kept up by that expenditure; and in the second place that it has not or may not have been according to the amount expended for the so called "repairs" and according to what was done with it. But it is found in gas property, taking one with another, that about so much money in a property of a given sort,—about so much money say per thousand feet of gas sold, although you may possibly get a more accurate way of measuring it here in round dollars in relation to the capacity or extent of the plant or measured in cents per thousand feet sold, or in some other suitable way,—must be spent on a property to cover the necessary repairs and to make renewals and extensions enough*t* to take care of that shrinkage in value which we call depreciation.

1318 Dealing more particularly for the moment with the word "renewals", when a thing is renewed depreciation is taken care of once for all in connection with the particular article that is depreciated. If we renew a gas blower, the depreciation of the old blower, is finally taken care of when we get another as good and as large in place of it. And so if we want to know what additional allowance, if any, a company should have above what it has actually spent on its plant for the shrinkage in value called "depreciation" we must say in the first instance how much it has spent and what it *ah*s done with the money spent in that connection; and until we know how much has been spent on the property under the title of repairs and renewals, we are in no position at all to say that any particular sum should be added by way of further allowance for depreciation. In fact, I could *s*ite some cases if necessary, where the annual expenditure for so called "repairs and renewals" was way ahead of what was necessary to keep up the value of that property during the year. In other words when the so called expenditures for repairs and renewals actually increased the value of that plant and made it more valuable at the end of that year than it was in the beginning because they simply put in a lot of new stuff and called it "repairs and renewals", bigger and better stuff, and made it a better and bigger plant than they had at the beginning of the year. I figured here in the way I have indicated the amount they have expended on this property by the way of repairs and renewals, and have inquired to see the exact meaning of those figures set down here in exhibit "310" to "319" inclusive, a description of the exact items appearing in the gas reports for which these moneys were expended; from an inspection of these items and from what familiarity I have been able to gain of the property by looking it over it appears that a number of new and valuable things in addition to the mere putting on of patches and the tightening of

screws and hooks and such ordinary things that a number
1319 of new and valuable things were bought to replace the older things that have become as has been thought too old to be used. I think in this plant during this period of years 1903 to 1912 in the cost of repairs and maintainence we have a substantial amount of money spent to offset the shrin-age in value of the property besides what was spent to merely keep the thing going, to keep the screws tightened up. Illustrating what I said about the sum of $104,246.08 charged to repairs and renewals have been spent for actual renewals of property and putting in of new, if not bigger things, and perhaps both I refer to the gas benches exhibit "309" to a column headed "gas benches" running from 1903 to 1912. There was charged to gas benches for repairs and renewals from 1903 to 1912 $12,169.63. In 1907 $4,022.24; in 1908 $2,425.77, apart from the amounts of these charges,—which would indicate that something new was constructed or replaced at least,—what I know of the history of these benches derived in another way, leads me to conclude that the sum of money in 1907 and 1908 was mainly spent for actually new parts of gas benches down there. It would be impossible to expend any such amount of money in repairs of gas benches that pertains to the number and capacity they have at this Lincoln plant. It would be impossible to — spent that money in that way, in fact I know they did not because it is in the records and in the printed records to a considerable extent, that those gas benches were to a large extent rebuilt in those years, so that was an absolute replacement of old and more or less worn out structure and to that extent, a complete offset of depreciation as to that structure. When the old is replaced with the new, of course the depreication is offset and taken care of.

In the same way as to the column headed "other machinery" which included an expenditure during the term of years of $18,317. It would be incredi*t*able to my mind that that amount of money
was spent merely in repairs of the machinery. The title of
1320 expenditure of course does not say that it was all on repairs, it says "repairs and renewals", the point I am trying to emphasize is the fact that there is a substantial amount of actual renewals or plant included in this $104,246.08, and to the extent that there has been renewals, depreciation up to that time was completely taken care of and needs no further allowance. My opinion is that these expenditures actually made in repairing the plant, and in renewing parts of it, have while not completely, offset the depreciation as well as taking care of current repairs have materially contributed to that end. In other words shortly stated I think that this $104,246.08 represents substantially more than was necessary to merely repair the Lincoln Gas Plant during this term of years from 1903 to 1912; and represents very substantially amounts of actual new plant put in there, or as replacing plant that was already there or as an extension and enlargement of the plant, and the additional amount that should be allowed for a complete offsetting of depreciation is a matter for estimation and on that at a

little later point in my testimony I will endeavor to give the best opinion that I can.

I have covered in the main what is necessary to be said in explanation of the tabulations that I have made from the figures in the reports of the company in an effort to set up clearly and plainly just what the reports do show as to the several departments of expense, that the repairs and renewals and other classes of expense I have noted in my testimony, and I am preparing and have ne-rely an estimate of such modifications that I think ought to be made in this showing of the company's figures to cover all the fair cost of making gas, including the matter of depreciation. In that estimate I will attempt to give what I think is the fair cost of making gas here in Lincoln; as a part of that cost I should state what I believe to be the fair allowance for repairs, renewals and depreciation in toto. I do not think this $104,246.08 for
1321 instance, during this period of years is quite enough for repairs, renewals and depreciation; the company has called it,—whatever they mean by that,—"repairs and renewals", and as I understand the testimony of the company, they also claim that a further considerable sum should be allowed as so called depreciation. It is my opinion that the problem is really one problem, the sum one sum, namely, to take care of the plant and keep up its value; the plant is constantly shrinking in value and we must spent money on it to keep up that value, here is $104,246.08 spent on this value, and money spent at the rate of so much a year and so many cents per thousand feet of gas sold. Now I am going to attempt to say what in my best judgment should be added to this rate of expenditure on the plant in order to offset or make good all expenses, for repairs, renewals and depreciation. As to my expressage of opinion as to what should be set aside to meet depreciation in the absence of renewals I do not think that the talk about funds to be set aside and all that sort of thing corresponds with what actually happens in a gas business, or what is necessary to happen or which should be allowed for; that is not the way the gas business is done, by setting aside of funds. The practise is to keep up the value of your plant and increase its value if possible. It would in fact be impracticable to create any great fund representing the greater portion of the value of the plant out of depreciation money. If you are getting a large amount of money from any source, you can put a lot of it away in a fund if you want to, but if you are getting just the money that is necessary to meet current repairs and offset depreciation you must put most of that money from time to time into your plant in order to keep it a good useable plant, particularly if you are wanting some little extentions from time to time to these or new business. There is no such thing as a gas plant that runs like the wonderful "One horse shay" that goes to pieces all at once and then you have to turn around
1322 and build a new plant by some fund that was accumulated in some bank. In other words the theoretic depreciation fund actually goes into a portion of the plant from year to year. You may accumulate a few thousand dollars in a course of a few

years and then comes up a big expenditure and you must put it back into the plant again. I do no- mean to say that you can and should expend on a plant every single year all of the money that should properly be allowed on repairs, renewals and depreciation; but I do mean to say that in the ordinary run of business you will be required to spend the most of that money. You will sometimes get ahead a few thousand dollars, but you will not build up any great fund representing one half or even one quarter of the value of that plant in the ordinary run of business, not if you take your plant and keep it up as you should, but you will be constantly adding to your plant and it will absorb and keep in use the money that is contributed to offset the value of the structure that will and as soon as replace the structure that disappears from time to time. I am not much of a believer in this depreciation fund, so called, that is supposed to exist off in some bank or in the form of government bonds somewhere. I do not know of any plants that are run that way. So far as I know the hypothetical depreciation fund slips into the plant from year to year of a well managed gas company. That is into the entire existence of a plant. They must put the money into the plant as soon as they get it or there is usually enough extensions coming along so they have no trouble in keeping up the value of the plant. They do not run into that difficulty that I said I thought would surely come up with a plant that had no reasons for extensions, such a plant I told you could not possibly be kept up in value, I suppose that the result would be if the rate of dividends or interest was to be determined by the value, that the resulting dividends or interest would be a constantly decreasing amount if they were to be measured by the value of the plant.

Of course I am not saying whether they will or not, but I
1323 do say as a physical thing is a plant made up of given specific units shrinks in value necessarily and inevitably, from year to year; unless you are going to add to its units some new ones you are not keeping up the value of the composite structure.

One of the standard writers on depreciation mentions the practise of many of the English shipping companies who have a considerable fleet of boats or steamers on the oceans in different parts of the world, they are constantly charging enough depreciation off on their boats from year to year, so that the average amount at which each boat stands in the assets of the concern is very much less than the cost of a new boat, so that the value of the assets are only kept up to the par amount, we will say, by the addition of a new boat every year or two. This writer on depreciation,—Mr. Mathewson commends that practise and speaks of it as the sound method of treating the subject and it certainly seems to me to be the only method to get the approximation of the case, which are, that a physical thing does shrink in value, and if you have a composite structure like a gas plant, or a fleet of boats, you can only keep up the value of the bunch by putting new things in as the older things decline in value as I see it.

Mr. A. D. ADAMS, having been previously sworn herein was recalled and the direct examination on behalf of the defendant resumed.

Examination in chief by Mr. Foster:

Exhibit "348" is entitled "Net income in Lincoln, with net gas rate one dollar per M," that is one dollar per thousand. This exhibit "348" shows the estimated income in Lincoln with gas selling at one dollar per thousand feet, the estimated expense incurred on
1324 account of gas sold in Lincoln, and the net income resulting by deducting the said expense from the said total income derived by the sale of one dollar gas in the City of Lincoln down the years 1905 to 1912 inclusive. I have added here the year 1905 in order to get a broad basis for the figures, although I understand the ordinance in question here did not begin to operate until the later part of 1906. It may be necessary or sufficient inasmuch as all the figures are contained in exhibit "348" to read simply my conclusion as to the net income in each year that would have been derived by the sale of gas at one dollar per thousand feet.

For the year 1905 the net income resulting from the sale of gas at one dollar net per thousand feet is $48,891.53; for the year 1906 the said net income per dollar gas is $37,785.89; in 1907 the net income is $52,027.82; in 1908 the net income is $65,148.96; 1909 the net income is $82,545.36; 1910 the net income is $89,511.39; in 1911 the net income is $105,006.90; in 1912 the net income is $91,571.52.

In connection with this estimate I have assumed for present purposes in making it,—not having had time to annalize or change the reported expense for materials and labor making gas by the Lincoln Company, and not having made any change in the taxes, I have taken the reported amount in the gas reports of the company as I understand them, for the materials and labor involved in making gas and for the taxes; and as to the other items of expense, the figures I have just read are made up with the aid of my own estimates as to the proper amount of expense. If at a later date I should be required to make an annalysis of the cost of materials and labor involved in making gas, my expectation is that the net incomes which I have read for the respective years, would some or all of them be increased, becuase I do not think that I would agree to the
1325 correctness of all the items stated in the company's report of the labor and materials involved in making gas; however, according to the reports if I understand them at all as to the labor and materials involved in making gas, I simply assume those figures I do not assume tha- the sales would remain the same as reported or that they would be increased resulting from the reduction; I have also neglected that factor and have made up this estimate of the net income purely on the basis of the gas actually sold in Lincoln as shown in the gas reports, and on certain small amounts shown to have been sold outside of the city of Lincoln by the testimony of Mr. Lea for the company. To my mind a reduction of 20 cents or 1/6 the total selling price of gas, would undoubtedly produce a substantial increase in sales over the sales that have actually taken place since

1906. That is another factor which a further annalysis and computation would operate to increase the net incomes I have stated, I have made no computation as yet of that kind and the net incomes stated are the sales that are actually reported.

An increase sale of gas would increase the gross sum on account of the reduction of price as to its effect on the operating expenses,—would increase the gross sum of operating expenses which would tend to decrease slightly the operating expenses per unit of gas sold, per thousand feet of gas sold, other factors remaining equal, so that your income would be somewhat increased.

Explaining in detail how I arrive at the figures in exhibit "348," the net incomes stated as sold in Lincoln, per exhibit "348," for gas have been obtained by deducting for each year from 1905 to 1912 inclusive, the estimated expense of procurring and delivering the gas sold in the City of Lincoln or from the extimated income to be derived from that gas sold in the City of Lincoln as sold at the
1326 rate of one dollar. In exhibit "348" the income with gas at one dollar is set out for each year from 1905 to 1912 inclusive, that is, the income to be derived from such sale of the gas actually sold in the City of Lincoln and the estimated expense of producing and delivering that gas and carrying on all the operations of the company with reference to Lincoln is also set out in exhibit "348" for each year from 1905 to 1912.

In exhibit "347" the method of obtaining the gross or total income is derived from gas sold in the City of Lincoln,—is set out, and I have made no estimate as to any change in the price of gas outside the corporate limits of the City of Lincoln.

In exhibit "347" is headed "income in Lincoln with net rate one dollar per M," meaning, one dollar per thousand feet of gas sold. Exhibit "347" covers the operation of the years 1905 to 1912 inclusive, and sets out in one column the incomes actually derived by the company from the sale of gas in the City of Lincoln at the price it has been sold; another column shows the volume of gas sold each year from 1905 to 1912 in the City of Lincoln only; that volume of gas having been obtained in a way that will be later described in detail. Another column in exhibit "347" the reduction of income that would have been suffered in the City of Lincoln in each year from 1905 to 1912 if the net gas rate had been reduced 20 cents per thousand feet, that is, had been reduced from $1.20 to $1.00. These reductions at 20 cents per thousand feet sold in Lincoln are obtained by multiplying the number of thousand feet of gas sold in Lincoln by 20 cents for each year. To illustrate, in 1907 the computation shows that 178,626 thousand feet of gas were sold in Lincoln. And a reduction of 20 cents per thousand feet the reduction of income suffered in that year by the company by reason of that reduction would have been $35,725.20. In 1912 the reduction suffered by the company by a reduction of 20 cents per thousand feet in the net price of gas on a sale of 227,297 thousand feet would have been
1327 $45,459.40.

Having obtained in each year in the way stated, the reduction in income that would have been effected by a reduction of 20

cents in the net gas rate, these reductions are taken from the income actually received for gas that was sold in Lincoln in the years in question to get the net income from gas sold in Lincoln at the one dollar rate. To illustrate again, in 1907 the income actually derived by the company from the gas sold in Lincoln was $214,888.20, the reduction of 20 cents per thousand feet amounts to $35,725.20. If this reduction is taken from the actual income it leaves $179,163.00 as the income in Lincoln with gas at $1.00 in the year 1907. Again to illustrate for 1912 the method used, the income actually received by the company for gas sold in Lincoln for the year 1912 according to its reports is $273,175.93. The reduction in 1912 which would have been effected had the net rate of gas been reduced 20 cents on the same volume of sales that actually took place would have been $45,459.40, which deducted from the actual income in Lincoln in 1912 $227,716.53. The incomes with gas at one dollar obtained in exhibit "347" in the way I have just described are the incomes carried into exhibit "348" where the computation results in the net incomes on gas in Lincoln which I have already stated.

Exhibit "339" is entitled "Income in Lincoln per gas reports and expense and net income for Lincoln per Adams." This exhibit covers the operation of the gas company from 1905 to 1912 inclusive, it shows the income obtained from the sale of gas in Lincoln, only, according to the reports of the company. The expense on account of the gas sold in Lincoln, as partially derived from the reports of the company and partially estimated by myself and the resulting net income from gas sold in Lincoln at the rate it actually had been sold, not at the assumed one dollar rate.

For illustration again the year 1907 the actual income for gas sold in Lincoln was $214,888.20 the expense derived partly
1328 from the reports of the company and in part estimated by myself, in 1907 was $127,135.18 leaving as a net income in 1907 from the gas sold in Lincoln at the price it was actually sold $87,753.02; which does not take into account the reduction which would have occurred if the gas had been sold at one dollar, but take it as sold at the net price of $1.20.

Skipping the other years and coming to 1912 in exhibit "339" it shows there that the net income from gas sold in Lincoln in 1912 was $273,175.93 the estimated or actual expense combined,—to be shown more in detail later,—on account of the gas sold in Lincoln was $136,145.01, leaving a net income of the company for 1912 from the gas actually sold in Lincoln at the price it was sold of $137,030.92.

In exhibit "340" the expense incurred on account of the gas sold in Lincoln, the exhibit being entitled "Total estimated expense and expense for Lincoln, per Adams." The object of exhibit "340" is to separate the expense incurred on account of the gas sold in the City of Lincoln from the total expense of the company in its gas business some of the gas having been sold outside of Lincoln. The expense incurred on account of gas sold in the City of Lincoln is taken to be the same per cent of the total expense incurred as the gas sold in the City of Lincoln is and was of the total gas sold the percentage of gas

sold in the City of Lincoln is for each year multiplied into the total expense of the company in its gas business to get the expense incurred on account of the gas sold in Lincoln. To illustrate, in 1907 the total expense on account of the gas business, as shown by the reports of the company in part, and as estimated by myself in part, was $127,671.40. In 1907 99.58% of the total gas sold by the company was sold in the City of Lincoln, so that the $127,671.40 of total expense is multiplied by 99.58% to get $127,135.18, the expense incurred by the company in 1907 on account of gas sold in the City of Lincoln. So again in 1912, the total expense of the company in its gas business, estimated and actual, was $140,399.11; in
1329 1912 the percentage of gas sold that was sold in the City of Lincoln was 96.97%; multiplying the 96.97% into the $140,399.11, the total expense, gives $136,125.01 as the expense of the company for gas sold in the City of Lincoln.

The expense for Lincoln shown in exhibit "340" is the expense for Lincoln shown in the third column in exhibit "348." It is the expense that is used in exhibit "348" to deduct from the income of $1.00 gas to get the net income of $1.00 gas in Lincoln during the years 1905 to 1912.

Exhibit "341" is entitled "Estimate- salaries, office, distribution and general expense, and repairs, renewals and depreciation per Adams, and material and labor making gas plus taxes per gas reports."

Exhibit "341" covers the years 1905 to 1912 inclusive, it contains in one column headed "salaries," "dollars, salaries," etc., estimated salaries, office, distribution and general expense necessarily reasonable to have been incurred by the Lincoln Company in carrying on its gas business during each of the years in question. The column headed "dollars, repairs, etc., per Adams" contains the total amount necessary in each year to cover all the repairs, renewals and depreciation incident to and connected with the Lincoln Gas Plant in order to fully take care of the plant and keep it in good operating condition and to meet all shrinkage in value incident to the depreciation therein. To keep up the value of the property, that may be an equivalent expression to keeping it as good as new. I individually answer in that way, because I have in mind the fact as I have tried to say before, that the individual items of the plant can not be kept up as good as new in a machine any more than a man,—speaking of it as a total,—as an investment. A machine no more than a man can be kept as good as new or as good at all times as it was at one time, but the plant being an aggregation of items can
1330 be kept up to a given figure of value, a figure that applied to some particular period in its history,—either at the beginning or some subsequent period,—and these charges entitled "repairs," etc., that I have set as against each year from 1905 to 1912 represent the money which if expended in the Lincoln Gas Plant for repairs, renewals and extensions, or in other words expended to repair existing property and to add new property,—will amply and fully keep up its value as of any particular date. I have made the amount ample, and more than I really considered necessary, I have

made the amount more than the company has charged in its repair and renewal accounts from year to year. The company has not charged enough in its repairs and renewals accounts to keep up the value of the property in my opinion, and I have allowed somewhat more than that. I call attention to the fact that I have made my allowances as covering the items that are commonly described by those words "repairs, renewals and depreciation," because the problem is one problem,—the thing to be done is one thing,—namely to keep adding to that physical property and keep repairing it so as to keep it up to a given value, and any separation of those items is at best not quite exact, and unless it is carefully made, may lead to very serious misunderstandings, so that I prefer to treat in the first instance covering these three items, the so called repairs, renewals and depreciation, as really one item, which I consider they are in effect.

Take for illustration in this column "repairs, renewals and depreciation" the amount set opposite in 1907 is $16,142.94, which I say is more than ample if expended on that property during the year to repair, and to make such additions of new things to it as will in toto more than fully offset any loss in value due to depreciation.

Taking again 1912, the repairs, renewals and depreciation item as estimated by me here is $21,094.74, that I say is more than ample to take care of all necessary repairs, that is, the fixing up of
1331 the existing plant and all additions necessary to be made in the way of new articles and to fully offset the shrinkage in value on all the articles included in the plant during that year.

Taking the distribution system, which is a considerable part of the total plant, the pipes in the ground are deteriorating from year to year, and will undoubtedly become valueless. This item embraces things of that character, it embraces the depreciation on each part of the plant.

Whether there has been any substitution of old pipe with new ones,—I think there has been some in this plant, but I am trying to make it plain that this figure I just gave, for instance for 1907 of $16,142.94, is my estimate of the amount. Necessarily that must include additions and extensions of the plant in the way of making a larger plant,—not meaning substitutions of worn out parts with new ones,—taking that plant as it stood in 1907 the figure $16,142.94, includes what was necessarily done during the year in the way of bare repairs on the property; also in the way of renewing a main, a service pipe, or some machine connected with the property; it further includes a substantial sum for making extensions to the plant, making it bigger. In no other way as I see the matter, could the value of the property be kept up. There is just one more thing to be said in that connection and that is this, these amounts set out here for repairs, renewals and depreciation for each year are to be considered together, one year with another, that is what I have in mind for this situation; suppose it had fallen out that in 1907 a large gas holder in this plant had become so corroded and had many holes and the tank had gotten to leaking and various other things happened to it that it absolutely had to be replaced in this year,—I

am not suggesting that was the case but it might have been that in such a particular you had some large replacement to make. If that was done the amount to be expended for renewals in that
1332 year would be extraordinary for that item alone might be enough to offset the shrinkage in value of the plant because you would be taking care of a very large amount of depreciation by putting in a new gas holder in place of the old one. But taking the series of years together these figures I have given will in my opinion — more than enough*t* to take care of all repairs, renewals and depreciation.

The figures shown for the various years in exhibit "341" in the column entitled "total expense" are the same figures I have used for the total expense in the same years in exhibit "340."

Exhibit "342" is entitled, "Estimated salaries, office, distribution and general expense," and shows how the figures for these items used in exhibit "341" were obtained. Exhibit "342" covers the operation of the company for the years 1905 to 1912, and set out the feet of gas sold by the gas company in toto during those years, or during each year and the column is headed, "above expense per M feet." There is exhibited the amount of expense measured in cents per thousand feet of gas sold, that I say is all that would be reasonably necessary and more than is absolutely necessary to cover all salaries, office, distribution and general expense of this company if honestly and independently managed. The word "above" in all of these tables refers to the heading of the exhibit, or tabulation, the description of the column is so long, that putting it over that column would make an inconvenient tabulation so I put it in the heading and then used the word "above."

I want to make the basis I have gone on in estimating the total amount necessary for salaries, office, distribution and general expenses of the Lincoln Company in its gas business in each year from 1905 to 1912 a little clearer if I can. I said those figures given here were all that were necessary, and more than was absolutely necessary, to cover the said expenses with honest and independent management, and by that I mean the employment of persons
1333 here to run this gas business who are competent to run it by themselves and do not have to have somebody over them in some distant city or to have any office in any far away place but have sufficient office and sufficient equipment here to run this gas plant as a local institution, putting men here at the head of this business who are amply competent to run this business as other gas companies are run in other place- and to administer the business as competently and reasonably economical as a person who will endeavor to run the business and make a profit out of it.

The cents per thousand feet of gas sold, which I have estimated as ample and sufficient to cover the salaries, office, distribution and general expense of the Lincoln Gas Plant, are in the respective years as follows: 1905, 15 cents; 1906, 14½ cents; 1907, 13½ cents; 1908, 13 cents; 1909, 12½ cents; 1910, 12½ cents; 1911, 12 cents; 1912, 12 cents. These respective cents per thousand feet in the several years are multiplied into the thousand feet of gas sold in those

years, resulting in the following total expenses for those items, namely: the salaries, office, distribution and general expense of the Lincoln gas business. 1905, total expense , $21,553.50; 1906, $22,-281.14; 1907, $24,214.41; 1908, $25,400.83; 1909, $25,535.50; 1910, $26,271.15; 1911, $27,272.16; 1912, $28,126.32.

It may be well at this point to call attention to the radic-le difference existing between the figures I have just estimated for all necessary salaries, office and distribution and general expense, in connection with the Lincoln gas business; and the expenses shown in the reports of the gas company for the same years in connection with that business.

Taking as an illustration the year 1907, I have estimated that 13½ cents per thousand feet of gas sold, all that could be reasonably charged and all that it would reasonably cost to cover the sal-
1334 aries, office, distribution and general expenses during that year. In exhibit "303" it appears that the charged of the company for those same items in that year instead of 13½ cents was 20.58 cents. These items in that year I estimated to amount in dollars to $24,214.41 whereas exhibit "304" shows that the company charged in that year for these items of expense $36,912.89. Taking again the year 1912, I have estimated that 12 cents per thousand feet is ample to cover all salaries, office, distribution and general expense, in connection with the company. In exhibit "303" it appears that the company has charged 31.12 cents for those same items of expense. My estimate of 12 cents on the gas sold in 1912 amounts to $28,126.32, which I say is ample, measured by the experience of other companies, or from any standard of measurement that I can think of, to pay all of the said expense in connection with the Lincoln gas business if honestly and independently managed, whereas it appears from exhibit "304" that the company in connection with its gas business in 1912 charged up to these same items $72,944.99.

Exhibit "343" is entitled "Estimated repairs, renewals, and depreciation expense". This exhibit covers the years 1905 to 1912 inclusive, shows the total thousand feet of gas sold by the company in each year; my estimate of the cents per thousand feet, which is more than ample to take care of all repairs, renewals and depreciation, and the result of multiplying that estimate in cents per thousand feet into the quantity of gas sold, giving the dollars which I say is more than sufficient to get all the repairs and renewals and depreciation on the plant. I have used a uniform number of cents to the period of years stated, because in treating this matter of repairs, renewals, and depreciation, we must recognize that so far as,—particularly if renewals appear as an actual expense,—coming irregularly, the amount of actual renewals in different years will vary very considerably
1335 so I have taken here and used as the amount that is more than sufficient for all these expenses 9 cents per thousand feet of gas sold. In some years it would be impracticable to apply in any necessary or desirable way the amount represented by that 9 cents to the physical property of the company to improve and extend it or repair it, in other years more than that would be wanted, by taking

the group of years together and that is the way we must treat the betterment to a large physical property and the care and upkeep of it, the 9 cents which I have taken in each year, taking the years together, will fully and more than fully take care of all the items of repairs, renewals and depreciation.

In each year from 1905 to 1912 inclusive as shown by exhibit "343", I have allowed 9 cents per thousand feet of gas sold to cover the repairs, renewals and depreciation and that 9 cents is multiplied by the thousands of feet of gas sold to get the total amount in dollars, which is more than ample to take care of all repairs, renewals and depreciation of the Lincoln plant year by year in considering these years together. So that I may not be misunderstood I repeat that some years these items would absorb more money that the 9 cents amounts to in that year, the test of the correctness of the allowance would be taking a considerable number of years along, and I would say most positively that the necessary repairs and the actual renewals and sufficient additions of new things to offset the shrinkage in value of the old things all added together would not amount to more than 9 cents per thousand feet sold during that series of years.

In that connection I call attention to exhibit "307" which is entitled "Expense repairs and renewals per gas reports". This exhibit "307" gives year by year, beginning with 1903 and running down through to 1912 inclusive the amount of money in dollars that the company has actually charged in its gas reports into its operat-
1336 ing expense to repairs and renewals of plant during the period of years in question as shown in exhibit "307" the company has charged $104,246.08; during that same period of 10 years the company has sold 1,763,989 thousand feet of gas according to its reports, and dividing that number of thousand feet of gas into the $104,246.08 gives us the average amount of money expended and reported by the company during that series of 10 years as expenses on its plant, either in repairing existing articles or buying new articles, amount to the sum of 5.91 cents per thousand feet of gas sold. That sum is not sufficient to cover the repairs and to make enough renewals and extensions of the property to maintain its value as of any particular date. I have allowed 9 cents per thousand feet of gas sold as the figure to be used to amply cover repairs and renewals and depreciation against the 5.91 cents which the company has charged in its reports for the cost of repairs and renewals. Undoubtedly a very substantial part of that 5.91 cents per thousand feet of gas sold during this 10 year period was absolutely expended for new property,—not for putting on patches or repairing existing pieces of equipment,—but for absolutely new property either by way of renewals or extensions, I don't think it went to increase the value of that plant because the bare repairs of a plant of this character running along from year to year,—and by bare repairs I mean just keeping the existing articles in operating condition without reference to their absolute renewal which takes care of depreciation on that particular article when it occurs,—the bare repairs are substantially less than 5.91 cents which we find to have been expended during this 10 year period, I have allowed 9 cents as an ample sum for all repairs, re-

newals and depreciation. The total of this 10 year period on repairs is $104,246.08; I haven't completed my computation to show
1337 what my 9 cents would amount to, but it will be a substantially larger sum. I call attention to the amount of depreciation which is computed and allowed on this gas property connected with my valuation of the plant.

Up to the first of 1907 I computed a total depreciation of the property of $82,975.00 as shown by the schedule filed in my exhibit in connection with my valuation, whereas up to 1913 the first of the year I showed a total depreciation of $135,827.00, the difference between those two an increase in depreciation of the property of $52,852.00 during that years from 1907 to 1912 inclusive. During that same period of years the sales of gas was 1,250,864 thousand feet, amounting if divided into the $52,852.00 increase in depreciation to 4.22 cents per thousand feet of gas sold for depreciation only, and the difference between that 4.22 cents and the 9 cents which I have allowed as covering the repairs, renewals and depreciation, is substantially more than is necessary to take care of current repairs under the 9 cents for the depreciation should I have underestimated the depreciation in valuing the property, because the depreciation I have estimated as occurring to the property beginning with 1907 to the end of 1912 was only $52,852.00 amounting to 4.22 cents per thousand feet sold during that same period.

In this explanation of exhibit "343" I might mention the amount of money in dollars shown by estimate to be necessary on the basis of 9 cents per thousand feet of gas sold to take care of all repairs, renewals and depreciation in the Lincoln gas plant. I will state these dollars for several of the years, calling attention to the fact already stated that the sum actually necessary to be expended in that particular year for renewals is not intended to be measured by this statement but rather the sum necessary to be expended on the average over a period of years for repairs renewals and depreciation.
1338 In 1907 the allowance of 9 cents per thousand feet of gas sold amounted to $16,142.94; in that same year the company charged to repairs and renewals on the plant $12,920.67.

Taking another illustration from 1912 my allowance on the average for repairs, renewals and depreciation at 9 cents per thousand feet of gas sold amounted to $21,094.74, the company charged for repairs and renewals in 1912 $11,712.60; that charge works out in 1912 at just 5 cents per thousand feet of gas sold,—my allowance is 9 cents for repairs renewals and depreciation on all existing plant.

The figures for the various years from 1905 to 1912 in the total "above expenses" in exhibit "343" are the figures used by me in exhibit "341" under the heading repairs, etc. per Adams".

Exhibit "344" is entitled "Estimated salaries, office, distribution and general expense, and repairs, renewals and depreciation per Adams, and materials and labor making gas plus taxes, per gas reports in cents per thousand feet sold." Exhibit "344" covers the years 1905 to 1912 inclusive, shows the total thousands of feet of gas sold by the company in each year at the estimated dollars, office, distribution and general expense per thousand feet of gas sold in each

of the said years, for repairs, renewals and depreciation per thousand feet of gas sold in each of the said years, and then states the reported expenditure for materials and labor making gas per the reports of the company, and the taxes paid by the company. The total of these three items of expense per thousand feet sold, is carried into the final column in exhibit "344" "total expense" and this total expense amounts in cents per thousand feet sold to the following for the respective years: in 1905, 66.80 cents; 1906, 76.25 cents; 1907, 71.19 cents; 1908, 66.38 cents; 1909, 59.38 cents; 1910, 56.65 cents;
1911, 53.36 cents; 1912, 59.90 cents. This estimate of total
1339 expense is made up of my estimate of all necessary salaries, office, distribution and general expenses, and my estimate of the sum that is more than necessary to cover the repairs, renewals and depreication plus the amounts reported by the company as expended for materials and labor in the operation of making gas and plus the reported taxes.

Exhibit "345" is entitled "Reported income and expense for gas sold in Lincoln only". The word "income" should be dropped from the total of exhibit "345" its inclusion there is a mistake, leaving the heading of the exhibit to read: "Reported expense for gas sold in Lincoln only". Exhibit "345" covers the years 1905 to 1912 inclusive and shows for each year the total gas sold in thousands of feet; the thousands of feet sold outside of Lincoln; the resulting thousands of feet of gas sold in Lincoln, that is, in the city limits of Lincoln; the per cent of total gas sold, that is sold in the City of Lincoln, the total gas expense and the expense for Lincoln, on the basis of the percentage of gas sold in Lincoln for each year. The percentages of gas sold in Lincoln as shown in exhibit "345" are the same percentages used by me in exhibit "340" in the column "per cent expense for Lincoln".

Exhibit "346" is entitled "Total income per gas reports and income outside of Lincoln per Lea". It covers the years 1905 to 1912; shows in one column the dollars total income from the gas business taken from the gas reports of the company; in another column the income outside of Lincoln, which was obtained from the testimony of Mr. Lea; and in the final right hand column the income of sales of gas in Lincoln obtained by deducting the income of gas sold outside of Lincoln from the total reported income.

Exhibit "349" on page "A" of the folder entitled "Other gas rates and expenses compared with Lincoln gas reports" and is entitled "All
expenses except materials and labor making gas, repairs, re-
1340 newals and taxes for plants selling 100 million to 300 million feet of gas annually per sworn returns to the Massachusetts Gas Commissioners, cents per M feet gas sold".

Objection made to the exhibit for the reason that there is no sufficient verification, no proper foundation laid, no basis for comparing, and no similarity of conditions shown between the markets and operating and labor conditions and materials and supplies in the district in which the Lincoln Gas Company operates and the district mentioned in the exhibit, and the original data upon which the tabulation is made is not before the court or subject to cross examination or verification.

Referee: The objection I think is a serious one, I will receive the evidence however. It seems to me that the objection is a very dangerous one if I conclude the testimony is not competent I will not consider it and will so state in the report. The Plaintiff excepts.

(Witness continuing:) The data shown in exhibit "349" has been taken from certain public records of the Commonwealth of Massachusetts known as the returns to the Masachusetts Gas and Electric Light Commissioners. These records are kept in the office of that Commission, a public commission of the Commonwealth of Massachusetts and are treated as public records, namely, open to any one who comes at suitable times and in a suitable way to inspect and make copies or otherwise properly use them. They are not permitted to be removed from the custody of the Commissioners in which they rest. These so called gas returns are returns required by the Gas Commissioners of Massachusetts to be made to the Commissioners annually on printed forms supplied by the Commissioners to the gas companies for this purpose. The printed forms being composed of various printed questions or entries which are intended to be filled out by the gas companies that are required to make the returns.

1341 The system of obtaining these returns from the gas companies has been going on in Massachusetts since the year 1885 when the first return was required and obtained from the gas companies over the Commonwealth, and there are in the possession of the Gas Commissioners of Massachusetts a continuous record represented by those returns of the Gas companies from 1885 to June 30th, 1913. The returns are made for years ending with any statement of years that I may make in reference to data derived from these returns to the Massachusetts Commissioners namely: that the data is for years ending June 30th. I have here in Lincoln a copy on the original form of one of these returns of one of these companies which can be produced here, which is on the printed form required by the Commissioners, of course it is not the original return for the company in question but a copy of that original return. They have extra copies of these forms and I simply obtained one for this purpose.

I have resorted extensively to these returns in the office of the Massachusetts Gas Commissioners to aid me in forming an opinion among other things as to the amount of costs to the Lincoln company for the various salaries, office, and distribution and general expenses of the Lincoln Company, apart from its cost of materials and labor involved in making gas and apart from its taxes. I have also resorted to these Massachusetts returns very considerably, for any year, as the basis of forming an opinion on the subject of necessary amounts for repairs, renewals and depreciation, so that my opinion on both of these branches runs back largely to the facts disclosed by the returns in the hands of the Massachusetts Gas Commissioners.

Returning now to exhibit "349" headed "All expenses except materials and labor making gas, repairs, renewals and taxes for plants selling 100 million to 300 million feet of gas annually," I have made up this table to aid in forming an opinion as to the fair and necessary amount as measured in the first instance by cents per

thousand feet sold, to be charged by the Lincoln company
1342 for the items of expense in conducting its gas business not enumerated in the heading of this exhibit "349"; the items of expense enumerated in this heading not being here considered. The tabulation has been made up from various companies in various years, when between one hundred million and three hundred million feet of gas were sold particularly because those limits includes the annual sales of the Lincoln company, about 1906 or 1907 and up to 1912, so that the exhibit shows as to the cost of the items of expense under consideration with other companies when sales of such volumes of gas annually as have been sold approximately in the years 1906 to 1912 here in Lincoln.

For instance, to illustrate, in 1906 the Lincoln company sold $153,663 thousand feet of gas, exhibit "349" shows that the Haverhill Gas Company back in 1903 sold 153,068 thousand feet of gas and that various other companies sold amounts just above and just below that. The charge of the Haverhill company for all expenses except those enumerated in the heading of exhibit "349" was 10.36 cents an amount substantially less per thousand feet than I have here for the expenses under consideration in Lincoln in the year 1906.

Taking the year 1907 when the Lincoln company sold 179,366 thousand feet of gas, and turning to exhibit "349" in the column headed "thousand feet of gas sold," we find the Haverhill company in 1906 sold 170,759 thousand feet of gas at an expense for the items under consideration of 10.44 cents per thousand feet.

The Charlestown Company in 1904 sold 179,798 thousand feet of gas at an expense for the items under consideration of 12.16 cents per thousand feet sold. Charlestown again in 1910 according to exhibit "349" sold 238,229 thousand feet of gas at an expense of 11.40 cents per thousand feet sold for the items under consideration. That corresponds very near in volume of sales to the Lincoln company in 1912 when 234,386 thousand feet of gas were sold at an expense of 31 and a fraction cent- per thousand feet of gas
1343 sold for these same items of expense. Taking the largest sale included in the tabulation in exhibit "349" at the foot of the column headed, "M feet of gas sold," we have the Lynn plant which sold 283,578 thousand feet of gas at an expense of 8.37 cents for the items of expense under consideration, it cost 31 and a fraction of a cent here in Lincoln in 1912. Exhibit "349" is, with the exception of the Haverhill Company which will be added, a compilation and selection of which run through the year 1900 to 1912 and show a great variation in the sale of gas and exhibit "349" was picked out from these exhibits as a convenient compilation that would show the expenses under consideration for the range of sales of gas annually that occurred here in Lincoln since 1905. My deduction on page "A" not taken from the items embraced on the subsequent sheets of the folder it is simply a compilation with the object of showing an increase of out-put of gas and the accompanying sets of expense, and those pages from 1 to 10 inclusive were taken by

me and my assistants under my direction from the records of the Massachusetts Commission.

Exhibit "350" is headed "Cambridge Gas Light Company, all expenses except materials and labor making gas, repairs, renewals and taxes for sworn returns to Massachusetts Gas Commission."

Before going further with the explanation of exhibit "350" I might explain as to the heading, that there is this variation from the expense as exhibited in the sworn returns to the Massachusetts Gas Commissioners, the returns wrongfully include the item of bad debts as an expense. Bad debts is not an expense, I have several times in hearings before the Commissioners of Massachusetts called attention to that; the amount is small but it is not properly an expense, it is not included as an expense in these tabulations. To illustrate, suppose a concern makes and sells a certain amount of gas in a year and pays out money on materials and labor and all the expense of making and selling that gas and delivering it is $100,000.00,
1344 it pays that out in money, suppose then that they bill that gas out at $150,000.00 the whole yearly volume; now suppose further that through some misadventure they do not get paid for any of that gas and the consumers all fail and go into total bankruptcy, say, if they are going to charge their bad debts into their operating account the operating account in that year will show $250,000.00 as the cost of gas, when as a matter of fact they spent $100,000.00. The Massachusetts Court says, "cost is money paid," and that is the principle I have gone on in making this compilation. I have left out the bad debts and that is the only variation from the Massachusetts accounts.

Exhibit "350" shows all the reported expenses except materials and labor making gas, repairs, renewals, and taxes of the Cambridge Gas Light Company in each of the years 1900 to 1912 inclusive. These expenses I have divided here into two groups, calling one "salaries and office expense" and the other "distribution and general expense." I do not set anything in particular by those two groups, they are simply approximate divisions of the accounts,—I might have adopted some other, but I though these were more convenient to bring out the nature and extent of expenses such as are described by the heading of exhibit "350."

In the right hand column of exhibit "350" I give the really crucial figures for each year, namely, the total of the expense described,—it is perfectly possible for the total to be made up of sums charged in a different ways by different companies under the different subheadings, and that is why the division into salaries and office expense so called and into distribution and general expense is only an approximate division which is more or less convenient and gives some fair idea of the way the expenses are divided.

1345 Exhibit "350" is intended to go with Exhibit "351" which relates to the Cambridge Gas Light Company and is headed "All expenses except materials and labor making gas, repairs, renewals and taxes per sworn returns to the Massachusetts Commissioners cents per M feet gas sold." Exhibit "351" like Exhibit "350" covers the years 1900 to 1912 inclusive, shows the thousands

of feet of gas sold in each one of those years; then sets up the cents of expense obtained under each one of the heads mentioned by dividing the dollars total in Exhibit "350" in each column by the thousand of feet of gas sold in the year in question, so as to give the cents per thousand feet sold in each year in Exhibit "350" the total expense is shown in the right hand column of Exhibit "351" and for the Cambridge Gas Light Company in 1900 was 11.83 cents; in 1912 it was 12.82 cents and in the intervening years it fluctuates in the neighborhood of those figures. Taking the year 1900, which in the case of the Cambridge company is the nearest year in the matter of out-put of gas that I have here recorded, the total expenses except materials and labor making gas, repairs, renewals and taxes of that company was 11.83 cents per thousand feet of gas sold; the sales of that company in that year being 276,284 thousand feet.

Referring to Exhibit "352," as previously stated by me, the figures in each of these exhibits showing expenses were obtained from the sworn returns to the Massachusetts Gas and Electric Light Commissioners and from no other source whatever.

Exhibit "352" is to be accompanied by and understood with "353" both of those exhibits show the operation of the Charlestown Gas & Electric Company.

Exhibit "352" is entitled "All expenses except materials and labor making gas, repairs, renewals and taxes per sworn returns to Massachusetts Commissioners." In this exhibit which covers the years 1900 to 1912 inclusive the total of the above described
1346 expenses mentioned in the heading, is set out for the company in each year and the same division approximately into salaries, and office expense so called, and into distribution and general expense so called, is made. This division, is only a provisional and approximate one, and may not represent,—I want to lay stress on that point may not, and probably does not represent as to the different companies,—the same items. It is not to be expected that a large number of gas companies are going to charge the same items under the same headings. Take for instance the column "salaries and office expense," I have included from the returns of the company just the same items for each company in that column, it is quite possible and to my mind probable, that the companies in keeping their books as they are required to do in a form prescribed by the Massachusetts Commissioners may have charged not quite the same items under the headings that I have denominated "Salaries and office expense" and the same holds true as to the items I have collected under the heading "distribution and general expense"; I have collected the same items for each company for each year under that heading; but the different companies may not have charged the same items into the same place, but that does not matter for our conclusion because this table affects my judgment and I rely on it by reason of the amounts exhibited in the right hand or total column so that any difference of classification of those accounts becomes of trifling importance because they are all in the right hand column whatever heading the company has kept the accounts under.

In other words the classification in the first two columns "salaries and office expense" and "distribution and general expense" is to some extent arbitrary in the judgment of different bookkeepers, but the column headed "total of above expenses," including the items set out in the heading of the exhibit does include all of the expenses of those companies other than those excluded in the title of
1347 the exhibit precisely. It includes everything that the companies have charged and reported in their sworn returns except what they said was the cost of materials to make gas and the cost of labor to make gas or to use the exact language of the Massachusetts returns "labor at the works and repairs, and renewals and taxes;" they are separately set out under different heads in the Massachusetts returns as will appear when I bring in the copy of one of those returns.

As to the Charlestown company in Exhibit "352" in 1904 that company sold 179,798 thousand feet of gas, or very nearly that sold by the Lincoln company in 1907. The Charlestown company for all the expenses I have described in this connection, in 1904 charged in its sworn return the sum of $21,873.00 and that divided by the 179,798 thousand feet of gas sold amounts to 12.16 cents per thousand feet,—a less sum that I have allowed in 1907 for the Lincoln company in fact I have intended to make a liberal allowance for the Lincoln company and more than would be allowed strictly on the basis of this showing here on these foreign returns. In 1912 the Charlestown company again charged for all expenses under consideration $27,358.00 on a sale of 256,869 thousand feet of gas, amount by division to 10.25 cents per thousand feet sold.

Exhibits "354" and "#355" give in toto the cents per thousand feet sold, all expenses except materials and labor making gas, repairs, renewals, and taxes of the Lawrence Gas Company as returned to the Massachusetts Commissioners for the years 1900 to 1912 inclusive.

In the year 1902 the Lawrence Gas Company returned to the Commissioners an expense of $32,065 for the items here considered on a sale in that year of 184,256 thousand feet of gas, or about that sold by the Lincoln Company in 1907 that total amount of reported expense amounts in that year to 17.4 cents, an amount larger than I have allowed the Lincoln Company.
1348 In 1903 the expense of the same company was down to 12.2 cents per thousand feet of gas sold. Following down from 1902 the Lawrence Company in 1903 shows a sale of 236,808 thousand feet of gas sold at a total expense for the items under consideration of 12.2 cents. I think that is the nearest year to the sales in Lincoln in 1912. In some of the years the Lawrence company is down below 11 cents for these total expenses under consideration as shown by the tabulation.

Exhibits "356" and "357" show the returned expenses of the Lynn Gas and Electric Light Company to the Massachusetts Commissioners for the years 1900 to 1912 inclusive. The Lynn Company selling a large volume of gas. By reference to exhibit "357"

the smallest sale I have here is the one of 1900 which was 183,843 thousand feet of gas sold which is, therefore, the nearest figure I have for the Lynn company for the sales of the Lincoln company in 1907. On that sale in 1900 of 183,843 thousand feet of gas sold the Lynn company reported a total expense for the items under consideration of $13,572, amounting to 7.38 cents per thousand feet sold. An amount very much less than what I have allowed the Lincoln Company in my estimate. To get a figure approximating the sales of 1912 of the Lincoln company we have to take the year 1902 for the Lynn company when the sales were 224,514 thousand feet and on those sales the total reported expense for the items under consideration was $19,680.00 amounting to 8.76 cents per thousand feet of gas sold. The Lynn company reports a low expense for the items under consideration for the entire series of years from 1900 to 1912. The highest is 11.16 cents per thousand feet sold and anything like as that occurs in only one year. The expenses reported by this company are exceptionally low just as those reported by the Lawrence company was exceptionally high, at least I used the word "exceptionally" there to mean in the case of the Law-
1349 rence Company is some of the years I have shown, higher than I should consider reasonable. In the same way in the case of the Lynn company the expenses are lower than I should think proper to require the Lynn company to come down to. I do not mean to set up any of these companies as an exact standard by which I weight it but I do say that a consideration of these figures has aided me very materially in coming to the conclusion I have in reference to the fair expense to the Lincoln company. Some of these figures are lowere than I should suggest, and some of them higher.

Exhibits "358" and "359" show the reported expenses of the Taunton Gas Light Company, Taunton, Massachusetts, covering all expenses except materials and labor making gas, reparis, renewals and taxes, for the years 1900 to the year 1913.

The Taunton Company is a rather small one, its largest sale of gas which was in 1913 is distinctly less than that sold in Lincoln in 1907. In 1913 its sale of 136,492 thousand feet, on it the reported expenses for all items under consideration was $17,984.00 amounting to 13.17 cents per thousand feet sold. All the other years of the Taunton Company show a still smaller output of gas somewhere the output was down below 100,000 thousand feet of gas show a large expense per thousand feet.

Exhibit- "360" and "361" show all expenses except materials and labor making gas, repairs, renewals and taxes of the Haverhill Gas Light Company per sworn returns to the Massachusetts Commissioners for the years 1896 to 1907 inclusive. During this period of years the Haverhill Company was constantly much below the annual sales of the Lincoln company but in 1906 and 1907 the Haverhill company approximated in sales to the sales of the Lincoln Company at that time. In 1906 the Haverhill company sale was 170,759 thousand feet of gas, this a reported expense for the items under consideration of $17,836.00 amounting to 10.49 cents per thousand

feet of gas sold. In 1907 they sold 182,359 thousand feet of
1350 gas at a reported expense for the items under consideration of $22,376.00 amounting to 12.27 cents per thousand feet of gas sold. For the sale of 1906 and 1907 I have allowed more than either one of those figures for the Lincoln company.

Exhibit "362" is a compilation made by mer from Brown's Directory of Gas Companies. Brown's Directory is considered a standard book of reference concerning gas companies; it is a book published annually by Mr. Brown of the Gas Age and has been published annually since about 1885. It is the only book that I know of dealing generally with gas companies throughout the United States. The information contained in that book is understood by engineers to be derived by Mr. Brown from correspondence with the various gas companies. (Interrupted.)

The plaintiff moves to strike out the answer as hearsay no proper foundation laid and volunteered by the witness as to what the source would be. Overruled. The plaintiff excepts.

(Witness continuing:) This book is generally resorted to by engineers in connection with gas matters; it is the only available source of information, and is generall- accepted as authority for the matters contained in it. It is not categorically accurate the companies apparantly do not report or at least Mr. Brown does not publish in his reports detail operating expenses and that kind of things but he does give a variety of figures, and most of the gas companies have a copy of the book and keep it for their information as to what other gas companies are doing. This is for the year 1908, and will show the figures for 1907, most gas engineers keep a copy of this book.

Exhibit "362" is entitled "Thousand feet of gas sold in the year 1907 and net rate per thousand from Brown's Directory of 1908." Brown's Directory comes out in the fore half of each year, and is understood generally be engineers to contain the records of operation to the extent that it goes for the preceeding year; that
1351 is Brown's Directory dated in 1908 would contain some figures, from the operation of gas companies for 1907 and that is the directory from which the information in exhibit "362," with one exception, is obtained.

Exhibit "362" gives a list drawn from Brown's Directory of cities where gas plants are located and of the thousands of feet of gas sold according to Brown's in each place in the year 1907; of the highest net rate charged for said gas per thousand feet; according to the same authority, of the miles of mains reported in Brown's Directory as in use by the plant in the specified location; and in the last column is a set of figures that I have obtained simply by dividing the thousand of feet of gas sold by the miles of mains to give the thousands of feet sold per mile of mains. All of the companies exhibited in the table had a net rate of as low as one dollar in the year 1907. Emporia, Illinois and Cedar Rapids, Iowa, the net rate was 90 cents. In the case of Colorado Springs and Pueblo the rate of one dollar applied to gas that was used for fuel purposes by the purchaser and there was a net rate of $1.50 which was applied to gas in case the

consumer was so unfortunate as to use it for lighting. Unfortunate because he had to pay the extra 50 cents if the gas company caught him doing it but I suppose they had two meters for each consumer. In the Cedar Rapids, Iowa company the records which I have shown here, a sale of 91,330 thousand feet of gas at 90 cents is not taken from Brown's Directory but is taken from the printed records before the United States Supreme Court in the case of the Cedar Rapids Gas Light Company vs. Cedar Rapids, a case as I understand it the validity of the 90 cent rate which had been fixed by the municipality was sustained; in the record of the sale of gas in that year it is given as 91,330 thousand feet for the year 1907, just as all these figures are, and the rate required by that ordinance being con-
1352 sidered in that case was 90 cents,—I know that personally because I was employed in that case by the City of Cedar Rapids and it is shown in the record. There should be a reference mark which the stenographer has omitted from the Cedar Rapids to the words "per record United States Supreme Court."

Referring to the sales per mile of mains for the companies shown in exhibit "362," it appears that the Lincoln company sold 2,798 thousand feet per mile of mains, which is a medium figure compared with the sales of the other companies, neither the highest or the lowest but are up towards the highest figures. These companies shown in exhibit "362" are companies in this section of the United States; the exhibit was compiled with that in view to get the companies in this central part of the United States that were selling at this rate, at the range of rates shown.

Exhibit "363" is entitled, "Some gas plants where the highest net rate per thousand feet for any purpose are not over one dollar in 1907, per Brown's Directory of 1908"; this being the same copy of Brown's Directory referred to in exhibit "362."

Exhibit "363" is compiled on the basis indicated in the heading, namely, that the rate charged by the company was not more than one dollar per thousand feet highest net rate, and the table is unlimited as to location as far as the United States is concerned. That is, it picks out companies all over the United States whose output runs all the way from 11 millions at Canton, Ohio to 50 millions at Erie, Pa., 75 millions at La Crosse, Wis., up to 9,500,000 thousand feet of gas sold in Brooklyn, New York. Many of the rates in the table are below one dollar; that at Cleveland was 75 cents,—that is a much larger plant than the Lincoln plant, the output is much larger; on the other hand the City of Wheeling, West Virginia had a rate of 75 cents, I think that was from a municipal plant. Cedar Rapids, Iowa has a rate of 90 cents on an output of 81,330,000 feet, and as in the former table the figures for Cedar Rapids
1353 are taken from the records of the United States Supreme Court. As I make it by a quick count here there are about 18 plants shown in this table that were selling not more than the Lincoln plant in 1907 and that sold for not more than one dollar, two of them selling below one dollar. At Cedar Rapids the rate fixed by the company was $1.00, but this 90 cent rate had been fixed by the city authorities and was in litigation, and as I understand, the

decision of the court was subsequently held to be valid, so that it would apply there in 1907 although the company was insisting on its right at that time in the courts to charge a rate of $1.00.

Exhibits 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 356, 357, 358, 359, 360, 361, 362, and 363 offered and received in evidence.

I have made a study of Massachusetts plants for the purpose of a comparison with the Lincoln plant. I have taken a number of Massachusetts plants that sell gas at $1.00 per thousand feet and compared them as to rates, capitalization, book assets, and extending of plant equipment with the Lincoln plant; these in the main included the same companies as in my former testimony but the list is here extended for the purpose of the present comparison. I prepared exhibit "367" which is entitled "Massachusetts plant with rates of $1.00 or less for gas and the Lincoln plant in 1912."

This exhibit "367" is a summary of exhibits which follow it and which is intended to represent in a concise way the final figures of the other exhibits. Exhibit "367" involves a comparison in the first place between 18 Massachusetts plants and the Lincoln plant; and a further comparison in the second instance of 11 of the previous 18 Massachusetts gas plants with the Lincoln plant.

Taking first the comparison between the 18 Massachusetts plants and the Lincoln plant in the matter of rates; the highest net rate per
M feet charged by each of the Massachusetts plants which
1354 ranges from 75 cents in some of the plants up to $1.00 in
others. While some of the plants don't charge an entirely uniform rate, some of them do. I have paid no attention to that variation one way or the other but have tabulated the plants as to the highest net rate which each one charges for gas per M feet and if in any of the plants they charge a less rate than the maximum net rate for some purposes, for consumption, etc., I have paid no attention to that factor.

The net rate in Lincoln is $1.20 and so stated in exhibit "367." Now the million feet of gas sold by each company during the year in Massachusetts ranges from 57 million in the smallest plant to 783 million in the largest plant, whereas the sale in Lincoln was 234 million.

A word of explanation is needed there about those figures in this respect; the Massachusetts figures are for the year ending June 30, 1912. The Lincoln figures are for the calendar year of 1912; each set of figures, therefore, represent a 12 months' operation. They don't exactly represent the same 12 months, one ending in the middle and the other at the end of the calendar year.

From memory I make an explanation as to the plant that sold only 57 million feet and yet charged $1.00, that is the Attleboro, Massachusetts Gas Plant, and the rate there last year, 1913 was $1.00 per M feet net; I find that rate of $1.00 was not in force during the fiscal year ending June 30, 1912 but has since been put into affect,—I had forgotten that at the time I made this compilation,—during the fiscal year ending June 30, 1912 it was not but one dollar is the rate there now.

For the 18 plants in Massachusetts the sale of gas during the year was 7,488,972 thousand feet as against 234,386 thousand feet in the Lincoln plant. The combined holder capacity of the 18 Massachusetts plants was 36,329 thousand feet, in Lincoln it was 850
1355 thousand feet. Now dividing the thousand feet sold into the holder capacity gives for the Massachusetts plants a holder capacity of 4.85 feet per M feet of gas sold during the year; and for the Lincoln plant 3.62 feet per M feet of gas sold by it during the year.

Taking again for comparison the feet of mains of greater dimension than 2 inches it appears that the 18 Massachusetts plants had 10,523,556 feet of such mains while the Lincoln plant had 141,285 feet of such mains. Reducing these feet respectively to feet per thousand feet of gas annually sold we obtain for the Massachusetts plants 1.4 feet of mains of greater diameter than 2 inches per thousand feet of gas sold; and for the Lincoln plant .6 of one foot. These figures as to holder and mains indicate to my mind distinctly a smaller and less costly equipped plant as to those features of the Lincoln plant than in the corresponding figures in the Massachusetts plants here considered.

The total feet of mains in the 18 Massachusetts plants is 11,414,-602; according to the testimony of the company as I understand it, in the Lincoln gas plant there are 459,251; that gives for a total feet of mains per M feet of gas sold 1.52 for the Massachusetts plants and 1.95 for the Lincoln plant, showing there are a somewhat greater length of mains when you take into account the large amount of mains of 2 inch diameter here in Lincoln whereas if you leave the 2 inch mains out the length of mains per thousand feet sold is less than one half in Lincoln than in the Massachusetts plants.

Comparing the mains in the matter of percent it appears that in the Massachusetts plants the length of mains greater than 2 inches is 92.1% of the total length; in Lincoln it is 30.7% of the total length, showing again the relatively small amount of large pipe in the Lincoln system.

The 18 plants in Massachusetts just considered are in part operated by companies that also operate electric plants so that the
1356 capital stock in its relation to dividends and dividends in their relation to the gas out-put, can not be accurately and conveniently compared because the companies that operate both derive their dividends from combined sources of gas and electric service and their capital stocks and bonds are devoted in part to each class of service; so that of the 18 Massachusetts plants already mentioned and the names of details of which appear in later exhibits, 7 are dropped out for the purpose of the next comparison. They are not the 7 that have combined service, not all of them, one, Haverhill is in litigation with the Commonwealth of Massachusetts and had paid no dividends during the year, for that reason in considering the matter of dividends that plant is excluded; I don't remember for the moment that there was any other exclusion except on the basis of gas and electric service and the peculiar situation

of the Haverhill plant, which is engaged in litigation as to rates and paid no dividends.

Passing to the lower half of exhibit "367" the number of plants concerned with the Lincoln plant is 11: the 11 plants sold 5,108,479 M feet of gas as against 234,386 M feet of gas sold by the Lincoln plant.

Taking the average dividend for the 11 plants in Massachusetts now under consideration, it was 10.05% of the stock. That average was obtained by taking the entire dividend paid in dollars and dividing it be the entire capital stock of those companies,—for I should mention here that these companies have no bonds outstanding,—so that apart from any interest that have been paid, and as will appear was paid on notes, the dividends represent the entire returns of the stockholders and consequently the investors got out of it; that is subject to qualifications about notes which will be gone into more in detail.

As to capital stocks and bonds of these 11 plants in Massachusetts which do only a gas business they had outstanding at the
1357 close of the year $8,964,100 par value of capital stock, there were probably additions to that stock during the year. I haven't brought that out in this exhibit and haven't the figures to show what additions if any there were, but these large gas companies are frequently increasing their stock and I have no doubt there is stock outstanding against the property during the year as a whole were somewhat less than the figures at the end of the year; any addition would tend to increase the total stock.

For the Lincoln Company I understand the stock and bonds to be $2,250,000.00 outstanding. I took that from the Supreme Court printed record in the former hearing of this case; if something has been added since I didn't take account of it here, I don't know that anything has been actually issued since. While my notation reads capital stocks and bonds the word "bonds" was put in to cover the entry as to the Lincoln plant; there are no bonds outstanding of the 11 Massachusetts plants; it is all capital stock, as gas plants in Massachusetts usually prefer to issue stock instead of bonds. The next entry shows the plant's assets per company's books. Those statements of assets are purely the statements of the company concerned, made to the Gas & Electric Light Commission of Massachusetts, they are statements of opinion, as all statements of the value of assets as apart from the cost must be; I suppose the Commissioners exercise,—as far as I am able to see how and have studied the matter for a series of years as to the bookkeeping of these Massachusetts companies and their returns,—exercise no supervision or any authority, they are the amount of assets reported by the companies. In other words the companies report their assets respectively at what the companies' officers think they are worth, or what they choose to report them and that amount is unchanged and not supervised by the commissioners in any way to determine whether it is correct or not. In a rate investigation the Commission isn't bound at all by the statement of
1358 the company's assets, in fact in a number of those rate investigations I have been in I was not able myself to find any such

value of assets as was reported by the companies. At any rate it is a fact to be considered in all the rate investigations in Massachusetts along with any other relavent fact, but it is not controlling on anybody unless it would be the company and I never knew it to control them very much. These plant assets for the 11 Massachusetts plants are reported for the year 1912 at $13,818,834.00 while for the Lincoln plant the book assets given in this case are $785,081.00.

As to the items I have included here under the term plant assets, I would say that all of the items are corresponding to the returns of the Massachusetts companies, real estate,—that is land and buildings,—all machinery and holder equipment, and main service, and meters, in other words it is the complete manufacturing and distributing plant of the company; but it does not include outside investments like the stock and bonds the companies may hold or cash they have in the bank; it is the physical plant of the company, that they use presumably in the gas business. Although that is subject to slight variations in this respect that our companies in Massachusetts even hold some real estate that is not used or useful in the gas business, either by way of vacant land or property that they rent; I didn't investigate that statement as to this group of companies merely mention it as an incidental line of assets. It would take an exhaustive investigation to find which particular real estate wasn't used in the gas business. I haven't gone into that I have simply taken the total.

The next figure to my mind is an extremely important one it is the cents dividend per M feet of gas sold as compared to the per cent dividend to the stocks and bonds.

1359 The per cent of dividends to the stocks of this group of companies was 10.05 and the cents per M feet of gas sold actually paid in dividends was 17.64: meaning thereby that if you take the entire dividends paid by those companies and divide by the entire number of thousand gas feet sold you get 17.64 cents per thousand feet. This amount of 17.64 cents per M feet enabled those companies to pay a dividend of 10% on their capital stock,—for each thousand feet of gas they put out on the average they paid a dividend of 17.64 cents,—and that amounted to 10% on their stock.

Lacking figures as to dividends for the Lincoln company I have dealt with the net income of the Lincoln company as I have computed it but not as shown on the face of the books of the Lincoln company. That net income of the Lincoln company in the year 1912 computed on the sale of gas at $1.20 per M feet I make to be 58.46 cents per M feet sold.

The next item in exhibit "367" is per cent dividend to plant assets, which is 6.52 cents,—which by mistake is placed in the wrong column being placed in the column for the Lincoln company and should be in the column for the Massachusetts plants as I have not been advised as to what dividend, if any, the Lincoln company made, and made no entry of that kind for the Lincoln company,—the 6.52 cents means that taking the statement of the plant assets of the Massachusetts companies as they give it the dividends they pay amount to 10.05 on their stock represented by 6.52% on their plant

assets as shown by their books and a greater bulk of that gas was sold at voluntary rates to make these dividends and earnings; that is, the rates which the companies themselves fixed and I think that this figure of 6.52% for dividend payment to plant assets throws some light on the probability that it is an accurate statement of assets.

1360 The next line, per cent net income to plant assets, which is properly entered in the Lincoln column, the amount in per cent is 17.45; that is the net income as figured by me for the Lincoln company in 1912 amounted to 17.45% of the company's claimed plant assets as shown by their books.

The next entry is per cent plant assets to stocks and bonds. For the Massachusetts plants this per cent 154.15; obtained by taking the stock of the Massachusetts plants and dividing it into the book assets or plant you find that the ratio is 1.54 per cent of books assets to capital stock.

In the same way for the Lincoln plant the percentage of capital stock and also of bonds in this case,—because the Lincoln plant has out some bonds,—is 34.89%. To put it shortly, in Massachusetts the plant assets as stated exceed by more than one half the capital stock with no bonds outstanding; and in Lincoln the book assets as stated by the company, are a little more than ⅓ of the outstanding stocks and bonds.

The difference between the 11 Massachusetts plants and the Lincoln plant in this respect is further brought out by the next entry which is stocks and bonds per M feet sold. In Massachusetts the stocks only,—there being no bonds,—for these 11 plants was $1.75 per M feet gas sold. It means th-t they had outstanding in the way of stocks $1.75 par value for every thousand feet of gas they have sold during 1912.

If I had correctly copied the stocks and bonds of the Lincoln company their figure amounts to $9.60 per M feet gas sold during the year as compared with $1.75 in Massachusetts.

The next line in exhibit "367" are compared the plant assets per M feet gas sold as stated by the books,—that being all I am dealing with here book assets,—the plant assets per M feet for each group of plants. For the Massachusetts group the combined assets of

1361 plant per the books per M feet sold it $2.70, and for the Lincoln plant the books show $3.34 per M feet sold. That is all of exhibit "367" which is merely a summary.

In considering these figures it should be mentioned that the Lincoln company operates both gas and electric plants. A very large figure here for stocks and bonds per M feet gas sold, being $9.60, as compared with $1.75 in Massachusetts. It must be born- in mind that the Lincoln company carries on an electrical business as well as the gas business and the plant for that electrical business is represented in part by the stocks and bonds outstanding against it; I can't make any precise division of course, as we are dealing with the Lincoln plant I had to take it as it is and put down there what they had I haven't included any electrical plant assets, all the Lincoln plant assets are of gas.

Exhibit "368" consists of figures and writing including "All expenses except materials and labor making gas, repairs, renewals and taxes." Both in dollars total and in cents per thousand feet of gas sold. The first set being dollars total and the next in cents per thousand feet sold.

This is an exhibit similar to that already presented to a number of other Massachusetts plants. It shows the total expenses of the Worcester gas plant, with the exceptions noted as to expense for each year beginning with 1895 and ending with 1913. The items of expense considered are divided into two main groups, the division is not particular important or very precise but is as near as can conveniently by made. The important thing about showing the expense is the total of those expenses which for the Worcester plant in 1895 amounted to $25,760.00 and in 1913 to $70,994.00; in 1895 the Worcester company sold 158,541 thousand feet, or less than the
1362 Lincoln company sold in the year 1907, and the total expenses here considered at that time amounted to 16.24 cents per M feet of gas sold. In the next year it was 13.58 cents and as in the following years by dropping gradually reaching 8.24 cents in the year 1913,—in fact in the year 1911 it was less than in 1910 being 7.62 cents.

The meaning of tabulations like this one as to the Worcester Gas Light Company was gone into perhaps sufficiently in my former testimony, I will say again it includes all of the reported expenses of those companies, except those specifically excluded in the heading of the exhibit, namely: materials and labor making gas, repairs, renewals, and taxes. Exhibit 369 was prepared by myself with the help of my assistants and shows the gas sold; the maximum net rates charged therefore; and the dividends paid in 18 Massachusetts gas plants during the fiscal year ending June 30, 1912 as to Attleboro I wish to repeat the correction already made. At Attleboro it was $1.10 and was reduced after the close of the fiscal year June 30, 1912 to $1.00 so that the $1.00 stated here is incorrect as applying to that year, although it was reduced the next year to $1.00 in other words this experience wouldn't apply to the dollar rate it was $1.10.

In this exhibit "369" there is set out the name of each plant, being indicated by the name of the city where located, in the left hand column and is treated entirely by itself, no combined computations are based on the figures as to dividends and price of gas, so that the misstatement of 10 cents in the Attleboro rate does not viciate any computation that has been made as far as this table is concerned. The range of sale in these plants was from 57,326 M feet in Attleboro to 783,734 M feet in Worcester.

These 18 plants here are not intended to include all the plants that sold gas at $1.00 or less in Massachusetts in the year 1912,
1363 except the Boston Consolidated Gas Company, which is so large I thought it inadvisable to include it in the tabulation. The sale in Boston is very great as compared to that in Lincoln, the price in Boston was under $1.00 and which would have to go in had it not been for its large size.

Two plants, Lynn and Worcester, sold gas at 75 cents per M feet

in the year under consideration as the maximum net price; several other- sold at 85 cents; and other- 90 cents and on up to $1.00. These plant- paid dividends which range as high as 16% on the capital stock at Lynn and as low as 7% at Malden.

The Haverhill plant paid no dividend whatever, because that is engaged in litigation as to its gas rate, in former years the dividend- of the Haverhill plant have been substantially as large or larger than any of those here. The litigation was not to secure a lower rate, but arose in this way: The Gas & Electric Light Commissioners of Massachusetts fixed a rate of 80 cents per M feet for gas in the City of Haverhill, the company was then and is now selling at the 85 cent- per M feet, and to prevent the lowering of the rate from 85 cents to 80 the company is litigating in the United State*d* Court the constitutional validity of the rate fixed by the Gas & Electric Light Commissioners of Massachusetts, and that litigation is -till going on.

It will be noticed in exhibit "369" that several of the entries as to cents in dividends per M feet sold are marked estimated. The reason and meaning for such marking is this: The company so marked operates both gas and electric plants and the amount they paid out in dividends can't be precisely divided between the gas and electric business. To arrive at an approximate idea of the dividend paid by these companies as to the gas business, I took the proportion of the entire dividend payment to the net earnings of the plant, that is the excess of income over operating expenses and then took the
1364 same percent of net earnings derived from each class of business, namely, gas and electric business; that gave me the dollars of dividends that I assigned as paid out of the net earnings to each class of business and the gas business showed a net earning and the electric business shows a net earning, those combined earnings were greater than the dividend paid, I assumed that the dividends were paid pro rata out of the net earnings.

I call attention again to the amount of dividends in cents per M feet of gas sold that these percentages of dividends on stock amounted to. In other words, taking Attleboro there was a 12% dividend, and this isn't affected at all by my misstatement of the price at Attleboro; there is a 12% dividend at Attleboro amounting to 12.14 cents per M feet sold in that year.

In North Adams the figure is quite small 6.74% per M of gas sold. That is the smallest one in the list, outside of Haverhill where no dividend was paid. Looking down the right hand column of exhibit "369" with three exceptions the dividends here paid which range from 8% to 16% and amount to less than 20% per M feet of gas sold. In one case the figure was 20.2%; in another it was 20.34%; and in another it was 26.71%; with those exceptions the dividends were all less than 20% per M feet of gas sold and yet they amounted to the percentages ranging from 8% to 16% set out in the column of percent of dividend.

Exhibit "370" is entitled "Feet of mains and holder capacities Massachusetts gas plants, June 30, 1912." Exhibit "370" deals with the same 18 Massachusetts gas plants that were referred to in exhibit "369" and gives the total length in feet of mains, larger than

2 inches for each plant, the percent of mains larger than 2 inches in diameter and the total length for each plant fo- the thousands of feet of holder capacity for each plant.

1365 I will deal only with the totals which were used to arrive at the average quantities as the figures are so obvious.

Taking the total feet of mains in all of the plants which was 11,414,602 and of that total 10,523,556 feet had a diameter greater than 2 inches; the percent of those mains with a diameter greater than 2 inches was 92.1; the total feet of holder capacity was 36,329 M feet.

Exhibit "371" is entitled "Feet of mains and holder capacity per M feet — gas sold Massachusetts plants, June 30, 1912"; and reducing to figures per M feet of gas sold the length of mains and the holder capacities shows in toto in exhibit "370." Considerable variation will be noted in the total feet of mains per M feet of mains of diameter greater than 2 inches, per M feet; also in the feet of holder capacity, per M feet of gas sold; I will deal simply with the averages which are obtained in every instance by dividing the total quantity average by the total thousands of feet of gas sold. In other words dealing with the total sale by these 18 plants of 7,488,972 M feet of gas sold during the year it appears that for each M feet of gas sold as stated, there existed in these plants selling the gas 1.52 feet of mains, of all sizes, and 1.4 feet of mains having a greater diameter than 2 inches; there also existed in those plants a total holder capacity per M feet of gas sold of 4.85 cubic feet.

These are the same figures carried into exhibit "367" marked "A" in this folder. The intention of the figures is to indicate as far as they go the extent of the plant equipment under consideration.

Exhibit "372" is entitled "Capital stock and dividends of Massachusetts plants, with no bonds and rate $1.00 or less, year ending June 30, 1912."

This exhibit "372" deals with the 11 plants summarized in exhibit "367," the names of the plants are set out in exhibit
1366 "372" and their total capital stock amounted to $8,964,-100.00; the total feet of gas sold by these plants is also set out amounting to 5,108,479 M feet during the year. The percentage of dividends to capital stock of the 11 plants is also given in exhibit "372" running from 7% from Malden up to 12% for each of the several other plants — Fall River, Lowell, Springfield, and Attleboro, and the average rate is 10.05% which was shown in exhibit "367." Whether that is the average of the capital stock or the average based on the sums of the percent divided by the number of plants,—I should explain that this figure 10.05 is obtained by dividing the total dollars paid in dividends by the total capital stock on which it was paid; I should consider that only a fair average.

The final column in exhibit "372" being that of cents dividends per M feet of gas sold, obtained by dividing the total dollars paid in dividends by the plants by the M feet of gas each plant sold during the year. These dividends run up all the way from 12.14 cents per M feet of gas sold in Attleboro up to 26.71 cents in Salem. There

is only one instance where the amount of dividends per M feet of gas sold was over 20 cents that was for Lowell where it was 20.2 cents. That average in each case is a true average. To obtain the 17.64 cents of dividends per M feet of gas sold, I took the total sale of gas which is 5,108,479 M feet and divided it into the total dollars paid in dividends by these properties giving 17.64 cents per M feet sold which enabled the payment on the average, dividends of 10.05% on their stock. In my opinion the showing as to the actual cents per M feet of gas sold is a very crucial one in gas matters. That gets right to the bottom of the whole matter, that is providing you-dividends are representing the entire returns to the investors in the property.

Motion to strike out the answer as a mere argument because the exhibit shows on its face that it is 15 to 26.

1367 Overruled. Exception.

(Witness continuing:) I am simply saying that I think it is an important figure, I am not saying whether it should be more or less.

Mr. Rose: Attleboro is 12.14 and Salem is 26.71, both figures are involved in that average and there is a wide variation.

(Witness continuing:) A thousand feet of gas is a very definite and precise unit, and stocks and bonds that may be outstanding against a property is subject to very great variations, a number of conditions I ought not to discuss. It is important to determine stocks and bonds and percent of any dividends paid as to stocks, but when we get to thousand feet of gas we have a perfectly fixed and precise unit, for that reason it is a very informing factor whatever the amount of the dividend may be.

Exhibit "373" is entitled "Stocks and notes Massachusetts plants with one dollar or less rate and no bonds in 1912."

The same 11 plants considered in exhibit "372" are also shown in exhibit "373" with the sales of gas in thousands of feet.

In exhibit "373" however, the amount of notes payable outstanding by the respective plants, have been added in each instance to the capital stock of the plant. I don't mean to imply by that addition that the notes necessarily represent the plant, I think they do in some instances and do not in some others, but in order that a complete showing may be made I include them here for whatever they may be worth. The plants have no bonds; they have so much stock, shown in exhibit "372," and they have outstanding some notes which may or may not in particular instances represent the plants.

1368 The two right hand columns in exhibit "373" of first, the stocks, and second, the stocks plus notes of those plants per M feet of gas sold. The range of capital stock, at par, runs from $1.01 per M feet of gas sold up to $2.97 in the 11 plants, taking the total volumn of stocks outstanding at par against these plants and dividing by the total feet of gas they sold during the year, giving a true average of $1.75 of capital stock at par outstanding for each thousand feet of gas that the plant sold.

In the same way dealing with the final or right hand column of exhibit "373" it appears,—if you add in all the notes that the plant had outstanding, without regard to what those notes represented,—and then divide the sum total of the sum of stocks and notes by the M feet of gas sold you will obtain $2.09 per M feet of gas sold, that is, representing the amount of stocks and notes that was on June 30, 1912, outstanding against those companies. I don't think that all of those notes represent plant investment; I do think on the other hand, that some of them do.

Exhibit "374" is entitled "Capital stock and stock premiums Massachusetts gas plants June 30, 1912."

Explaining the meaning of stock premiums under the Massachusetts system, before stock can issue of a gas company that company must come in before the Gas & Electric Light Commissioners and show what the plant is to be paid for by the stock that is desired to issue; and must show the market price of the stock; must nominate a price at which stock of a given par value,—say $100.00 will be sold or taken if the issue is allowed by the Commissioners, thereupon the Commissioners either authorize or refuse the issue.

As to many gas companies in Massachusetts, and in fact that seems to be the case for very nearly all of these 11 plants here considered,—

1369 the investment represented by the stock of those companies are so attractive that the stock sells for more than par,—that is the market price of the stock for some of them is very much more than par,—$200.00 to $250.00,—something like that sometimes. So that for these prosperous companies the stock can only issue if taken at a premium therefore, for each one of the 11 plants here considered there have been paid certain amounts of stock premium when the stock was issued by the company, and these amounts of stock premium are know- and I have set them out here so as to show each and all of these 11 companies. The par value of the stock is shown in the column headed "stock" and the amount of the stock premium at which a portion of the stock has been required to issue; the premiums draw no direct dividends. The dividends are on the par value of the stock, but nevertheless the money for the premium went into the treasury of the corporation because they couldn't get the stock out without letting it go at a premium.

For the 11 companies that sold 5,108,479 M feet of gas in 1912 and had outstanding $8,964,100.00 of capital stock at par value, there had been paid into the treasuries of the corporations $3,092,433.00 of premiums. I am not dealing at all with the amounts or with the price at which the stock once out of the treasuries may sell for in the market. I have nothing to do with that. I am merely dealing with the amount the stockholders had to pay for this stock in order to get it from the treasuries of the corporations in the first instance.

Taking that stock valued at par and adding the premiums to it, it all amounts to the figures per M feet of gas sold shown in the right hand column of exhibit "374," and finding as before a considerable variation from $1.26 per M feet sold up to $3.52.

1370 My justification for adding the notes in exhibit "373" or omitting them in exhibit "374" being a little less than $2,-

000,000.00,—I have added the notes in exhibit "373" so that it might appear that I had made a full representation of the facts as they are as to the obligations or liabilities of those companies; I specifically stated that I didn't think all those notes represented plant. I have a very good reason for thinking so if that is to be gone into. I think to add the stock premium and notes both to the stock would rather tend to an unfair than a fair impression. If anybody thinks they should be added, I have given them there and it is but a mere matter of arithmetic to do it.

Exhibit "375" is entitled "Assets and dividends of Massachusetts gas plants ending June 30, 1912."

The assets here dealt with are the plant assets as reported by the companies in their books and previously mentioned. The gas dividends are the dividends actually paid in dollars, with which a previous exhibit have dealt. The assets for the group of 11 plants, for the 11 plants already considered, was $13,818,834, and the plants reporting those assets paid as dividends $901,204. The thousands of feet of gas sold for those 11 plants has already been stated. The book assets for the plants as shown in exhibit "375" amounts to $2.70 per M feet of gas sold.

The percentage of dividends to assets will be seen in the last column and varies from 4.53% in Attleboro up to, I think, 8.5% on Newton.

Taking the entire amount of $901,204.00 and dividing by $13,818,834.00 of assets gives an average payment of dividends to assets of 6.52% by these companies.

Exhibit "376" deals again with the same 11 Massachusetts plants having no bonds out and with a dollar gas rate, with the exception that while Attleboro now has a dollar rate in 1912 the rate was $1.10 that fact, however, does not viciate any of the computations in exhibit "376."

1371

Exhibit "376" shows the total gas sold in each plant and for the group; the total dividends paid again; also the total interest paid; the total dividends paid amounted to $901,204.00 as mentioned. The total interest paid by these plants, which would include interest on all outstanding notes, and also some small amounts of interest on consumers' deposits, rather trifling but which amount to something; all of that interest amounted to $92,387.00.

Now if that amount of dividends $901,204.00 and the $92,387.00 interest paid are added together and divided by the thousand feet of gas sold it gives a total of .194 cents per M feet of gas sold, which represents it seems to me more than what the owners of those properties got for the use of their property per M feet of gas sold; I say more, because I know all of that interest don't represent interest on the cost of the plant, but all of it together with this dividend amounted to .194 cents per M feet of gas sold. The dividends alone were .1764 cents per M feet of gas sold as shown in another exhibit.

Exhibit "377" is entitled "Sales of gas at $1.00 and less per M feet by Massachusetts plants, year ending June 30, 1912."

That exhibit covers three sheets in this exhibit "377" the gas plants of Taunton, Haverhill, Lynn, Lawrence and New Bedford are consid-

ered. These plants are taken because at the time their gas rates were reduced to one dollar the out-put in each instance was some less I believe, than the out-put in Lincoln in 1907; and exhibit "377" is intended to illustrate the sales of gas that arose from reductions of the rate to $1.00 in the first instance and subsequently to less rates than $1.00 through the series of years represented for each plant,—as the plants reduced their rates to one dollar and less in these
1372 years,—of course the statement for the respective plants covered this series of years but in each series I have given for each plant the series of years beginning one year before the rate was reduced to one dollar and coming down to 1912.

For each plant there is given the year; the dollars gas rate per M feet, meaning the maximum net rate, and the thousands of feet of gas sold during the year; also the percentage of increase over the first year,—by the first year I mean the year next before that in which the dollar rate appears. The first plant in exhibit "377" is Taunton and a dollar rate per M feet in Taunton was first applied sometime during the year 1910; the sales of gas in the year 1910 amounted to 107,365 M feet. I haven't the particular month of the year when the change of rate first went into effect and take the percentage of increase in the second year that the dollar rate appears when you have had it in force for something over a year, while in the first year it might have been in force for only a month and in getting that percentage of increase in sales of gas in the next year preceeding the dollar rate as compared with the sale during the second year that the dollar rate was in force. Now on that basis in Taunton the sale of gas in 1909 at the rate higher than $1.00 was 91,753 thousand feet; in 1910 some time during the year the dollar rate went into effect, and in 1911 the sale of gas was 119,920 thousand feet showing an increase of 30.6% over the sales of two years previous in 1909. I have also figured the percentage of increase in 1912 as compared with the sales in the earlier year given for each company. For Taunton, that being a recent reduction the increase in 1912 was only 37.8% over the year 1909 when the higher rate was in force.

The Haverhill gas plant is next shown in exhibit "377" which put the dollar gas rate in force in 1900 and its sales in that year were 115,022 M feet; during the year previous when the
1373 high rate was in force the sale was 91,737 M feet and during the year 1901 under the dollar rate the sale was 115,457 M feet an increase of 25.8% over the sales in the earliest year. For 1912 the increase at Haverhill had amounted to 156.3% over the sales in 1899. The next plant in exhibit "377" is Lynn whose various figures are shown. They put the dollar gas rate into effect in 1898 and in that year the plant sold 144,444 M feet of gas, and during 1897 at the higher rate the sale of gas had been in Lynn 130,376 M feet; and during 1899 the second year thereafter the sale in Lynn at the dollar rate was 159,002 M feet showing an increase of 21.9%; in 1912 when the gas rate had dropped to 75 cents the sales of 743,042 M feet represent an increase over the year 1897 of 469.9%.

Referring again to the Haverhill plant I want to have mentioned in connection with the increase of 156.3% in 1912 that the gas rate

in 1912 was down to 85 cents per M feet. That is the increase over the out-put of the earliest year in every instance, and the increases are figured on the out-put of the year before the rate was reduced to one dollar taking it from that time, which in that case the year was 1899 and two subsequent decreases in rate there given down to 85 cents, and it shows the sale and rate for gas in each year, the whole record is set out there. These percentages might be figured for various years to show what the sales climbed up to but I haven't figured them out here.

The next company is Lawrence, the rate for gas at Lawrence was reduced to one dollar in 1901; in that year there was sold 146,549 M feet of gas by that plant; in the previous year at a higher rate the sale had been 138,314 M feet; in 1902 at the dollar rate the sale was 184,256 M feet of gas an increase over the sale of 1900
1374 of 33.2%; in the year 1912 in which year the gas rate was 90 cents and the sale was 441,324 M feet amounting to an increase over 1900 of 219.07%.

New Bedford is the next plant considered and in that plant the dollar rate was reached in the year 1906 when the plant was selling 195,149 M feet; that is the only one of these instances I think where the sale of the gas in the year when it dropped to one dollar was higher than in the Lincoln plant in 1907, and for New Bedford in 1906 when the rate first went to $1.00 it sold 195,149 M feet during the previous year, that is, 1905, the sales in New Bedford at the higher rate had been 165,077 M feet, and during 1907 when there was a further reduction to 90 cents per M feet the sale was 229,652 M feet representing an increase of 39.1% over the second year previous. In 1912 when the price of gas in New Bedford was 80 cents,—I don't know in what month,—the sale of gas in New Bedford was 472,545 M feet representing an increase of 186.3%.

Asked for an interpretation of my exhibit "377" beginning with the comparison of the years 1909 and 1910 when there was no change in the rate for gas, and whether I argue that because the rate of increase in 1910 over 1909 were larger in my tabulation than was the increase in 1911 over 1910 when there was a reduction of 10% in the rate, whether that proves that the tendency of the reduction of 10% there was to arrest the normal increase or not,—I would say the tendency of a reduction in price the quality and other factors remaining the same, is invariably to increase the out-put. Asked on that theory how I account for the figures given for 1909, 1910 and 1911 show the greater rate of increase was in the year in which there was no reduction calling attention specifically to 1910,—I would explain the situation in this way,—in the first place we don't know at what time in a particular year these rates of $1.00 and 90 cents went into effect; I don't know, and I assume counsel don't
1375 know if the 90 cent rate went into effect the very last of the year against which it is set opposite it would have very little affect on the out-put; it would take a very careful study of the situation as between any two years to give the entire full season for just what happened. Let me add this fact which happened within my own knowledge as to Haverhill in 1911: At that time there was

hearings going on during the entire year of 1911,—a series of hearings amounting to 20 or 30 before the Gas Commissioners held in the City Hall in Haverhill looking to a reduction in the price of gas; there was a great agitation about the gas business in the newspapers and on the streets concerning those hearings and arguments and evidence before the Commissioners and it would be no wonder to my mind if in that situation a given reduction in the gas reate didn't produce its normal affect. That is all I know about that just now.

Whether exhibit "377" for Haverhill shows that this 156.3% increase for the period of 12 years was the normal increase due to the increase in population, improvements in appliances, and new demands of the publis, the rate from 1900 to 1910 inclusive having been the same level rate of $1.00,—I don't think it does quite. I think a large part of the increase at Haverhill shown in exhibit "377" is one due to the increasing knowledge and appreciation by the public of the use and value of gas, which is undoubtedly a factor in the use of gas everywhere, but I don't think that is all of it. To answer the question precisely we would have to have the population of Haverhill in 1900 and 1910 and see what the sale per capita was in order to get at an accurate answer to the question. It will be noticed however, the increase in sales in Haverhill -as been simply compared with some of these other companies, I think a part of that increase
1376 was fairly due to those reductions in price that occurred in 1900 and again in 1911 and in 1912, and I think as counsel suggests, a considerable part of that increase was due to the increase in population and the appreciation of the advantages of gas.

Whether, taking Lynn representing the increase of 1903 over 1902 both years having the same rate of $1.00, the increase appearing to be 58,064 M feet or 26% pluss, and the next following year a recuction of 10 cents per thousand in rate when the increase in sales appears to be only 38,064 M feet or a- increase of 13% plus; whether there is any significance in the fact that the rate of increase in the first year's reduction was only half of the rate in per cent of the previous year,—I would say each fact has its significance, and undoubtedly the fact that counsel calls attention to does mean something, just what it means or what caused it I wouldn't be able to say without studying the Lynn situation. At that time they may have extended their territory to Sargus that year. I think however, on the showing of the Lynn out-put along with those prices that the price has had a very substantial influence in boosting its sales. It is true if you are going to pick out some particular years just two years say, and figure how you are going to explain that you will have to study the local business very minutely to explain it, but you take a series of years you can see those local factors are minimized in effect.

If you look at a particular year you must in the first place know in what month your reduced rate went into effect and then study all the local circumstances. I may state as to that Lynn rate, according to my recollection that for all of it they voluntarily reduced the rate and I suppose it is a fair assumption that the company making that reduction to 75 cents for gas thought it had a bearing on that very

large increase of out-put they have had there. Asked whether
1377 it might not necessarily reflect in the net revenues the increase in any one year because it might have been due to the extraordinary exertions to promote the sale,—I didn't say anything about that.

Exhibit "378" is entitled "Feet length of mains added by certain gas plants in various years, per reports in Massachusetts". Meaning the reports to the Gas & Electric Light Commissioners. The exhibit shows the length of mains that have been laid by the various plants mentioned in exhibit "378" in various years and has had a bearing on my judgment in fixing on the 7% which I did fix on to be added for engineering, interest, etc. which I added to the other structural costs of the Lincoln gas plant. The matter of interest for the loss of that time during which a given length of mains can be reasonably laid are, of course determined to some extent, the interest that must be lost on that construction whil- in the process of construction and before it is ready to use.

As I understand the testimony of the company it had on January 1, 1913, 459,251 feet of mains, and I should expect those mains during the course of one season not any less than one year or season of one year for laying mains in the event of the construction of a plant like the plant in the City of Lincoln; I notice in the instance of the Brookline Company in the instance of 1894 they laid 565,002 feet of mains in a single year; that laying occurred under a pretty difficult situation to lay mains, namely, in the City of Boston which like other large city is greatly interlaced with pipe and other structure below the street surface. (Interrupted.) Asked whether those were mains actually constructed or acquired from other companies,—I would say those mains were actually laid, that is a celebrated instance where they were laid for competitive purposes, back in 1894.

The next instance is that of Brockton in 1912, they jump all around in the matter of years,—I *amy* say that under the form of the Massachusetts returns each gas company must in each
1378 year in its sworn return to the Commissioners state the length of mains which it has laid during the year, of each size and the total length.

Taking Brockton in 1912 they laid 227,687 feet of mains, in addition to a large lot of mains that they then had in that year,—that was simply the yearly addition, they made a large extension that year.

At Brookline again in 1895 after the large laying of mains in 1894 in the next year laid 221,965 additional feet.

And so running on down the list the number of instances of laying more than 100,000 feet of mains in a year are shown. I think they show to an interesting extent what can readily be done in the laying of mains. I have taken these increases of mains for different plants for the reasons that it very seldom happens nowadays that a gas plant is constructed De Novo in a large city, the gas business is fairly old and particularly in larger cities, it is very hard to find a large city without a gas plant. A large city in which a new plant extending all over the city has not been built in any recent years,

and those mains I mentioned here are not the total, but simply additions to the existing plants laid in that year.

In the Brookline case, that company in 1894 had relatively a small amount of mains in the City of Brookline and had laid 565,002 additional feet in that year.

Exhibit "379" is entitled "Time provided in contracts for the construction of gas plants." The exhibit gives the dates on which certain contracts for plants as stated were made; and the dates per the same contracts when the construction was to be completed. This exhibit "379" like the previous one has a bearing on my judgment in the matter of the necessary time to construct a gas plant, and the necessary interest charges to be included in the construction cost.

1379 I give here the records I have from a number of contracts for gas equipment. Here is a one million foot gas holder in Springfield, Illinois and the date on the contract was November 6, 1912 and the date of the completion was July 1, 1913. A one million foot gas holder is double the capacity of any gas holder in this plant, considerably larger in size, and a large holder like that is about the biggest single piece of equipment that a gas plant of any such as Lincoln would be apt to have and would require fully as much time for construction of any piece of gas plant would expeect ordinarily to have.

A little further down in exhibit "379" is a one million foot holder in Haverhill, Massachusetts the contract was dated September 30, 1910 and the date set for its completion was March 1, 1911. And then they had the disadvantage of working largely in the winter months. It will be noticed that those dates show the time periods of construction materially less than a year in every instance.

Here is a million foot water gas set in Springfield, Ill. the date of the contract was April 19, 1905 and the time specified for its completion was 90 days from the date of the contract. As to whether I would call that the usual and reasonable period to figure on,—I would say it does not strike me as particularly unreasonable. I think we would be able to construct water gas sets in that way.

I have here a million foot water gas set No. 4½-B in Haverhill, Massachusetts, the contract was dated September 10, 1910, and the date of the completion was December 15, 1910; that is three months and 5 days, I think that is rather a reasonable period.

Here is a little purifier contract at Springfield, Illinois,—one of these outdoor purifying boxes 25 feet in diameter and 10 feet deep,—

1380 the contract was dated June 24th 1912 and the date for completion was not until September 29, 1912. I should think that if anything, was a little unreasonable in the matter of length of time because that purifying box is a comparatively small structure.

Here are four purifiers, outdoor boxes, Holyoke, Mass., 17½ feet in diameter,—I haven't the length and depth of those boxes here, they are good big boxes something like 10 feet deep,—the four are erected on the steel structure out doors. The contract was dated

May 19, 1909 and four months was set for that construction, which I think was very ample.

Here is a 7′ 6″ water gas set, one of the larger sets here in Lincoln, the contract for that set was dated May 24, 1912 and the date for its completion was August 1, 1912.

Here is a 200,000 gallon oil storage tank at Haverhill, Massachusetts, the date of the contract was December 23, 1910 and the date for its completion was January 22, 1911.

Here is a 10 foot station meter at Haverhill, which was contracted for September 15, 1910 to be completed January 1, 1911.

Without taking all the items I will mention the large purifier at the Haverhill plant; these boxes were 20 by 15 by 7½ feet, four of them, the contract was dated September 15, 1910, to be completed November 24, 1910.

Those contracts illustrate what I am very sure that the fact that periods very much less than one year are sufficient for the erection of such pieces of equipment as exist in the Lincoln gas plant.

Exhibits 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379 offered in evidence by the defendant and received in evidence over the objection of the plaintiff to which the plaintiff duly accepted.

(Witness continuing:) I have at least one of the Springfield contracts here.

Exhibit "380" is entitled "Lincoln Gas & Electric Light
1381 Company cost of mains laid in 1903 to 1912 per work orders."

The exhibit sets out a compilation of cost of mains laid from 1903 to 1912 as per work orders, and contains the cost of mains laid within the years mentioned as shown by the so called work orders,—one of the forms of record on file in the office of the company,—the size of mains found to have been laid per work order records are 2, 4, and 6 inch, and their cost has been footed up under the divisions "cost of materials; cost of labor"; and also the total feet of each size has been footed up.

The total feet of mains laid in the 2 inch size as found from these work orders,—by this I mean to say that we have found work orders which show on their face the laying of 184,263 feet of 2 inch mains, and we have found work orders for the laying of 27,453 feet of 4 inch mains; and 2,556 feet of 6 inch mains,—the cost of materials of all sorts shown on the work orders for 2 inch mains is $19,167.47; the cost of labor on those mains is $18,551.05; making the total cost for the 2 inch mains laid of $37,718.52; reduced to the cost per foot for the 2 inch size the figure for the cost of material per foot for that quantity of pipe and all other material which is 10.40 cents; the cost of labor per foot is 10.06 cents; the total cost per foot per these work orders for the 184,263 feet of pipe is 20.46 cents. That figure as compared with what I allowed in my report for the same size I think is a trifle greater, it seems to me my figure is about 18 cents for the wholesale construction of a plant the size of this one,—this if for piece meal construction stretching it over the years,—I should not expect it to be quite as low as the cost of the size of one job.

For the 4 inch mains as found on the work orders the total length was 27,453 feet laid at a cost for pipe and all other materials
1382 of $8,108.81; the cost of the labor was $4,429.59; and the total cost $12,538.40. Reducing the 4 inch cost to cost per foot the figure for materials is 29.53 cents; the cost of labor per foot is 16.13 cents; and the total cost per foot is 45.66 cents.

I am bearing in mind in connection with these work order costs that they involve the cost of laying mains under tracks and so called electric crossings and that sort of thing, as well as laying under other conditions encountered here in Lincoln. My figures for labor, for instance per foot of mains laid, includes all those extra costs, except the paving which is estimated separately; I understand these work order figures do the same thing, that is, they show the costs actually encountered, if they had to go under tracks that made the work outside of tracks a little more expensive.

Of the 6 inch size we found 2,552 feet of mains laid at a cost as stated for materials of $1,167.00; cost for labor $495.26; making total cost of $1,662.26.

Reduced to cents per foot the materials for the 6 inch size amount to 45.73 cents; labor 19.39 cents; and the total material and labor 65.12 cents per these work orders.

Explaining these work orders, they are sheets on which the foreman apparently reports the labor cost and a list of the items that go into the main laying job, the pipe and other materials used and the list of the labor on that job. They are usually signed by the foreman or by his initials as I remember. These mains costs have already been dealt with by me in an analysis of the costs in the so called annual gas reports of the company, which is another form of record found in the office of the company. I am not able to say, without setting up a comparitive table, just how near these costs shown on the work orders are to costs shown as per the gas reports, but the work orders would appear to be even a more primary
1383 source of information than the gas reports, although I am not questioning the accuracy of the sources of information.

Exhibit "381" is entitled "Lincoln Gas & Electirc Light Company, cost service pipes per cards,—A to R".

The Lincoln Gas Company has in its office a series of cards which I have called service cards, I think they are commonly known here by that name. The cards are filed as I remember according to the names of the streets where the services lie alphabetically; so that it is not possible to get chronological annalysis of record of the service laying without a great deal of labor, and we didn't attempt it, and didn't go through all of the service cards either, we did take the cards just as filed from the letter A to a part of "R". I think we didn't finish the cards under letter R, the cards under letter A would represent the services laid in or under streets whose names began with "A" and so on down through, that is the way we took these service cards and that method of selection was purely a blind method, there was no object behind it any more than to get the record of as many cards as possible,—we got the record of 1639. Those services included 103,394 feet of pipe; the cost of that pipe

was given at $6,446.02; and the cost of other materials at $1,423.50; and the cost of labor of those services was given at $9,816.57; making a total cost for the services as shown on the cards of $17,686.09.

I have reduced some of these costs to cost per service, and cost per foot of pipe laid; the cost of pipe per service of the pipe of 1639 service- I make $3.93; the cost of other materials per service is 86 cents and the cost of labor per service is $5.98; making a total cost per service of $10.79.

This includes the complete length of service pipe as laid clear in to the meter, $10.79 is what the record shows, if it is wrong I will have to correct it at another time.

1384 Taking the cost per foot the cost given for pipe amounts to 6 cents per foot; the cost for materials 7 cents per foot; and for labor 9 cents per foot and the total costs per foot is 17 cents.

Attention being called that the total cost per foot is not right as 6 cents, 7 cents and 9 cents make 18 cents instead of 17 cents,—I would say through some error those costs have not been carried out to the 1/100 cent as is my custom. I am testifying that these figures are correct to the best of my belief, as far as having it in the fraction of the cents the decimal has been omitted, these figures being obtained by division and not by addition, and if you leave off all of your tenths and hundredths of a cent you wouldn't get at this figure as suggested.

Exhibits 380 and 381 offered in evidence by the defendant and receive- in evidence over the objection of the plaintiff to which the plaintiff *accepted*.

1385 Mr. ALTON D. ADAMS, a witness for the defendant, previously sworn herein, was recalled for further examination in chief:

Examination in chief by Mr. Foster:

Exhibit "391" is entitled gas sales and rates per reports of the Massachusetts Commissioners. Exhibit "391" was made by myself, and my assistants under my direction. Its source is the printed reports of the Massachusetts Gas & Electric Light Commissioners, which refer back again to the original sworn returns of the companies, of which the printed reports are a compilation.

In several instances, for the population I have gone to the United States Census Reports. I think all this information is contained in the printed reports, but the same information is in the original returns; this is merely compiled from the printed reports. Exhibit "391" is to show a number of the larger gas companies, mainly those, perhaps entirely those, for which the price and other data have been previously given,—the price and volume of sales in 1900, a United States Census year, also the price and volume of sales in 1910, a United States Census year,—as a result of that the feet of gas sold per inhabitant of the several districts served of the population on the basis of the United States Census,—there is no effort to determine just how much of the population may be reached by the company's

mains,—we have simply taken the acknowledged population as reflected by the United States Census in each case for the place served. That isn't the amount consumed per consumer. It is the amount per inhabitant in that municipality, or municipalities as the case may be,—many and perhaps all of the companies mentioned render service in some out-lying municipalities,—and in taking the pop-
1386 ulation the intention is to take the census population of all the municipalities in which the company renders service,—for lack of space the names of all suburban places is not written in, but that is revealed in the printed report of the Massachusetts Commission. All the figures here are from the sources already indicated, except the feet sold per inhabitant, which is a mathematical deduction,—obtained by dividing the total population into the total gas sold there in the respective years,—so we get the sale of gas per inhabitant by that simple division in each case.

Attention is called in the exhibit to the highest net prices at which the gas was sold in the municipalities as existed in 1900, and for the price of gas in the year 1910, and in connection with those two prices attention is called also to the thousand feet of gas sold in these respective municipalities in 1900 and 1910; and finally to the sales in feet of gas per inhabitant, which is shown in the right hand column, and shows to my mind, the marked increase in the sale of gas per inhabitant that has occurred all along with and at the same time as has this reduction in price of it.

The North Adams figures for 1900 rate are not given because I didn't have with me the record that gives that, but the sales of gas in 1910 show a large and substantial increase. I haven't carried out in the column of feet sold per inhabitant any figures for 1910 as to North Adams. The reason being that North Adams sells some gas to several other companies and I didn't have with me the record of those sales for 1910, I left it as it appears.

The same is true for East Boston where with a price of gas of $1.40 in 1900 and 90 cents in 1910 there was a rise in sales from 50,000,000 in 1900, to 241,000,000 in 1910, some of that, to my best recollection, for the sale of gas to other companies in 1910, not being
1387 able to segregate that I have been obliged to omit the figures per foot sold to inhabitants as to East Boston. Those are the main instances where that difficulty has been met.

Coming to Taunton, in 1900 the price of gas was $1.20, in 1910 it was $1; its sale of gas in 1900 was 53,000,000 feet; in 1910 it was 107,000,000 feet, showing an increase over 1900 when the sales per inhabitant was 1718 feet and 1910 it was 2863 feet. It will hardly — necessary to go through all the figures that way, but I should like to show one or two for illustration. All the figures are worked out in exactly the same way.

Exhibit "392" was compiled by myself, and under my direction, from the records of the Gas Company; as to several of the figures from Mr. Lea's valuation of the Lincoln property; and as to several of the figures from Brown's Directory. The population in 1900 and 1910 is taken from the United States Census; and the feet of gas sold per inhabitant is derived by the division of the feet of gas sold in Lincoln

by the population. Exhibit "392" shows a fall in Lincoln in the price of gas from $1.73 per thousand feet, as given in Brown's Directory in 1898, to $1.20 per thousand feet in 1904, at which figure it has since remained.

The sale of gas in Lincoln in 1898 was 40,738 thousand feet, and in 1912 it was 227,297 thousand feet. Coming to the Census years, according to Brown's Directory in 1900, it had a sale of 60,000,000 feet, which on the then population of Lincoln gives a sale per inhabitant of 1493 feet; at that time gas was apparently sold in Lincoln at $1.50,—I say apparently, because Browns' Directory doesn't give the price for that year, but I do find that Brown's Directory gives the price of $1.50 for 1899, and $1.50 for 1902, and probably was $1.50 in 1900, although no computation is based on that probability.

In 1910, when the price had fallen to $1.20, and the sales had risen to 208,024 thousand feet in Lincoln, with an increase of 43,973 in population, the sales per inhabitant amounted to 4730 feet, or more than three times that at the $1.50 rate in 1900. Showing to
1388 my mind that the gas consuming public in Lincoln have responded nobly to the reduction in price that has taken place, and I should expect that from the situation in Lincoln as to fuel. Domestic fuel in Lincoln, as compared to Massachusetts, for instance, is substantially 50% more per ton. Comparing the sales per inhabitant,—and the increase in sales occurring in Lincoln, with the reduction to $1.20,—with the increase that has occurred in Massachusetts,—with a much greater reduction, down below a $1.,—I think it is a pertinent fact to bear in mind that the gas consuming public in Lincoln will absorb more gas than the gas consuming public in Massachusetts; the prices the Lincoln public must pay are more expensive than the Massachusetts public can secure. Not speaking of the price of coal in carload lots, but such as the common consumer must pay per ton the way it is ordinarily sold. In other words, from exhibit "392" while in 1910 the consumption in Lincoln is pretty high as compared with the Massachusetts cities mentioned,—I should expect a still further large consumption in Lincoln, largely because the price of other fuels with which gas competes, approximately, to the ordinary user, is 50% higher in Lincoln than in Massachusetts. That is not also true of coal gas. The next exhibit will show the comparative cost of coal gas and coal and coke for generating fuel for making water gas. Then explaining that gas coal is the name applied to the stock of coal we put into the gas benches to make what is known technically as coal gas, as distinguished from water gas. The coal we put into the water gas generator we don't call gas coal, and isn't that kind of coal known to the trade as gas coal. On the other hand if we use it in a water gas generator it is hard coal; we often do use in lieu of that, coke, but never use a gas coal in the water gas generator.

Exhibit "393" was prepared by myself and my assistants under my direction, it is entitled: "Gas rates, price of coal per ton; and gas made in Lincoln, as per returns from Massachusetts Com-
1389 missioners 1912," and also in a number of Massachusetts cities, and price of gas coal,—I never use the term technically,

—but coal suitable for use in making coal gas for gas-ification in retorts. In that column of gas coal there will be noticed reference marks to two entries: Haverhill and Fall River. And below with reference marks attached the statement: "W. G. generator fuel", meaning water gas generator fuel. The entries of prices corresponding to Haverhill and Fall River are the prices paid for the fuel used in the water gas generators,—those two plants have no coal gas equipment,—except that Fall River now has under construction an extensive coal gas equipment. Haverhill has none. The other plants here listed all have coal gas equipment; and two of them, as will appear in a moment, made no water gas whatever. Lincoln made only water gas, but it has a coal gas equipment, and might make coal gas.

As to the sources of this exhibit "393", it runs back to both the printed reports of the Massachusetts Commissioners, and to the sworn returns of the individual companies to those Commissioners. The price for coal, for instance, is not given in the printed reports of the Massachusetts Commissioners and was taken as here copied from the original returns of the companies to that Commission. The towns are New Bedford, Fall River, Lowell, Springfield, Worcester, ——— (interrupted.)

Mr. Strode: The point we make, we have investigated those original returns and if you are going to switch to other towns, it would not be fair to us, we would have to go back again. Fall River isn't in the other report.

(Witness continuing:) We are using the same towns I have used before.

Mr. Strode: Objects to the use of exhibit "393" including the price of gas coal because it is based, according to the statement of the witness, upon the original reports on file with the Commissioners in Massachusetts, and is not available to counsel for the company, particularly objecting to the towns of New Bedford, Fall River, Lowell, Springfield, and Worcester.

1390 Referee: Sustained, to permit that to go in now would be followed by an application for further time to investigate it, and that time I don't think ought to be given; I don't believe the matter is of sufficient importance to justify it. The exhibit will go into the record for the benefit of the court, notwithstanding the ruling. The objection is sustained—exception.

Mr. Strode: That is limited to the one exhibit or item that we have no way of verifying?

Referee: Yes sir.

Mr. Strode: As to the other items found in the printed record showing the population we have no objection to.

(Witness continuing:) The item of the price of gas coal has been taken from the original records. It is not in the published report.

The percent of the cost of coal obtained from the sale of residuals is exhibited as to a number of plants in exhibit "393" in one column, these figures are worked out by the Commissioners and printed in their report, and are taken from that source. This showing is to the extent to which the cost of coal is, or may be, recovered from

residuals tends to reduce any differences existing between different places in the cost of coal.

The feet of gas made, as distinguished from the feet sold, is shown for each of these plants, except Lincoln, it might have been put in for Lincoln, I haven't got it I see, however, Lincoln only made water gas so the percentage shown in the right hand column of water gas made would be for Lincoln 100 as it was for Haverhill and Fall River. All the other places made coal gas to a greater or less extent. Two places, Taunton and Charlestown making only coal gas,—except those mentioned, all the others making a substantial percentage of coal gas during 1912.

Since on the stand before I have made corrections as to exhibit "381". Exhibit "381" gives the cost of service pipes from the cards of the Lincoln Gas & Electric Light Company's service cards "A" to "R" and I have figured in exhibit "381" that the cost of
1391 the pipe the labor and materials add to so many cents per foot, the tabulation was completed in my absence and brought to me while I was testifying and I found that the figures had not been carried out to the hundredths of a cent, as they should be per foot of each element of cost of the service pipes; furthermore the feet of pipe per service, on the average, was not stated in exhibit "381" as it should have been, and I have made the suggested additions to exhibit "381" on another sheet so that the cents per foot are carried out to the hundredths of a cent for the pipe and other materials, showed in connection with the service and the labor and these all total the cost of the service per foot. (Corrected sheet identified as defenda-s-s exhibit "381-*a*", and offered and received in evidence as a substitute for exhibit "381".

Exhibits "391", "392" and "393" (Except the portion of "393" previously excluded by the Referee) offered and received in evidence.

Exhibit "394" is entitled "Lincoln Gas & Electric Light Company, operating expenses and income of years 1907 and 1912." Setting out the expense and income of the gas department month by month, for 1907 and 1912 respectively. They are copied from the records of the company, known as gas reports on file in the office of the company, being the records of their gas business. The intention being to show the reported expense of the company in each month of the respective years of 1907 and 1912, and also its reported income.

In mentioning these expenses of the company for each month of the years 1907 and 1912 respectively, I think a portion of these reported expenses are unnecessary and need not be incurred reasonably in carrying on a gas business. I have in other portions of my testimony indicated what these items are and my reason for thinking they are not necessary. In exhibit "394" I simply give
the total expense as reported by the company without making
1392 any deductions therefrom.

Exhibit "394" is given for the purpose of information and as a basis for information as to the proper and reasonable amount of working capital to be allowed the company for its gas business. By working capital I mean capital to work with. In other words the money or money's worth that the company must reasonably

have to put into the business, or kept ready to put into the business, as distinguished apart from any monthly receipts from month to month from the business itself, which is merely the overturn of the working capital, and not to be confused with the working capital at all, which the company and its promoters must put into the business to make possibly the buying of things and working them up into gas and getting the money and keeping that process going. The income exceeds the expenses of the company every month by a substantial amount, which is what we expect, knowing that the gas and sometimes residuals sold one month in a great part are paid for during the following month.

These reported expenses do not necessarily represent money actually paid out during the month. I have no doubt but their business is carried on in the usual way by getting the usual credits in connection with buying such materials,—wages of course, are paid weekly, monthly or some intervening period.

It being true that general credits are obtained for the purchase of materials, and the income follows pretty closely every month after the expense as a return for the expense of the preceding month, greatly reduces the amount of necessary working capital if the returns,—meaning payments for gas principally,—was on some longer basis.

Having invested $100, in materials for making gas, worked that up into gas and sold it at $200, it would be highly improper to consider your $200, as a part of your working capital,—that is simply a part of your overturn of your working capital,—which if you have good luck during the year, you will finally pay out
1393 in dividends at the end of the year. You don't expect to pay dividends daily or monthly.

The cash in the bank for the payment of interest on bonded debt, surplus or some other case, has nothing whatever to do with working capital. Working capital is the money we must have to carry on the business with, aided by reasonable times of credit, moneys that come in month by month with the overturn. It must be put in in addition to your fixed assets to reasonably and economically carry on the business. It is not the money you get out of the business to pay dividends with at all.

Exhibit "395" is entitled "Lincoln Gas & Electric Light Company operating expenses in each month, and coke, coal and oil on hand at close of month, per gas reports of 1912."

This exhibit taken from the gas reports of the company and shows the total expenses as reported by the company for each of the months of 1912, also the coke, coal and oil on hand at the close of the month. In the final or right hand column is the statement "Dollars working capital equals expense of one month plus coke, coal and oil on hand end of month." That statement is not intended as a hard and fast rule, but merely an indication of the opinion of the witness, that the amount arrived at in this way, in this way, represents an ample working capital.

It is necessary to carry some supplies in the gas business on hand all the time, and these supplies on hand run from $2935.25 in April

1912, to $5265.54 in July, 1912. It is not necessary to pay spot cash for all of those supplies, and is not the common or convenient conduct of the business to do so; sometimes a special discount is obtained for spot cash; the more ordinary time of payment is allowed and taken. That applies to supplies on hand as well as supplies used through the month to make up the total month's expenses.

1393½ Taking all these factors into consideration the statement to the effect that the working capital, in this instance, may be taken as equal to the expense of one month as reported, plus coke, coal and oil on hand, which appears to me to be a fair allowance for the working capital of the Lincoln Company in its gas business. That is, take the month of January the company will provide substantially $20,000. to carry on its business of purchasing supplies and paying labor in the usual way, I think that $20,000. will be ample to meet every expense it is called upon to meet, taken in connection with the money it will obtain for its gas beginning in the early part of February, and so I have fixed on $20,000. as an ample working capital to be allowed this company in its gas business. These figures are taken from 1912. I should allow the same amount of working capital for 1907, although the business was substantially smaller in 1907, the company was then making a substantial amount of coal gas, and if it took very short credits on its coal,—30 days for instance,—it would require more working capital when making coal gas than when making water gas. I find that the company appeared to be carrying more supplies in 1907, in the way of coal, than they did in 1912, so I should think the allowance of $20,000. for working capital for 1912 and for 1907 was very ample.

Exhibit "396" is,—in what I have just stated I had forgotten what appears in exhibit "396"; I have here the coal on hand at the end of each month in 1907 as well as 1912, also the oil for 1912, and the sum of the coal and oil in 1912. This sum of coal and oil in exhibit "396" was used in exhibit "395". Exhibit "396" was compiled from the records of the company, the gas reports, and sets out month by month for 1907 and for 1912 the dollars of reported cost for the coal on hand, the oil on hand in 1912, and then the sum of the coal and oil on hand for 1912. I didn't put in the oil on hand for 1907, either because I overlooked it, or because it is not stated in the gas reports, otherwise I should have put it in.

1394 Oil is used mainly in the manufacture of water gas, almost entirely in the manufacture of water gas in a combined water and coal gas plant where any enrichment is obtained, in enriching with coal gas so you enrich the combined product to the required point. In 1907 they were making coal gas and didn't need as large an amount for sales in 1907 as they did in 1912. In fact you can make good coal gas without any enrichment whatever.

Exhibits "397"-"398"-"399"-"400" and "401" offered and received in evidence.

Mr. ALTON D. ADAMS, was recalled in chief and testified as follows:

Examination in chief by Mr. Morning:

Asked to give my definition of "going value", and so much of my theory regarding it, and such observations as I care to make in regard to it and its place in a rate hearing,—Would say, "Going value," to my mind, is the value of a business. We hear the term now-a-days constantly as to the business of public service agencies, and in dealing with it I have public service agencies more particularly in mind, but I don't think that going value is by any means confined to public service agencies, or that a business which does not happen to be done with the use of the public streets necessarily lacks the element of "going value" at all.

"Going value," as I say, is a value of a business; in other words, no business, no value. Looking at it from the other end, the greater the business, all other things being equal, the greater the "going value." A business means income, necessarily involves income. So that the idea of income, although not to the full extent, the amount of income is involved in "going value" and in computations to determine the amount of "going value."

I have in mind the expression of Mr. Justice Brewer in the
1395 original "going value" case,—the Kansas City Water case,—
where he refers to the reasons for the rule, in discussing it, he uses the expression: "And earning the money that it does earn."

So that my best consideration of the subject "going value" is an intangible value that does not inhere in any plant or any business to the physical property,—although possessed commonly by the owners of a specific physical property,—is a value that depends, to some extent, on earnings, and it is to be arrived at, in my opinion, by a computation showing what it would cost to acquire the business under consideration. What it would cost to acquire it, not the present discounted values of estimated future incomes of such a business would be. I disagree entirely with any such method of computing going value as that. For one reason, that it includes all franchise values, as for instance, taking a method of computing "going value" which involves a discount to bring to their present worth all sums which it was supposed would be received; or all the profits which would be received through the business for a term of future years, I should not consider that a proper or correct way to compute "going value" at all. Because you are computing the value of something else besides the business, you are computing the value of the franchise to do the business.

My best study of the subject of "going value", which is an undoubted element of value,—and element that really exists,—is that that element of value is not, and cannot, in the nature of things, be reasonably a part of the basis considered in fixing rates.

To make it a part of the basis in fixing rates appears to me to be reading into a public grant something, that is in the first place entirely lacking on the face of it; and something not necessarily implied by anything on the face of a public franchise grant, and

worse than that, to my mind, reading into a public grant, a grant of a public franchise, a provision which would necessarily defeat, to a large extent, if not entirely, the police power to regulate
1396 rates, because the greater the business and the greater the income of the business the greater, to a certain extent, the "going value", and, the greater the "going value" the greater the rates that must be allowed to allow a fair return on the "going value", so we have that reasoning in a circle in that way just as we used to have with the franchise proposition.

Then too, a further reason of mine for thinking that conclusion is absolutely correct and that "going value" is an element of value,—while a theory only,—is not one that can form the basis of rate making, where the rates are subject to regulation,—if found in a study of the pleadings and facts in the Consolidated Gas Case decided by the Supreme Court. In that case,—as I understand it,—the company in its bill of complaint, and through the mouths of its leading expert witnesses, defined a thing which is called "good will", and included all the elements that must necessarily go into a "going value" determination.

They included the business, the organization of the business, the extent of the business, the nature, the name and the good will in their bill of complaint and through the mouths of their witnesses; and their witnesses valued that, as I remember it, at a good many millions of dollars and it seems to me,—I am just stating this as a reason for my opinion,—that when the court excluded, as it did, specifically "good will" as an element for rates that it wasn't dealing merely with empty words, but dealing with the things that the company described and called "good will."

So, I think in the Consolidated Gas Case, taking the record of that case, the court fairly excluded as elements to be considered in a rate case, the very elements that must be considered in making any computation as to the amount of "going value".

I have the Master's report here in town and shall be glad to introduce in the morning from it those extracts from the plaintiff's
1397 bill and the testimony of its witnesses on which it relied to establish this thing which it called "good will", but which by description and enumeration included elements that must necessarily go to make up "going value".

What I have said implies, I think necessarily, that "going value" is distinctly an intangible thing of the business,—not of the plant; the plant may exist without the business, and the business may exist without the plant,—.

You ask how can that be? I am supposing a temporary destruction of the plant. Take a factory, suppose we blow it up over night,—here is an automobile business with a factory,—the supply is gone, because the business will undoubtedly wither away, if you don't make a provision to take care of it, because the particular physical thing easily suppose an illustrated case where the things have disappeared That is my idea, while some particular group of physical things, of course, is always found where there is a going business value as an aid for carrying on the business that that value represents, I don't

think the value is in the things at all, it is in the business. You can easily suppose an illustrated case where the things have diseappeared and the business replaced by others, and the business wouldn't be affected at all, or if at all, only a little.

I see the book containing the Master's report has arrived, and it might be well to read into the record some of the extracts I had reference to, or I can pass that and put them in as written exhibits in the morning.

Well, part of the matter to which I referred in the record of the Consolidated Gas Case, as disclosed in the Master's Report, is found at page 82 and page 83. It is there stated in an extract from the bill of the Consolidated Gas Company, as follows:

"In addition to its said franchise rights, your orator is possessed of a large amount of intangible property, which constitutes an integral and important part of said business. Such property
1398 consists of the value of the connections between the pipes and mains, of your orator and the various buildings throughout the city of New York, the value of various contracts owned by your orator in connection with its business, the value of the organization of your orators business and good will, and various other elements of value which have been created and developed by your orator and its predecessors through intelligent and efficient business management during the past three-quarters of a century and fidelity to their engagements, all of which possess the full attributes of property and materially add to the gross earnings of your orator, upon which it pays an annual tax of one per cent. to the state of New York. By reason of such good will it would be difficult, if not impossible, for any company in the city of New York, even if vested with similar franchises to those possessed by your orator, to compete in selling gas to consumers in the said city; and if your orator elected to sell its tangible property and franchises, it could, apart from these, obtain a large sum for the said good will, and your orator avers that upon this good will, as an element of substantial value, it is entitled to a reasonable return, and that, in fixing the price, at which your orator should sell its gas, as hereinbefore stated, the said Commission of Gas & Electricity allowed no return whatever upon the value of the said good will but wholly eliminated it as an item of substantial value."

There are described in that extract from the bill, to my mind, elements absolutely essential in a computation and in the existence of "going value"; in fact, the elements of so-called "going value". But, as I have said, it does not matter at all, to my mind, that the company chose to designate that group of elements, and that group of valuable things by the term of "good-will".

1399 Referring here to the expression: "Such property consists of the value of the connections between the pipes and mains, of your orator and the various buildings throughout the city of New York."

I don't understand the bill to speak of the physical value of the service pipes that run into the buildings, that is to be taken care of in the schedule of the physical property of the Consolidated Gas Com-

pany, but I do understand the phrase of the bill to refer to the fact that that Consolidated Gas system had an established business, as represented by those physical connections with a great many thousands of gas takers in New York; in other words: they had a gas business worked up, and was carrying on a gas business and supplying gas to a great many gas patrons.

In this connection I think it is perhaps proper for me to say that another reason for my conclusion that "going value" is not an element of value to be considered at all in a rate case, is due to the fact that as I understand the cases, and have studied them, I don't recall one where "going value" has been included as an element of property, except in cases where it was a case of property in transfer; of course, the Kansas City case was a case of that kind. It was a taking over of the water works by the City. And the recent Omaha case, which went through the Supreme Court, was another case of the same kind. And then too, I remember the Justice in the Knoxville case specifically points out that he is not passing on the admissibility of the " going value" in a rate case. I don't know of any case in the Supreme Court of the United States, and I haven't any idea there is any such case where "going value" has been included in a rate case; I don't know of any case in any court of last resort where it has been included of the many, and there are quite a number which I have read, showing the "going value" included and the amount allowed therefor—I am not testifying, of
1400 course, that there isn't such a case—I am saying that I have examined quite a number of cases where it has been included, but in every case they have turned out to be cases of buying and selling the property,—— Condemnation cases, exactly, or cases of that nature, perhaps it isn't taken exactly under Eminent Domain, but the property was to be taken and transferred as a whole. Possibly they did allow it in the Oklahoma Telephone Case, I didn't read that case; I have heard it mentioned, but I am not trying to testify what the law is, but stating the impression I got from reading a number of cases where "going value" has been allowed, and in every such case that I have read of it in a court of last resort, it was the case of the taking or transferring of the title of the property.

I notice it also quoted here by Mr. Justice Brewer in the Kansas City Water Case, where he lays stress on the same matter of having connections between the water plant, in that case, and the houses and buildings of the water consumers, just as the Gas Company did in the New York Consolidated Gas Case, of having connections between their gas system and the various takers of gas.

But certainly I should be at a loss to estimate the "going value" of an alleged gas business that had no gas connections and no means of conveying or getting its gas to the various takers—of course, I could conceive with our modern developement of liquified gas, of a business which was carried on by carrying packages of liquified gas around in carts and in that way I think such a business would have a "going value", and there you wouldn't have to have the gas connections. Or water connections similar to the gas con-

nections such as Justice Brewer talked about. The- wouldn't have to have actual gas connections and that was dealt with and excluded in the Consolidated Gas Case, you would have a series of
1401 carts or what not, but you would have a gas business. But as it is in Lincoln with the gas running through pipes here the connection of the pipes with the property of the gas takers is an essential element; if you find the connections you know they have got the business. No connections, no business. That is all it amounts to.

There is another extract from this Master's Report that I would like to have copied out and present in the morning.

Now the computation as to the amount of "going value" attaching to any business, to my mind, shapes itself up in about this way: Take it here in Lincoln, the gas business, we find there is a certain amount of it. A certain amount of money or income is being derived from that business.

Now I think that roughly, the steps to be followed run along the line of finding out by the best estimates and computations we can make, based on experience here or elsewhere, the cost of creating for a new property that has no business or no connections with a new property that has no business, a business equal to that existing here. That doesn't necessarily mean an income equal to that which is being obtained here, and it doesn't imply at all the charging of the same rates that are charged here, which might have a great deal to do, one way or the other, with the rapidity with which the business could be acquired; I take it the rates on which any such computation is reasonably based must be in themselves reasonable rates; and reasonable without regard to the amount of the "going value".

As I say, the moment we admit the "going value" as an element on which to base rates, knowing it depends in part on income, at that moment we have begun to reason in a circle—a bigger income, a bigger "going value". A bigger "going value", a bigger income; a bigger property on which the income must make a fair return, I see no escape from that.

So, I think the rates to start any computation must be
1402 fair as to the other values on which those rates are based by having a fair return. And, having found out what the fair rates are and applying them and making an estimate as to the cost of carrying on or building up a business at those fair rates until you get a business of the present dimensions, will give, to my mind, a sum fairly representing "going value".

That is, representing a sum that a man who wanted to do that business, and who was in a position to do the business, and who had a right to do the business, that computation would give for that business that has been created at somebody else's expense, rather than to go and create a like amount of business at his own costs and expense.

Referee: That excludes "going value" as a basis for reasonable rates?

(Witness:) Absolutely. I tried to make it clear, that is my

opinion. I can't see any place for "going value" as a basis for rate cases. My position is it has a "going value" but not to be taken in a computation for reasonable rates, exactly. There is no doubt but a man would give something more for a plant here,—suppose he bought this or built another and we bring him to the time when he is ready to supply 10,000 gas takers, there is no doubt but he would give something to have these gas takers already at his door and ready to receive that gas and have that business all worked up. I didn't say that this theory excludes the estimates or the opinions altogether of "going value". I didn't say that we have any "going value" on anything that I have said, we simply have got ready to go ahead and estimate.

Whether we are not going to take an estimate,—that comes of reasoning in the line suggested, we are going to take into account the kind of value we hear so much about in connection with local matters, namely, the value to the fellow who wants the thing and is in a position to use it or get it in some other way if he
1403 doesn't buy, or will give for the thing that is in existence.

Here is a man that has a plant, and has an exclusive right to do business in this city, but he hasn't got any business, by going to work and running his plant and hiring a manager and hiring all the help necessary to get ready to supply gas and supplies it he can gradually build up a gas business equal to that in Lincoln, but that man realizing in doing that his income will fall short of his expenses, taking into account his fixed charges for a period of time he can't earn his outgoing expenses. If a new plant starts today here in Lincoln the income during the first month of operation will be less than the expenses, that is, the net income, taking the cost of materials for making gas, managing the business and the fixed charges on the property necessary to do the business, they will far over-top the business in the first month's income he will get.

I apprehend there is no use at all in ascertaining "going value" any more than there would be in ascertaining the franchise value or "good-will" value if nothing in them may be taken into account in ascertaining a reasonable rate, but I supposed the attorneys for the City wanted some figures for "going value" in here, I might be mistaken as to the propriety in excluding it as a basis for fixing rates. I suppose it is to be in there for contingent use. Mr. Foster can tell you why he wanted it in. I don't think it has any place in any corner of the estimate itself, but I do think it has a value, just as I think the franchise value has a value, and maybe a large one; it has a value because men will give something for it, that are in a position to use it; that is my idea of value, it comes back to what a man who wants it and is in a position to use it, will give for it.

And right there on that point I want to say that is a large part of the reason why I think "going value" is limited in the way it is, namely, to the amount it would cost to acquire it; simply
1404 because I don't think a willing and well informed purchaser who had put up to him the option of purchasing a business or of working up a business would give substantially more for the existing business he might purchase than he thought it would cost

him to acquire an equal business. I think that is just as true in the gas world as in the factory world. I don't think that the man who wants to go into the business of selling shoes is going to give substantially more for a shoe business worked up than he thinks would cost him to work up one. I don't think a man who prepares to build a gas plant will give any more for a worked up business than he thinks he could acquire that amount of business for.

So, to come back as to the basis for the computation as to "going value" or cost of getting it by a man who goes about it in a reasonable way, and under modern conditions as they exist today, because we are talking of this property under present conditions, we are not going back to what it cost to do things 25 years ago, except to throw some light on present costs.

I think in assuming the amount it will cost to build up a business, a gas business in Lincoln, equal to that of the Lincoln Gas Company, without of course, the competition of anybody, has got to be based on the present knowledge of the community as to advantages of gas, and the present pre-disposition of the community to use gas if it can get it. These are the facts that lie in the minds of men. Why not expect to get a knowledge of the advantage and disposition to pay a fair price to get it and have the benefit of it? Those are the facts with which the practical, hard-headed man would deal if he was estimating the amount it would cost him to build up a business in trying to decide whether he would buy the business of someone else, or build it at an expenditure of time and money—whether he would incur the expenditure himself.

1405 To get down to the details of such a computation we have got to consider the amount of plant necessary to do the business; the fixed charges on that plant in the way of interest and depreciation; the ordinary running expenses, in the way of wages and salaries; cost of the materials to manufacture the product, and then consider the very important element of time, estimating as best we may, and basing that estimate properly, and necessarily I think, on the best experience from what has happened elsewhere, as to the time in which a given amount of business may be built up. If we have a lot of charges running against us here, particularly interest and depreciation, which amount to so many thousand dollars a year,—adding them, and taking the amount of expenses incurred according to the volume of business done,—we can't tell what that will total up to unless we can make up our minds how long it is going to take at this rate to get a certain volume of business, which is the other fact, and whose value we are trying to arrive at.

I think the general formula for determining the "going value", involves a computation showing the expenses of all sorts, including an interest charge on the amount of money invested in the fixed plant that must be incurred while a given business is being acquired; crediting the transaction with such income as is derived during the period of acquiring the given amount of business.

That is in brief the way I see "going value"; a real value, real because well advised persons would give something for it to have it if they want it and were in a position to use it.

And the estimate of the amount that would be so given, by running up in dollars the annual expenses that must be incurred in the effort to get the business and the gradually increasing income that would be obtained during the period of acquisition to partially off-set the expenses.

I have outlined the theory on which I think such a computation must be made; the computation, as stated at the start, I
1406 haven't made as to the present property. If there is time before the hearing closes, and they desire it, it will be made substantially on the lines I have indicated, not because I think it has any place as a basis of rates, but because the City wants it.

Exhibit "410" is entitled "Cost of mains, Lincoln Water Works", and shows for the years 1907 to 1913 the mains laid in feet; the number of sections dug by the job by the laborers employed on the work; and the dollars paid to those laborers for digging those sections.

By a section of water pipe trench, as dealt with in exhibit "410", we mean an excavation of the earth 12½ feet long, 2 feet wide, and 5½ feet deep; that is known here in Lincoln as a standard water pipe section of trench, and for that standard section here in Lincoln I find the ordinary going price is $1. paid to the man who excavates the dirt, lifts it out of the trench and then leaves it. That is what the man does for the $1. The source of my information is derived from the records in the office of the Water Works at Lincoln; probably six months ago I obtained from the Water Works Office what purports to be a complete copy of their records of the cost of laying mains beginning with 1907 and running down through the years. I haven't the complete record for 1913, but have some work in 1913.

Answering whether this is a record of the summaries for the years, or a record of each individual job or portion of mains laid,—which was objected to as assuming; it is his deductions and compilations from the record produced here yesterday, objection overruled,—The record I got purported to be a complete copy of the record of the Water Works Department as to the cost of laying the mains, the quantity of mains laid in the years mentioned.
1407 that is a copy of the book produced here yesterday as the record of the Water Department, containing a record of the different jobs of main laying,—job by job,—giving usually the extent of the job in lengths of pipe laid, number of sections dug, and a great amount of detail as to the sections dug, specials, etc., I went through that record for the 4 and 6 inch sizes of mains and compiled,—not from any yearly summaries,—but from individual jobs of main laying,—the number of sections of trenches dug in the job basis of digging. The workman is not paid by the day or the hour but is paid for digging that kind of a hole in the ground. I compiled the jobs where the digging was done by the section. On a few jobs the cost is not given in any way. Making this compilation I got the following figures: Beginning with the year 1907 and running into, but not completing 1913, as shown in exhibit "410". The number of sections by the job at $1. each section was 1932.92 for the 4 inch pipe and for that the Water Department paid $1932.91,

that amounted in feet to 24161.5 feet of trenching, and the cents per foot which the dollar amounts to, based on the length of 12½ feet is 8 cents per lineal foor of trench dug in the earth.

This $1. applies to digging ordinarily in earth streets. I don't know what the rule would be where there was a pavement. I have not run through the figures for totals of the 4 inch mains from 1907 to 1913. Taking the 6 inch mains there was 2175.21 sections of threnches dug during this series of years and for that we have $2175.21 corresponding to the $1. per section paid the men who did that trenching work; the length of the trench amounts to 27190.12 feet, that again being at $1. per section of 12½ feet is 8 cents per foot.

Summing up the figures of 4 and 6 inch pipe in the matter of the number of sections it amounts to 4108.13 sections for which was paid $4108.12 for trenching; that amounts to 51351.62 feet of trenching, almost 10 miles dug in this way beginning with
1408 the record of 1907 for the mains of this City.

I do not remember from memory what I allowed in my valuation for digging per linear foot of trenching; it would vary with the different sizes of trenches.

Exhibit "411" contains the results of my investigation and information, in the first instance as to the standard size of a water pipe section of trenching in Lincoln and hereabouts, which I understand to be as already stated, namely, 12½ feet long, 2 feet wide and 5½ feet deep. I am advised that in digging for pipes smaller than 8 inches it is the practice of the Water Department to let off a little on the requirement that the trench shall be 2 feet wide, because a trench of that width isn't necessary for smaller piping, and in attempting to compute the cost of this trenching that is done by the section at $1. I have set out a tabulation in exhibit "411" showing the cubic feet per lineal foot of section, not only with the standard width of 2 feet, for the trenching,—which I understand is left out by you, but required where it is necessary,—but also I have made it on smaller widths of trench which might be allowed to be dug where only a 4 inch pipe was to be laid, so as to see what this $1. per section for trenching amounts to in cubic feet.

For the full width of trench of 2 feet, 5½ feet of depth, and 12½ feet in length the cubic feet are 137½ per linear foot of trench and that divided into $1. gives a cost per cubic foot of earth removed of .727 cents.

Assuming, however, the trench would be allowed to be dug in some instances as narrow as 1.6 feet, in that case the cubic feet of earth contained per linear foot of trench would be 110, and the cents cost per cubic foot of earth removed would be .90 of 1%.

Again going through a like computation assuming the ditch might be dug only 1.5 feet wide it raises the cost per cubic foot for digging that trench to .969 of a cent.

1409 Calling attention to exhibit "239" which shows that I have allowed for trenching, back filling and disposal of the material at 1½ cents per cubic foot, for all of this trenching on the Lincoln Gas mains, and these costs for the getting of the earth out

1033

of the original position and freeing the trench runs from .72 to .96 of a cent as compared with my entire cost of the job of getting the earth out and disposing of it. Digging the earth out of the trench is approximately ¾ of the whole job,—it might be as low as 2/3 in some instances. I can't give figures that would apply in every case.

I have figured out the entire labor cost in laying these mains that were laid, by digging the sections, by the job.

I have figured up the entire cost, labor cost, to the Water Department as shown in their record for laying 4 inch and 6 inch mains in the years 1909 to 1912 and for the 4 inch in 1913, where that portion of the labor of trenching was done by the section. Simply copying the entire labor costs out of the record of the Water Department. That includes the drayage and every expense set down in the record of the Water Department.

The length of this pipe stated separately for the 4 and 6 inch sizes, has been obtained simply by multiplying the number of lengths given for the respective jobs, where it was given in lengths, as it commonly is, is pipe of 12 feet; that doesn't give the total length of pipe laid in the earth for the reason that in laying that pipe system you are all the time getting in specials, which increase slightly, the total length of main system. If you never had any L's, crosses, sleeves or any other specials in your system you would get your length of pipe in the ground by multiplying the standard lengths used by 12, a water system contains more specials than even a gas system, which add to the length of the system laid in
1410 the ground. The water record does not disclose what the length is. I understood the witness for the company yesterday to t-stify that they didn't measure their pipe, that they simply took a length of 12 feet as corresponding to a section of pipe laid, not having the longer figure to go on, it would result in a slightly lower cost per foot. I have taken a figure which is slightly lower than the total length of the mains represented simply by the number of lengths of standard pipe laid and multiplied by 12.

As to the cost of laying these water mains, which is given for comparison with the cost of laying gas mains, it is only fair to call attention to these factors. In the first place the water mains are laid much deeper and the cost is substantially increased on that account. In the second place the number of specials properly so-called in a water system is enormously greater than in a gas system. The more specials, the more labor to a slight extent.

Again, in the water system we have an entirely new structure,—the hydrant,—which does not exist at all in the gas system, as to which the element of labor is very substantial in its erection. Hydrants, are not ordinarily and properly known as specials. I say that the word "Specials" does not include hydrants. The labor of setting those hydrants adds appreciably to the cost of setting a water system and that labor of hydrants is put into this figure per foot, for the cost of laying those water mains.

Another factor that adds to the cost of water mains over that of gas mains is the fact that all the joints are laid in oakum, whereas, the great portion of pipe joints in the gas system in Lincoln are

simply joints of screw pipe which are made at a very trifling cost as compared with lead and oakum joints. They are simply steel pipe screwed together. When we come to the cast iron portion of the Lincoln main system, I understand a large portion of it is made with cement joints, which again are decidedly cheaper to
1411 make than lead joints, which we have all through the water main system.

So there are a number of factors running up the cost enormously of this water system here over the cost of the gas system in the matter of the labor on the mains.

A further element of no mean importance when comparing the costs of the Lincoln Water mains as actually laid from time to time during the last 6 or 7 years, is the number of jobs,—I think the witness testified to some 26 jobs, averaging something like 1000 feet to the job,—little small jobs of but a few blocks. There is a substantial difference between laying that and re-laying as a whole, a pipe system of the extent of the Gas system,—the difference would be,—other things being equal,—the gas system per unit of length would be laid cheaper because it was laid as a unit and as a system and wasn't split up into jobs of 1000 feet of pipe each.

Taking all these factors into consideration I mention the resulting price per foot which I have derived by a simple division of the cost set down in the water works record. For the years from 1909 to 1913 the jobs of 4 inch pipe on which the entire labor cost was given as measured in feet,—multiplying the number of lengths laid by 12,—amounting to 27883 feet, or something over 5 miles during that series of years,—and that labor cost together with all the hydrants and specials that went with it, all the valves, and any paving that had to be removed in laying that pipe, if any, amounting to $6203.06 according to the Water Works records.

That amounts again to a total labor cost per foot on that pipe system, including all it does include, to 22.24 cents.

Another element of labor cost I neglected to mention before is the large number of gates or valves, you find in the water system as compared with the gas system. Those gates and valves were
1412 classed by the witness yesterday as specials,—they are not ordinarily so classed. In my opinion these valves and valve boxes add again substantially to the water works system over the gas, or a corresponding length of gas mains. The labor costs,—I am not dealing with the material costs, and for which I offer no computations,—but taking all these additional costs into consideration the figure for 4 inch pipe laid on the jobs, where sections were dug out for $1. each for the series of years, was 22.24 cents, per foot.

Taking now the 6 inch pipe laid during the years from 1909 to 1912 inclusive on jobs where the sections were dug at $1. per section, the feet of 6 inch pipe so laid is obtained by multiplying 12 into the number of lengths was 26263 feet, again just about 5 miles; and the cost for all the labor shown by the Water Works records on these 6 inch pipes during the years stated was $6157.52 amounting to 23.44 cents per foot of mains, taking the feet a little short of the

actual as before stated, as I have computed them at 12 feet per length of pipe.

Taking that labor cost of 22.24 cents for the 4 inch pipe and 23.44 cents for the 6 inch pipe, under the various conditions I have stated as affecting the relative cost of the Water Works work and the Gas Works in this City. While the figures are somewhat higher than the figures I have given for laying these gas pipes in the matter of labor,—that taking into consideration the different factors and the additional costs of the Water Works work that they, in a very substantial way support the estimates I have given on the gas system.

As to what way the depth of trenches required for water mains adds to the cost of digging the trenches as against the depth used for laying gas mains,—you have a great number of cubic feet of earth to lift out of the trench and you have a little greater lift to make. The point I am getting at is when you make a trench more shallow than 5½ feet you not only decrease the pro
1413 rata cubic feet of earth to be removed but also decrease the average labor. It isn't as much work to lift a shovel full of earth 3 feet as to lift it 5 feet.

I might call attention here to my total costs for labor on a 6 inch cast iron main as laid in the system of the gas company; that labor cost is allowed by me for the reproduction of the mains as a whole and is 14.88 cents as compared with 23.44 cents for the Water Works mains of the same size as disclosed by their record in the way I figured it up here. My allowance for the 4 inch is 11.27 cents and the Water Works record is 22.27 cents. That is the total labor cost per foot of main laid.

Whether in the water system it involves a trench substantially twice the depth,—according to the regular practice in this part of the country it involves a trench 5½ feet deep, but I have figured 3½ feet deep for the 4 inch gas main, and 3.7 feet for the 6 inch gas main, so you have substantially a couple of feet greater depth with your water mains. You also have that factor, while it is not great it should not be left out of the account with gas mains. We are dealing with the total corrected and certified length of the gas mains, whereas, with the water mains we are taking the lengths of pipe laid multiplied by 12, necessarily getting somewhat less than the total length of water mains laid in the ground.

Exhibits "410" and "411" offered and received in evidence.

Cross-examination by Mr. Strode:

Unquestionably there is such a thing as "going value". I didn't say that value should be taken into account if the company's property is to be taken as a whole under Eminent Domain,
1414 but I think the best information I can get from reading the cases when allowed, and required to be paid for, where franchises or City Ordinances, or other documents relating to the matter is broad enough to include it and require it to be paid for. We know it isn't impossible.

Not being much of a lawyer I wouldn't dare to answer the question in the affirmative as to whether I am acquainted with the question

in Massachusetts where public service property is taken under the power of Eminent Domain. I have heard of the Gloucester case, but that wasn't taken under Eminent Domain. The property was not taken, except as to the taking of the property it was under a provision of the Statute that expressly eliminated the franchise value. It was purchased at the request of the Water Company,—a voluntary proceeding on the part of the Water Company,—but no taking against the will of the Company. My recollection is the Statute eliminated the franchise value unquestionably, the property was purchased by the City and sold by the Company. To that franchise value by statute they added the value of a "going concern" value to the property. That was in the state of Massachusetts.

Whether in that instance I would say the question of going value did inhere in that property and was added to the physical portions of that property when taken over by the City in a proceeding where there was a purchase,—I deny that; I deny that it inhered in the property. It was considered a part of the property acquired, if the term property was so used. The City acquired that property from the Company under a provision of the Statute. The Statute didn't allow anything for franchises as I remember. Referring to the specific language of the statute and whether the prohibition of the statute did not provide that the City should pay a fair value

estimated without enhancement on account of its earning
1415 capacity, or future good-will, or on account of the franchise of the company,—I can't state from memory. It may be so, I don't dispute it. The court of Massachusetts in the face of that statute did sustain an award for "going value".

In the Omaha Water case in the United States Supreme Court there was added a value to the value of the physical properties designated as "going concern value" and about 10% was thus added. In round numbers a little over half a million dollars. Unless you find in the Statutes or Ordinances the requirement that the City pay for that element of value I don't recognize the element of "going value".

Whether there is anything in the Massachusetts statute authorizing specifically the giving of a value to the property on account of "going concern value",—I would be glad to read the statute, as I told you, I don't remember the statute now. I expect there was something in the statutes of Nebraska that specifically authorized the adding of a value to the property because of "going value", I know there was in the Kansas City case, where Justice Brewer wrote the opinion. It was either in the Statute, the Ordinances or the Contract, I have forgotten which. I can point it out. Judge Brewer, in his opinion uses the words: "business value", the value of a going business. I will not make an off-hand analysis, if it is wanted I will make it and bring it in. I said it was in my opinion, as far as I had seen it was only in those cases where there was an investigation there was such a decision. I do think where "going value" has been allowed that there has been a decision; I think so in the Kansas City Water Case. I can point it out later.

Whether I would think that even in cases where the property

is taken over there would have to be an express provision to authorize the payment for going value,—my mind isn't entirely made up on that. I think it is argued that the Court of Appeals of Great
1416 Britain held one way and our Courts have held the other.

I am not expressing positive information, I merely say that in any case I have studied, the underlying documents on which a transfer of the property was made, I find provisions in those documents which are broad enough to cover the element of this value in addition to the physical value. I am not saying if that provision is not there it can or cannot be supplied, although I have in mind that the court in Great Britain refused to supply it; I am stating the results of my investigation.

Whether the United States Supreme Court in the Smith-Ames case said the City could not take the franchise any more than they could take the property without paying for it,—the citation is a little vague. I should be inclined to admit that there might be such a rule of law. I think that early bridge case in New Hampshire near Brattleboro is the first case the United States Supreme Court passed on of that kind. Whether you can't take private property for public use without just compensation, will say that is, of course, a pretty general proposition of law to propound and has a great many ramifications; I think a great many times property is taken with no return for the value, in many ways under our system of laws, or any system.

Referee: Well, really that question of franchises in rate cases isn't involved.

Mr. Strode: It is involved in the way Mr. Adams presents the matter.

Referee: That is a question of law. We won't accept that and the court won't take it into consideration. I haven't been excluding anything in this case, but I think I will exclude that, you may need the time for some other purposes. Exception.

(Witness continues:) Whether "going value" inheres in the property itself,—— It does not in the physical property itself. Unquestionable the difference in cost of a meter at $7.50 in Chicago and the cost in Lincoln at $8.50, that difference inheres in the
1417 meter. It is its value that inheres in the meter, and being located in Lincoln at $8.50 and in Chicago at $7.50 put that value in it, simply that in the mind of men there is a desire to give $8. for a meter in Lincoln and $7. in Chicago. Nothing puts the "going value" in the physical property, you haven't got any "going value" in the physical property. If the difference in value between Chicago and Lincoln inheres in that meter, then the difference in value, if any, between that meter in the shop and in the consumer's house also inheres in the meter. The difference in value is represented by the additional labor on the meter in the different situations, it is wholly tangible. Whether you would value simply the meter simply in the house,—you can't value anything aprart from its location. The value of this gas plant in the Desert of Sahara isn't wourth the snap of a finger. You would value it where you found it. Its value in the house would be greater by the cost of

moving it to the house from the shop, and connecting it if it were connected. Whether if it cost so much labor to put it in the house and cost additional labor to put it in use would I add to the value of that meter the cost of putting it in use,— If by putting it in use is meant some labor performed in connecting the meter then apart from the value I might allow for the value of the physical connections themselves. I would add whatever it cost to connect that meter up so it could be used; but I wouldn't add a farthing to the meter on account of its use, but would add for getting into the situation where it could be used. Beyond that I wouldn't add a cent in getting the business, if it was necessary to do something to the meter to fix it so it could be used I would add that. I stop where the labor on the physical thing stops. A man's factor is worth what it costs to produce it without regard to what it cost to produce his business;

1418 he may blow up his factory and go on with his business and buy his goods somewhere else. The value of his business does not inhere in his factory. The value of a gas business does not inhere in its physical plant, nor in its gas mains. Whether the volume of that business determines the value of that property,—Oh no, the volume of business,—other factors about the business determine the value of the business; not the value of the physical plant at all. There are two kinds of property, tangible and intangible. The difference between this meter in Chicago and Lincoln is a tangible value. The value is what somebody will give for something. Whether for anything that goes to make that meter and put in service will increase the amount a man will give for it. I say no. By saying the value of a thing is what a man will give for it I mean, the man will give no more for the meter because the company has some business—he will give the company something for their business—but will give no more for the meter than he can produce it for and put it in that situation already for them to use. That is the value of the meter—what he can get one there in that situation for. The company has other property than its mains and meters, namely, intangible property, which goes under the general name of a business. The intangible property doesn't attach to the meter or any physical things; you can throw out all the meters you have and put in others. It is something that lies entirely above the physical property. There are two kinds of property, tangible and intangible and business value is intangible.

Referee: If there is a valuable distinction whether it is intangible or a physical thing you can go ahead.

Mr. Strode: It is the property itself, and he can't eliminate any item of that property.

Referee: I think about that, as I do the other things, it isn't — question, the facts are not in dispute and an expert can't settle it.

Exception.

1419 Assuming that meter to be purchased in Chicago and finally located in some man's house in Lincoln in service,—I wouldn't add anything whatever to the meter in any way, shape or form for "going value". It isn't the meter value. It is a going intangible business value. It doesn't inhere to the meter or attach to

it in any way; you may throw away every meter you have and have the value you have got, if you do it right. You might change every meter you have in Lincoln and put in others.

As to what process I would determine the amount of "going value" of the Company's property at this time,—I should determine the value of the going business, which constitutes a part of the intangible property of the Lincoln Company by considering the length of time it would take a person who wanted it to acquire its equivalent. I assume that the Lincoln plant or one like it, would be built here in one year without any trouble. The time it would take to acquire as much business as the Lincoln Company now has is one of the matters I haven't testified on, except to say that I haven't yet completed my computation on it.

My basis of my computation as to how long it would take to acquire the business,—would say partially by computation and partially by fact. As to the time required to acquire the business in their business to be based on such facts as you have in not only other places but in this place, in so far as the facts as to the rate at which business has been acquired in Lincoln would throw light on the question of time required of a plant starting with no business at all and get as much as you have; and so far as the Lincoln facts are pertinent I would take those into consideration; also from other places where gas plants have built up a business,—taking all the facts for what I thought they were worth, I would consider both computations and arrive at what I thought was a reasonable estimate of the time for a plant starting here without any business would be able to
1420 acquire such a business as you now have.

In making these computations and assumptions I would have the benefit of just such a situation existed as I assume; I know of places where the plant has come into existence,—it came into existence at one time here in Lincoln,—and at other places at much later dates and built up a business. Whether I would have the benefit of a city of 45,000 or 50,000 people where the plant was to be constructed and where it hadn't been served before,—I would say not in this country, so far as I know; there are some instances abroad of that sort. But there are instances of that substantially, in other lines of public service, which would give us the basis of fact to go on. I think you have a substantial amount of reliable information to go on, but I wouldn't want to put it just that way and say that you have just as much information right here at home in the development of this company as you could get anywhere else. I didn't say it was just as good as you could get anywhere else. Sure, you would have the experience of this company in building up this company; but to assume that the new company was to acquire its business as this company did, as to how long it would take and what it would cost, would be very inaccurate, because a company starting in 1913 to acquire a gas business in Lincoln, speaking generally, wouldn't be working at all under the same conditions that this company, for the last 40 years, has worked under to acquire its business; when this company began to acquire its business the knowledge of

the use of gas was very small, the price was very high. The situation has very much changed between 1875 and today.

I can't find a place where I can have the exact conditions I want to determine how long it would take,—not the exact conditions I want, but I can find lots of places where there have been large
1421 increases in the gas business in recent years that approximate more nearly to those that maintain in Lincoln now, than the whole conditions over the range of the history of the Lincoln Company, you have got a very different gas consuming public from what you had 40 years ago, I take that into account in determining how long it would take to build up the business. One of the factors is to know the community to be served and their disposition to accept the service. In giving an estimate on outside conditions you would have to know something about those conditions, and you would have to make up your mind as best you could how nearly they compared with Lincoln; they wouldn't compare absolutely on every point; you might find some so far off that they wouldn't be comparable.

I haven't completed my figures for the period of acquiring this business so am unable to assume or give now what portion of the company's business would be acquired during the first year period of construction. I have assembled a good deal of data and information upon which I could make such an estimate when I have had time to work it up; I haven't done it yet. The nature of this data is, of course, the figures for the increase in sales of your own company; the price at which that increase has been made, and the operating expenses, which I understand, you claim should be capitalized into "going value". I can't say that the growth and development of this company would be the controlling point or factor, but it would be a large factor. I have the sales for the last 20 odd years for 40 or 50 gas companies; also the sales of some water companies in very recent years that started with almost nothing that come up to their present large business—one or two—I have a large amount of that information and I think it is all to be considered. The weight to be assigned to any particular things I can't say now. I should not assume it would take a new company as long to build up its business as it has taken this company. I think it took
1422 this company about 40 years to bring its business up to the present standard. I am not so simple to answer your question in one form after I have refused to answer it in another. I told you I didn't know, and you are only wasting time by changing the form of your question, because I understand your question. As to other elements I would take into account, I would expect you to be acquiring business during this year of construction. I have no estimate and can't tell now how long that would be. I took into account the further element of the operating expenses of the company during the time it was acquiring the business. I would determine the operating expenses by looking at the experience of your company and other companies as to operating expenses, and seeing what the fair operating expenses of the company in the gas business is, and also by estimating the fixed charges in the way of interest and depreciation on your investment. In that I would be guided sub-

stantially by the experience of this company, I can't give the exact weight or extent to which it should go. I would look at it very carefully. I would take the operating expenses to find out the net results of operation during the building of that business. I should have to determine the rate for the service during that time; if I was making the estimate I couldn't make it and leave to someone else the key of the whole situation. The question of the rate would have to be considered in getting down to the net profits or losses from the operation of the business during that time, if I assumed a $2. rate I should never expect to get your business at all. I would not assume the rate the company is getting now. Whether if I were valuing the company's property I should want to change the rate before I started to value it,—would say that I am not valuing the company's physical property by this process, and I don't think the rate to be charged goes back to the value of the intangible business, I think it goes back to the physical property.

1423 In the determination of this intangible value I would want to determine it as a part of the company's property as of this time under the conditions as they exist now, but not necessarily at the rate now charged. The reason I change the rate any more than the character of the property is because I might think the character of the property was reasonable and the rate unreasonable. If I thought the rate unreasonable I would affect the going value by changing the rate most probably; there might be some compensating factors; ordinarily you would change the going value by changing the rate. If I thought the physical properties were reasonable I would take them, but it is absolutely not true that you have got to assume an unreasonable rate is charged, but I am not using the physical property in estimating the going value, except as I estimate the return and depreciation on it; I wouldn't estimate the returns. I wouldn't allow your fixed charges if you had a plant twice too big. I would take into account in valuing a property all of that property that was used and useful. In considering the question of reproducing the physical property I would consider all of the property that was used and useful when I came to value it. If I were going to estimate how long it would take to build another plant and acquire that company's business, if I thought that was reasonable for the situation, I would assume that I would build the same kind of a plant, the same equipment, and the same capacity to render the service. I wouldn't have to assume the same conditions as exist in this property, so far as the physical property is concerned, but I expect I would assume it if I thought the physical property was proper and reasonable, but there is the possibility of knowing that the property is only half big enough, but if you conclude the property is reasonable to do the business why take it then.

1424 I would not vary the intangible property at all from what I thought was a just estimate of their value, in arriving at their value but I would have to consider what is a reasonable rate. If I knew the value of the physical property I could determine the reasonable rate. In my opinion it should be based purely on the physical property. I don't admit that the proposition

that you can't take private property for public use, either tangible or intangible, without just compensation,—that is the commonly stated rule of law and is undoubtedly generally true, but there are exceptions in my mind. I don't think it would make a particle of difference nibbling it off or taking the whole chunk at one time.

I should take into consideration the amount of expenditure this company had made to acquire the business in determining the amount of this going value. Whether the expenditures of this company in acquiring the business would be a pretty fair guide there again would come the question whether I thought the expenses the company had been under while acquiring the business were reasonable expenses and were really necessary to acquire that business. If I thought they were not, the same as the rate, I would change it; I am supposed to be making this estimate. Not knowing the reasonableness of the expenses to acquire the business I would have to have some information about the conditions existing under which the expenditures were incurred. That I could find in your books of record, more here than in Massachusetts as to this particular company. I would find there the amount and for what expended, that pretty nearly tells the story. Whether that was justified or not you would have to know the general conduct of the business, the local conditions under which the expenditure seemed necessary, particularly if they were particularly exceptional. I wouldn't accept the expenditures the company had made in acquiring the property, as a whole. I haven't made any separation as to what portion I would give as money expended to acquire the business; I will give what I think you want. My idea of the way going value
1425 is built up and the items that go into it is this: You build your plant, hire your officers, manager, superintendent and even your president, if he does anything to earn the salary you pay him,—sometimes you pay him anyhow, but I might not agree to that,—the office is opened and the plant running; your officers are advertising the business, their salary is going on all the time no matter how much or how little business they get; you may hire a solicotor for special purposes to help the business, at any rate you have a corps of employes from general manager down and their time is going on and has to be paid, and undoubtedly for a time after you start your plant the net proceeds of the business are not going to meet all the fixed charges,—(interrupted as not responsive), —the class of items in the company's expenditures I regard as items that should be charged to acquire the business are a portion of the general office expenses, and salaries,—all of them which is commonly charged in the operating expenses,—a portion of them is what goes to create new business. I haven't made a separation and can't answer what proportion. When I make the computation I will cover that point. It comes back to the proposition that I haven't made this computation for your company and can't give hard and fast figures. It would have to rest in the judgment of the man making the estimate as to how much of those office salaries would be charged to acquiring new business. In addition to the officers' salaries I would include in this item,—all the fixed charges of the plant have to be considered in so far as not met, all operating

income, depreciation and interest on investment. To assume that the fixed charges such as taxes are met by the income, it is as broad as it is long if you pay the taxes and don't pay the coal bill. When you start in to build up a gas business your entire bunch of operating expenses from coal bill to manager's salary are going to overtop the income for a while and that excess represents, roughly, the
cost of acquiring the business to a man that would go ahead
1426 and try to acquire it. The excess between earnings of the
company and what it costs to get those earnings. I said the cost I took for acquiring the business was during that period when the company's earnings didn't equal its expenditures for coal, labor and fixed charges. Whether, after passing that point in the company's history, I would add anything on account of the additional business acquired as a part of the business of the company in fixing its value,—If I understand the question I would say no, because I would estimate the value of your business as of a certain date and estimate the cost of getting that much business. The thing I talked about is the business value on a certain date. I am taking into account all of the expenses of the company necessary to acquire business as of a certain date up to the time that business was acquired. Those are the fixed charges,—depreciation and interest charges, the dividends on fair return on the physical assets of the property. I consider the fair returns upon the physical property of the company as a portion of the cost of getting business, that portion up to a certain amount, or what you had January 1, 1913, just like your physical plant. I am not saying, as a matter of fact, what you have spent in 40 years to get this business is at all the measure of its value. Its value is what the well advised man would think what he would have to spend to get it, looking at the situation here now, not 40 years ago, nor 400 miles away from here, but 400 miles away might help you more than 40 years ago. It would be what he would say it would cost him to acquire that business from all the information he could get from any place. It would be the business value as of January 1, 1913 he would want to get, not measured by what someone lost, what a man gives for a property is what he thinks it is worth. The amount of money the company had spent to get its
present business would be no criterion at all,—no crucial test.
1427 What any one company expended would not be the crucial
test at all, he would have to make up his mind from all the information he could get. The cost of your physical plant isn't the crucial test of its value on the 1st of January; the cost of the intangible assets isn't the crucial test. Because a computation is hard and difficult it don't follow that it ought not to be made or can't be made. I have made computations about going value. I haven't completed any computations about this company and haven't anything definitely and positively in mind now that I would fix as the amount that should be set apart for going value. I have gone into the items but am not going to tell you what they amount to, I don't know, I will have to do that figuring when you aren't bothering me. I know I will have to come back where I will be bothered, when I have made up my mind I like to be bothered, but haven't it made up on that point so I can't give it now.

Mr. ALTON D. ADAMS, a witness for the defendant, was recalled for further examination in chief on behalf of the defendant, testified as follows:

Examination in chief by Mr. Foster:

Exhibit "412," consisting of three pages is an extract from the testimony of the witnesses in the New York Consolidated Gas Case cited as the Consolidated Gas Company of New York against Wilcox and others, and an extract from the bill of complaint of the company. These extracts are copied from the re*o*prt of the Master in the said case to the Circuit Court of the United States. I have copied the statements about "going value" in exhibit "412" from the Bill of the company as I read yesterday, and further defined by the witnesses for the company because I have long known about these statements and considered them in forming my ideas about the nature of "going value". I didn't read yesterday the state-
1428 ment of the witnesses as to their opinion about the nature of the elements that went to make up "going value". Beginning on page 2 of exhibit "412" the matter on which I relied is as follows:

"In the present case Complainant claims as the value of its "good-will" the sum of $7,500,000. and in support thereon relies on the opinions of two witnesses, Dr. Humphreys and Mr. Addicks. The defendants offered no evidence on the subject. Dr. Humphrey's testimony is as follows:

Q. Assuming, doctor, that in 1884, six gaslight corporations operating in the City of New York were consolidated, forming the Complainant Company, the Consolidated Gas Company; that one of the constituent companies was incorporated in 1823 and was in operation from 1825 to 1884; and that the other five were incorporated at intervals prior to the consolidation in 1884; that the output of the six companies in gas in 1885 was about 3,942,000,000 feet, and that the output has increased until in 1905 it was 13,283,000,000 feet or thereabouts; that the population of Manhattan Island, on which the Consolidated Gas Company is operating, is over 2,100,000 people; that it shows an increase of something like 50% in population in the last 30 years or so; that the Consolidated Gas Company has about 390,000 consumers, and is in active operation today; what would you consider to be the value of the good-will of that business, including the value of the established business, and its connections with consumers, and other elements which go to make up good-will as distinguished from its tangible plant?

A. I should estimate it at not less than $7,500,000."

The basis of Mr. Addick's testimony appears more clearly. He said:

"That in his experience, where consumers have connections and established relations with a gas company, it requires some special incentive to compel them to change." Such incentive, he said:

"Would be a reduction in rate by a competing company to
1429 the minimum extent of 10 per cent of the selling price of gas. Taking the Complainant's sales for 1905, 13,283,000,000

feet, such percentage would aggregate $1,328,300. This capitalized, at say 7 per cent, would amount to $18,875,000. or at 8 per cent to $16,603,750., as the value of the good-will."

Those are the statements and definitions of good-will that I refer to.

Exhibit "413" is a compilation of values made by me from the reported cases in the regular books—regular gas books—and in some of the instances from the reports of the commissions made to the courts. That was true in the instance of Holyoke. There the figures appearing in exhibit "413" were taken from the report of the Commission which was confirmed by the Court.

The exhibit sets out by naming the location of certain public service plants that have been purchased by municipalities; and in the next column indicates the nature of the public service rendered by the plant purchased,—that is, whether it is water, gas and electric, plant.—the next column moving to the right hand, gives the structural value put on the physical portion of the plant in each instance. By the body making the finding, that is the Commission or Court. In each case I think the finding of the Commission was confirmed by the Court.

The next column, moving to the right hand again, contains the amount in dollars of so-called "going value" that was added to the structural assets of the company whose property was being dealt with, and in those figures so far as they have all been copied by me out of the reports of the Commissions who sat in the respective cases, or of the reported cases, law cases.

The final column is adduced by me from the preceding figures by simply dividing the "going value" awarded in each case by the structural value of the physical property so as to obtain the percentage that was added by way of "going value" to the structural value.

1430 For instance, in the Kansas City Case the structural value as I read the opinion, was $2,714,000. and to that Mr. Justice Brewer added $286,000. which is 10½% of the physical property.

In the Newburyport case in Massachusetts the value of the physical structures was $235,000. and to that the Commission added $40,000. for "going value" amounting to 17%.

In the Gloucester case, another water case in Massachusetts the structural physical value was $525,000. to that the Commission added $75,000. for "going value," which amounted to 14.2%.

In the Holyoke case, which was the case of a purchase by a Municipality of both gas and electric owned by the Holyoke Water Power Company, the Commission found the value for the gas and electric plant $544,324. and added for "going value" $108,864. amounting to 20%. As I remember it the commission made their addition in the form of a percentage; they said the "going value" was 20% in addition.

In the other cases the percentages having been figured out by me in the Holyoke case I took the 20% right out of the book after checking it up to see that it was 20%.

In the San Francisco case, a water case; I believe, was in the Circuit Court of the United States, there was a structural value stated

of $24,129,389. and a "going value" of $1,400,000. amounting to 5.8% of the structural value.

It has been a long time since I looked at this case but am of the impression that it is a rate case, and apparently the lower court thought "going value" was a proper element to be considered.

In the Knoxville water case decided by the Supreme Court the structural value was $538,000. the amount suggested by the Water Company to be added for "going value" was $60,000. but the Court as I recollect, declined to deal with "going value," that amounting to 11.1%.

1431 In the Omaha case, the structural or physical value was $5,700,583. to that was added and allowed by the court $562,712. amounting to 9.8%.

It is significant, to my mind, in these decided cases, whose figures I have tabulated here, that the "going value" in each instance is stated as a separate sum aside from that stated to be the physical value of the plant, it helps to confirm me in my firm convictions that a "going value," while a real value in the sense that it exists, and is a valuable thing which a person wanting it would pay a large sum for,—is not at all a physical value, or one that inheres in physical things, as in the gas plant here in Lincoln. That is all I have prepared today on the subject of "going value."

If we take about 10% and add it to the physical assets of the Lincoln Company, taking my findings for the physical assets you will have between $40,000. and $50,000.; Taking the findings of the Company you will have a substantially larger amount for "going value," taken as a percentage of the physical assets. Here was the Kansas City case, to which the others refer back where 10½% was added; and here is the latest,—the Omaha case,—where 9.8% was added. Concerning whether the last two cases were the only cases passed on by the Supreme Court of the United States,—my recollection is, subject to refreshing it, that the $60,000. in the Knoxville case wasn't passed on at all by the court; they simply said it is there and it is not necessary to deal with it. That is my recollection, I may be wrong in that, but the amount is what I do testify to $60,000. or 11.1%.

Exhibits "412" and "413" offered and received in evidence.

Cross-examination resumed by Mr. Strode:

1432 I have not read the case of the Pioneer Telephone Company in Oklahoma, in the 118th Pacific Reporter, I will try to read that tonight. Mr. Morning told me the case was at my disposal but I haven't had tome to read it. I didn't make these computations today, I have had them for several years.

Whether I claim there could be no basis for the fixed relation between the amount of physical property and the amount of business the company has, by which "going value" is determined,—I should say no, if you mean a hard and fast rule; still, I do think on the basis of the showing here, in a matter of engineering or financial judgment, there has got to be some sort of a relation between the

physical assets employed and the amount of business you are apt to be able to do with that, in any line of business. My figures run from 9% to 20%. Unquestionably the relationship between the amount of business done and the "going value" is closer. In one case there is an effort to fix that relation, the Holyoke case. The peculiar fact of that case is they did use that 20% as a basis of determining the "Going value." If I could subscribe to that in total I would have to make up my mind; then I would tell you what "going value" was. The Holyoke Commissioners did find it apparently that way as their report shows, they say the "going value" is 20%. That was a Commission appointed by the Court to find the value of the property in suit. I think the Court must have been aided by the engineers in fixing the basis, they could not obtain the Court Order without the evidence. I know they didn't have engineers there who testified there was a fixed relation; I know some of the testimony of the witnesses in that case as to "going value." I don't think they worked it out in that way,—some of the figures for "going value" were very different from those found by the Commission, and whatever helped them this 20% they got as the figures they arrived at in this case. That is the only case referred
1433 to in the decisions, of any relation between the value of the physical property and the "going value" as far as I know. I wouldn't refer to that basis as to the first or primary method of determining it, but I would check my determination that way. Suppose in my computation I got a "going value" ten times as big as my physical assets in the gas business, I should think my computation was wrong, even though I used a method I thought was correct, I should look for bugs in it right away. If that computation should appear to be unders*ia*ble or larger than I wanted I should scrutinize it very careful. That would put me on enquiry to see whether I hadn't made a tremendous mistake; I didn't say I would disregard my reasoning. Whether, if I thought my method was correct I would care what the result was,—I wouldn't expect, if I got a result judged by their standards that appeared to be absurd and out of all common experience, I would scrutinize my methods more carefully and see if I hadn't made a mistake. Taking the same method applied to two cases, the Lincoln property and some other property giving a result that seemed all right as to the Lincoln property but as to the other it seemed too much for "going value,"—I wouldn't change the method for either property, I couldn't tell the result was too much. In measuring the "going value" by the cost of acquiring the business, the question of acquiring the physical property hasn't anything to do with it. I check back my results simply for the reason as a matter of common experience in different lines of business, you can do about so much business with a given kind of plant, bigness and capacity. You wouldn't expect to do $10,000,000 worth of business with your little gas plant; so I should say there was something wrong in that method and would look it over, and would find something wrong with it most probably, if I got into such circumstances as that. I would stand by my method and if I got

an absurd result, if my scrutiny convinced me my m-thod
1434 was sound I would hang to it. In this case, if I got a result within 20% of the physical values of this property, whether I would hang to it would depend on whether I thought my method was correct; I should not hang to it because it was 20%. I should not throw away my result if I found it was 20%, neither should I throw it away if I found it was down to 5% or 6%. Here is one for 5.6%. I haven't suggested that just taking a percentage of the physical property is the usual way. I said that the Commission in this Holyoke case does it; there are other methods sometimes employed, for instance, to allow so much per service. Engineers might do that as a short cut to an easy result, I have heard such things discussed. I never did it. Taking the cost of getting the consumer and multiplying that by the number of consumers is mentioned as a possible method, I didn't say it was quite frequently employed such as taking $30 per consumer or connection, I know that has been discussed. I never knew of engineers to accept 20% additions to the appraised value of the physical plant as another method employed. I know Mr. Floyd as an engineer of standing, I have been on the other side of cases before now, he is a friend of mine, but I would not accept as primae facie true what he might say about a matter of that kind; Even where he was writing a book on the subject, I don't accept statements at any time, not saying anything about Mr. Floyd, he is a bright man and an engineer of standing and reputation.

Whether I would hesitate to accept his book because he is an engineer, or because he has any interest other than to represent the matter in a published book as he sees it,—I would say, if you want an answer to that question, any gentleman, who commonly appears right along for corporations, when it comes to writing a book or paper before an engineering society and expresses his opinions about values, while I don't necessarily disagree with them, I scrutinize them carefully, because I can't help having in mind his occupation and the way he gets his living.

1435 I don't say absolutely that where a man's interests lie, it would influence his statements and opinions or conclusions, even though he was an engineer supposed to be testifying or giving statements about matters more particularly within the knowledge of engineers; it might; I think every man's mind is apt to be influenced and colored by the nature of his employment and the contentions he is in the habit of making and trying to support. I think that would influence his conclusions in the valuation of property if he were employed by a company generally. It might, I am not going to say about Mr. Floyd, he is a very pleasant acquaintance of mine. I simply say that any gentleman who is appearing habitually in valuation cases is apt to get some bias from the contentions he is in the habit of making right along, I think that applies to myself, and I am not making any accusations of improper suggestions about anybody. That might affect the cost of water gas, he might think he was looking at it from the standpoint of better power, as your

witness did when asked about a price a good deal less than he gave. There is two ways of looking at it.

Figuring on a valuation as a whole you must figure on what you expect to pay in the ordinary course of business, but I think there is some chance for differences in opinion,—if a man is working in the interests of his clients and their interests demand high values or low values he may conform to it. I don't say he would or would not. I think a man would get his mind where he would rather see the high side of things if he was trying to help people who wanted their things to be very valuable. I think it is almost inevitable. It is well known in the engineering world that engineering structures and machinery costs different amounts according to what care they are built with and designed and all that. Not like the company's witness Campen who estimated that the mains for two months in the year would be laid through 4 feet of frozen ground, while I valued them to be laid in the summer time; there is two sides
1436 to the proposition, and I think I am permitted to say what I am permitted to on both sides, at least I have said it. I think that the elements that go to make up the "going value" in the Consolidated Gas Case were defended substantially as I defined them here. The court did not exclude those elements as an element of value but as an element of a rate. I don't understand the court said there wasn't any such kind of value; but I understand the court didn't admit those elements as a basis of rate making. The treatment of the matter I referred to is headed "Good-will" in that section of the Master's report, but the talk of the Master in the section is about franchises. I don't remember that the term "going value" is mentioned in this case. I think it is true the term "good-will" was presented in the complaint and considered by the Master. Whether the Master in considering the "good-will" distinguished between good-will and going value,—I don't remember what the Master said about that, if you will show me the book I will answer you.

Attention being called to this paragraph of the Master's report,—"Outside of the proof that Complainant had secured control of a majority of the stock of each of the other existing light companies, no evidence was offered in support of the above allegations, but, assuming them to be well founded, it seems to me that they are predicated upon an erroneous view of the meaning of the term "good-will" as involved in Complainant's claim." — —

I don't agree with the statements you make, I do find that the Master says "This kind of good-will amounts to a "going concern", that is found right above line 335. This is the Master's report and is an official document. When the Master says "no proof was offered, etc.," I don't understand that he is talking about good-will, he is talking about the immediately preceding allegation. He also says: "It is not necessarily the ordinary commercial "good-
1437 will", such as attaches to an old firm name or place of business and is based in large degree upon the personal standing of the founder of the house,—" He says it isn't that thing.

And he says: "The modern decisions have recognized its proper

scope as including that species of intangible value which comes from the gradual building up of a complete organization in the successful operation of a going concern. Such value can exist in the case of large corporations, notwithstanding public disfavor, unless its disfavor reaches such a point as to result in the absolute destruction of the business, an instance where good-will of this description was considered by the court was in National Water Works Company-v-Kansas City, 62 Fed. Rep. 853, which was a condemnation proceeding."

That adopted the view of good will as defined in this report and that was the same thing Justice Brewer talked about. I want to correct what I said about "going concern" value being mentioned here. I now notice, on refreshing my recollection, that "going concern" is mentioned by the Master. "Going concern" is the thing which he is talking about to which the value attaches.

Whether I regard the "good-will" known to the Common Law and known to the private business the same as what is regarded as "going value" with respect to a public service company,—I don't regard it the same; I regard it as similar. Whether that value is determined in the same way as the value of the "good-will" in a private enterprise is determined,—I think there would be some variations in the computations. I never computed the value of a private concern in that way, so I should have to think the matter over before I should be able to tell you what variations would be necessary, if any, in the computations.

There is a very important difference in the valuation of the business built up by this company and the necessary expense in building it up and that of a newspaper in this community. The newspaper would have to build up its business in the face of
1438 competition and would be to that expense; the computation involves not only the building but the holding of the business, and the value of the business would be affected if it was for the time exposed to competition, they might take it away. Outside of that element of competition I think they would be very close together. If the gas company was exposed to competition I would not value it in the same way as the newspaper, but as to just how much difference there would be I would have to know about the competition. It is almost unthinkable that a gas company should be subjected to any such degree of competition as the ordinary newspaper plant. I do not recognize that the gas company is exposed to any direct competition. To compete in the matter of lighting as between the gas company and the electric light plant I don't think it is direct competition,—not what I call competition,—because every coal oil lamp or tallow dip is in competition but it isn't what we call competition—direct competition. I lay stress on the word "direct", it isn't direct competition. Here is a gas company and an electric light plant, the electric plant gets all the business, but I distinguish again between the "kind"; with two services like two electric services and every kind which you get when coal, coke, or charcoal competes with gas, or when electric light competes with the coal oil lamp, there is competition in all those cases, but is a different kind, or degree,—I call it direct or

indirect for lack of a better phrase. I think that might enter into the determination of the valuation of good will when existing, whether direct or indirect. I think there would be some difference in the method of computing "going value" of a strictly private business, I think it would right along the lines parallel with a public service business. Whether the percentage of "good-will value" would be expected to be much greated in a private enterprise in proportion to its physical property than in a case of this kind,—that would all depend on whether it was a famous surgeon or a wholesale grocery house, it depends on the line itself you are in
1439 so that you can't liken different businesses and draw a conclusion from them because the ratio of assets to the different businesses is very different, in so far as the ratio exists. I don't think the franchise would enter in any direct way into the consideration of the value of the going business element. I was not asked about exclusive franchises. I don't attach to that value of that property because of franchise rights because I think the going value is a thing separate and apart from the rights to carry on the business; the going value is the value in the business. One man may have a right to carry on a business, another man may have the business which he can sell or let die. In determining the going value I should assume the continuing right of somebody to carry on that business, a man wouldn't buy a business that was illegal to carry on. I think the going value is independent of the owner, whether this company or somebody else. The suppositious purchaser looks at the going value and any common rates that are charged up to that, he said it is worth so much because I can get it for so much expense rather than build it up myself, and I will give so much for it. I think that is what it is worth. If it was against the law in Nebraska to operate a gas plant that would kill the going value. I assume they would have a right to use that property for that service indefinitely, otherwise it would knock the spots off the going value. I am not going to construct any hypothetical plant, I may assume in valuing this business that the business may be carried on indefinitely. I assumed the time it would take to reproduce the Lincoln plant, and parallel the business it had January 1, 1913. I am not assuming a plant is going to be built, I am assuming what it would cost if one were built. The plant I valued is this plant, not some other that never was or will be. I propose to value the parts of this plant that are used for the Lincoln business. Not some other plant that never was or may be, but I have to look around and see what things cost,
1440 that is the method. I may enquire the price of pipe in Chicago or St. Louis, but what I may have is the value of your plant.

As to my practical experience, in the manufacture of gas, such as this company furnishes,—I have been watching the operation of gas plants and analyzing the results from operations, just as your engineers do here, and as all engineers must,—for the last 15 years. I have never been employed in or about a plant. At one time I gave a company some advice about the charges and method of running

their business. As far as operation the plant, being active and sharing in the work necessary to be done, I have been there and watched the work done, I didn't turn the levers. Whether I had had that experience with this company or any other,—No, I claim what I have done in connection with the gas business is engineering experience. If you want to know whether I have been employed by any gas company, I can answer very shortly, I will not testify that I haven't had any experience, because I have had 15 years of it, in connection with a good many whose results I have watched and analized, and I did it just as truly as any engineer that might have been in the employ of that corporation that stood by my side and made the same figures and comparisons, because the company paid him, and my client paid me. The information was gotten from the reports of the company showing the results of their operation, or from visiting the plant just as the engineers of the company did, to see how they worked, and would go up and look at the figures and see what the results of the work is, I call that experience. And that is the kind of experience I have had. I have never carried on the duties of a manager of a gas plant, nor been employed in connection with the management of any gas company, neither at the plant or in the management of it. On one occasion I did give the company some advice about the management of their business for which I was paid.

I have had experience in the installation of gas equipment, I never was in the employ of a company. That experience
1441 was not in installing that machinery for the people who furnished it, but for the use of those for whom it was installed, yes. Not for the company that purchased it. It was for the public, they had to pay for the use of it for some time and had to pay for the equipment too. I appeared in the relation of someone representing the public, that is the way I have appeared in my experience with gas companies, as the representative of the public. I never had any experience on behalf of any gas company in the selection of any equipment. Neither for any gas company in purchasing pipe for mains or laying mains. I was always acting on behalf of some portion of the public.

As to where I acted for the public either in acquiring equipment, installing it, or acquiring any part of the distribution system or pipe of the gas company,—take the Haverhill plant in 1911; the manufacturing end was almost entirely rebuilt during that year that we were trying the gas rate case for Haverhill, and I was at the plant a great deal,—went through some dozen or 20 contracts for equipment for that plant, which the company kindly furnished. Those were contracts that had been made. I was never called upon by any gas company to determine whether a kind or piece of equipment should be installed or not, but for a municipality in one instance, I was called upon to make such a determination but we never got to the point of installing the plant. I made an estimate and specifications about it and the thing is hanging there, and I don't know what they are going to do. It has been hanging there for *w*uite a number of months, that is at Ypsilanti, Michigan, as near as I can get at it.

Referee: It seems to me this has gone far enough to show that Mr.

Adams has had no practical experience in the sense you use the term, you and he don't agree on the definition, but the evi-
1442 dence is very plain. Exception.

(Witness continuing:) I never operated a plant for a municipality. I have operated a large business where I might be required to incur obligations that might be more or less incidental to the business, in the electric lighting business, for instance, and the manufacture of electrical machinery. I had the management of such business, and am somewhat acquainted with the incidental expenses of that business. As to the latitude existing in the conduct of such a business dealing with a large portion of the public where you have to give to charity,—the term "have to" is a strong term. If you say have to I think I should say no. You "might" do so, you might make a moderate contribution to charity. Whether that is good business sense and judgment to pursue that course,—that is subject to all sorts of qualifications. You might, in the exercise of good judgment, give moderately to several charities I think. It might be good business judgment to a very moderate extent incur the expenses in keeping an organization,—every man in good working harmony. It is often convenient, if the boys are working here at night, or have some trouble, to take them in and buy them something to eat or a cup of coffee, I should not hesitate to *to* that. I should not criticize necessary and reasonable expenditures for the men who are employed by the company and who needed, for instance, a meal of food or what not, when they were out in the service of the company, or out in that connection.

Whether I would criticize the expenditure for getting the heads of departments together quite frequently for talking business matters over,—I would say that is all a matter of degree; if it was a case of car fare to ride to some central point, I should not criticize that. I could tell more definitely if instances were cited.

I don't think the bare fact that when several persons employed by a public service corporation occasionally take lunch to-
1443 gether at the expense of the corporation, that that is a subject for violent criticism, it would all depend on the extent to which it was carried; sometimes, I can see how such a privilege might rightly be abused if it ran into a big supper that involved the expenditure of a good deal of money, that would be a different thing. Not knowing what the present practice by well conducted business houses, in providing shower baths, lockers and other conveniences for their workmen, and even free meals at noon for help, is I can't testify at all about that. If that is the situation if not carried too far the mere fact that certain persons employed by the company ate lunch together at the company's expense, if only carried to a reasonable extent, like an equal addition to their salary, for that is what it would come down to; it might be abused and that would be cause for criticism. Expenses incurred for literature we don't run into any trouble on that, but the expenses in attending gas conventions a good deal depends on what you get there. It don't cost a great deal to attend and discuss scientific papers, but if you go for a junket on the same trip and have a pretty good time and spend $100. extra

that might not be a very good item to write in the expense account. I agree to the principle of having a person or two or more, whatever suitable and necessary in a given case, to keep in touch with the advance in the engineering business matters and to attend association meetings for that purpose at the expense of the organization they are connected with, would be a proper item of expense in the manufacture of gas, but the mere fact that they went and spent a lot of money wouldn't authorize all the money they spent. I don't know if it would be outside the work of manufacturing gas, you have got to keep up with the progress of the business and the art. I should consider, if I was the manager of a gas company, and attended a convention and read a paper or took part in the discussion that I was serving
the purposes of that company just as though I was at the gas
1444 plant.

Exhibits "1" to "6" inclusive offered and received in evidence.

I presume I have somewhere, but have no copy here in the room, of the report of December 25, 1912, being a letter to Mr. Foster touching the earning value of this company's property.

To the best of my present belief exhibit "414" is a correct copy of that report; I state that subject to correction if I find that it is not.

Exhibit "414" offered and received in evidence.

I am not a practicing lawyer. I never carried on a law business. I had on the door of my office, where I really carried on an engineering business in Worcester the year after I graduated from the law school, which was in 1904.—I had the word "lawyer" following my name, but I was absent from the office myself all the time on engineering work, as a matter of fact I never engaged in the general practice. I can't say it was my purpose when I opened up my office to practice law. I wasn't sure, when I put the word "Lawyer" on my door what I would do, I had a good engineering practice at the time; I suppose if lots of clients had come in a crowd why I might have given up engineering. I never saw any parties and my engineering business increased and my law business didn't, so I took the word off the door and it hasn't been on there any more since. I substituted on the door "Engineering", I had been an engineer for 25 years before that, having gone through the law school I was guilty of the folly of having the word "lawyer" printed on the door after my name and I saw the folly of it and had it taken off. I have tried hard to live down that mistake since.

I have referred to a number of cities and towns where I have participated in the matter of rate hearings, certainly. Watertown, New York, may have been the first one I referred to; I had been in two or three before that. I was in the Watertown case. There I made an examination of the company's property to determine the physi-
1445 cal properties of that company. As to the time spent in the examination before reporting on its valuation,—I can't remember now, it seems to me I was there over 3 weeks or so; I wouldn't make any estimate of the time I was actually there at the plant, I was there a good deal of the time in the company's office going over the records and visiting the plant. I valued the physical

property based upon a physical inventory where I valued each item of property and reached a total valuation of the physical property. I think I examined the operating accounts, some of them, and made a verbal report, that was a capitalization case: I don't remember that I gave testimony before a tribunal, I don't think I did. I did give a detailed report, based upon an inventory, on the valuation of the physical properties of the plant. I only wish to vary from that for the purpose of accuracy, I didn't make any report at all, I valued that property and testified as to the value before the Commission. There is right there before the Commission a detailed valuation specifically and separately of the different items of property. I didn't rely entirely upon the inventory submitted by the company. I investigated in every way I could, by visiting the plant and looking over the sworn returns before the Gas & Electric Light Commission at Albany, and going over the records of the company; it wasn't based merely on a sheet of paper; I spent a good deal of time with the company's records and at the plant and with the reports to the Commission. That was on the part of the company to issue securities and stocks and bonds both. The purpose of taking the testimony was to find out the value of the company's assets with reference to an issuance of securities. I didn't testify about the securities. I testified about the value of the physical things. The question of rates was more or less up there. That was in 1906, and while, as I remember, I didn't analize before the Commission the operat-
1446 ing expenses of the company, my impression is that on the basis of my valuation, and the using of my valuation, the City got some sort of a rate order at a proceeding at which I wasn't present, subsequent to this capital stock proceeding. The Company had the property valued by an engineer at the same time, I think Mr. Breeder, of New York.

I valued the company's property at Saratoga Springs; that was both a gas and electric property—that was true at Watertown also. As to the time I gave to the valuation of the property at Saratoga Springs,—I was there substantially a number of days and visited the plant a number of times; I spent a good many days making my computations and assignments of value, I can't begin to tell you th*ime* now, it might have been a month, or six weeks that I spent altogether on that. I was not furnished a detailed inventory, except as I hustled around and got it, of course, the reports of the company were on file with the Commission at Albany; I visited the plant and got some information from their office, in the way of drawings, as I recall, and I presume some figures. I have forgotten where I got all the information, but from all the sources I resorted to I got what and all I could. Saratoga Springs is a place with a big name and small population, perhaps 10,000. I think the gas rate there was around $1.70; I think they manufactured both coal and water gas,—I am sure they had a water gas set. The larger companies in Massachusetts,—anything like as large as your company here,—with two exceptions, Fall River and Haverhill, have combined coal and water gas plants. I regard that as good practice: in Massachusetts at Haverhill they said it wasn't, I tried to impress on them it was.

I valued the property in Salem and had a detailed inventory and valued each item of the plant and added the items together to get the total. I don't remember how much time I gave to the actual examination of that company's property,—I think I was act-
1447 ually down at the works a couple of times, at first the company were quite willing to have me come, but after that they were quite crusty and said I should not come in there, and I went down and looked over the fence considerably and freshened my mind. When we speak of being on the company's property, it frequently happens that more than half of a company's property lies around the street. The group of machinery which we call the gas works isn't half of the property, in many cases. I think it is a little under half in this case. You must have some knowledge of the equipment by actual inspection, and would want to look over the fence at least more than once. You would want to inspect the equipment enough so that you would know it is in shape to be operated and all that sort of thing, and get some idea of its condition.

I did some work in connection with the gas plant in Woonsocket. I have forgotten in how great detail my valuation there went, my recollection is that my own personal notes went right through in toto as to the different equipment, I don't think that detail was reflected in the printed report made to and by the City. That was not a great proceeding, it was a proceeding out of court where the City got a report on the value of the gas property. I think I dealt with the Mayor, probably the report was directed to him. I visited the plant several times and made up a schedule of the equipment.

In a sense I valued the plant at Cedar Rapids, I can tell what I did if you like. I testified as to the value of the plant, including the value of the physical property. I didn't testify about any business values there. As to the length of time I was in Cedar Rapids examining the property before I testified, it was comparatively a short time, I wasn't called into that case until late while it was in progress. I wasn't in town more than a week and perhaps I was somewhere else in the intervening time. It was less than a week that I spent actually on the ground. They telegraphed me to come there. I didn't testify that I prepared myself in a week to testify, I
1448 may have come there and stayed 2 or 3 days and got some information about the plant and then gone away. I haven't any recollection now whether that was the fact or not. I don't remember that I criticized the operating accounts, aside from the depreciation claim, I criticized that.

If I said I valued the property at Attleboro I think I put it a little strong; I was connected with a proceeding there where the value of that property was in question; I didn't technically value the property but gave testimony about it. I presented a schedule showing the approximate or suggested values for that property to the Commission, based on the property actually there. I was there a number of times during the hearings and went over the plant as often as I wanted to; we had a pretty good line on the equipment there for we had 25 years of the record of the equipment piece by piece in Boston and I had some drawings of the outfit there. I made an examin-

ation of the operating accounts. I do not recall how much of the operating expense was carried into the item of "salaries and officers expenses, I could get all that, I can't carry all those figures in my mind.

I valued the gas property at North Hampton. I don't know how much time I gave to that valuation, I haven't made them a complete bill yet. I spent a good deal of time on that.

Going back to Attleboro I think I spent more than 2 weeks on that. I spent a number of days in the North Hampton case, I should say more than a month.

I spent considerable time on the Haverhill case, that was tried during the whole year, we had 26 hearings, and I was plugging between the hearings, it began in January and ended in December. The lawyers took advantage of the continuances, I worked as hard as I could in the meantime. I have worked hard here all right, if that is what you refer to.

I don't just recall my basis of valuation in the Haverhill
1449 case, I have a copy of my valuation here. As to what particular city I used as a basis of the cost of mains in the Haverhill case,—I have never used any such basis as that; I always use figures made up on my best judgment.

Whether that best judgment was justified by figures of actual experience of any city,—I think I referred to a number of places, I got some other costs there at Haverhill and costs in Springfield, Massachusetts and various places. I determined there the real estate value of the Haverhill plant. I didn't have occasion to determine there the amount per square foot the company was justified in expending for real estate for its plant, not in any such general way. I did testify there about the necessary amount to be expended in Haverhill per square foot to get a suitable gas site. I don't think I testified here that my observation and knowledge led me to believe that 2½ cents per square foot for real estate for a plant is what is commonly and generally accepted as a fair amount to be paid. I don't think I gave that testimony. Whether I recall that I gave the statement here that my knowledge of gas plants throughout the country led me to believe that 2½ cents was a sufficient amount for a gas company to expend for real estate in its plant,—I didn't put it quite that way, I probably testified to what was an ordinary and fair amount, I wouldn't say it was enough for any gas company. I might have said that that was enough in a good many cases. I should not hesitate to say that.

I didn't law down any such rule in the Haverhill case, that from my study and observation of Massachusetts cases led me to believe that 15 cents a square foot for real estate was a sufficient amount for real estate for a plant; 15 cents a square foot would be very excessive. I have a schedule of the valuation of the Haverhill plant. I never have made, or presumed to make, and never shall make,
because I don't know of any such sweeping opinion about
1450 the amount that should be allowed for real estate in the Commonwealth of Massachusetts, which has gas plants all the way from Boston down to small plants; I have always qualified

any opinion I have given about the fair cost of real estate according to the circumstances of the real estate I was talking about. Any general statement I have made here in substance that 2½ cents would be a fair amount, based upon the experience of other companies, would apply in a good many instances in Massachusetts; it wouldn't apply to all the companies. Whether it would be a general rule or have any value in it in determining the value of the real estate in this plant,—it would throw a little light on the fair value to allow for the land, but it would be subject to very decided control by local conditions and circumstances.

I have in mind now a figure that I regard a proper amount for a company to expend for real estate for its plant; it would apply in a good many cases, it wouldn't apply in all cases. I can't test the value of the land finally, in any place by simply such a general rule as I would give. I would tell you that in a great many cases land from $1000. to $1500. an acre, good land, can readily be had,—good for all purposes of a gas plant site,—that is a very common thing to find. I am not saying that in every place you can get land for that, or that land is only worth that. I tell you that is a thing you will not find confined to Massachusetts or elsewhere. When I come to value the land you have there, that general rule would have a little influence, it wouldn't have a controlling influence over local conditions as I found them. I should go on the situation with the idea that $1000. or $1500. an acre was in many locations about right for a gas plant site, but that would be subject to control, I should know it was too, what I found locally. I might and do find situations where that doesn't hold good.

I designed a plant at Yipsilanti, Michigan, and furnished specifications for a gas plant there,—I made a start part way along
1451 in completing a design for a gas plant there, they sent me word to hold up and not put any more expense on it until they found out whether they wanted to build, or to to buy the existing plant. I made an estimate in the first instance. I may have that down at the hotel, if I haven't I can readily get it. That included an estimate of the cost of construction of the mains and services,—of the gas plant from buildings to meters. That was filed with the City Officials of Yipsilanti, I gave them a copy of the report. I think the population of Yipsilanti is under 10,000. That report was furnished last year. There was a gas plant there, and the desire as expressed to me was the City wanted to either build a plant itself or buy the one there. Whether they tried to buy the plant there,—I don't think that is quite right; the general movement was to determine what a new plant could be built for and then see by comparative figures what the old plant could be bought for. Whether the City of the Commission in Michigan had the power to regulate rates, that is a matter of law that I don't know that I can testify about.

Melville, New Jersey, is a tax case where I valued the gas property for the purpose of taxation, in 1912 I think, or 1913. I gave a number of weeks- time to that case, I was down several times and spent a day or two and devoted a lot of time to it in between trips.

I valued all the physical property including the water plant, electric plant and gas plant. Melville has about 10,000 population.

At Racine, Wisconsin, I had two cases there, I am valuing the water plant now, I had to do with the gas plant, I have forgotten how far I went in the valuation of the gas plant. Whether I give a valuation of the different items of physical property of the plant or just give a total valuation of the whole thing,—I never give such a thing as a total for the whole thing, what I did, I gave this subject a careful examination,—The Engineers for the Wisconsin
1452 Commission got the schedule and valuation of the Racine gas property, and I took that schedule and visited that property and made up my mind about the values, or portions of it,—I think particularly to the main system,—but my recollection is I gave testimony as to the values of a large part of the plant. I think there were some elements in the Wisconsin Commission's value that I didn't disturb.

Whether my testimony wasn't based particularly, if not wholly, on the extent of the street mains and the weight of pipe and the cost, and a criticism of the company's report upon that item,—would say, I think I went to the extent of valuing a large portion of the property of the Racine plant, but just how much of the manufacturing plant was included I am not now able to recall. I was not there a long time, I think I was there only a very few days in the City, perhaps not more than a week, perhaps I spent some of the time away from the City in making up my figures; the hearing at Madison took some time. When I was away from there I had the Engineers valuation that I went down and checked over and took that away with me.

I referred also to some work for The National Civic Federation in both gas and electric properties; it included companies plants that were operating both gas and electric services. The report dealt unquestionably with a number of combined gas and electric plants; I don't now recall that I valued the gas end of the business. In the case of eight municipal plants I valued the electric end of the business, but out of consideration of the private corporations I let them off and didn't value them. The investigation dealt with 8 private and 8 municipal plants in Massachusetts. As far as I am concerned, my impression is it dealt with electric equipment; those volumes that contain my report are in the Library here and can be looked at; I don't remember that I valued the gas plants in connection with the electric properties, my impression is that I only dealt with the electric end of it.

1453 When I appeared before the Industrial Commission of Congress that was on the analysis of the results obtained from municipal ownership as against private ownership, it was reduced to dollars and cents figures. Whether that was a public hearing where anyone got any opportunity to be heard and could be heard,—maybe so, I can't tell you about that. Different views about industrial life were presented to this Commission, it is in 20 volumes, there are a great many views, and on a great many subjects. I presented a statement as to the results of earnings,—and I think rates,—although the earnings applied to a very large part of the

testimony I gave of the municipality owned and privately owned plants in Massachusetts. I don't remember that I dealt with the gas business of any of the plants. I dealt with the electric. I rather think the report was confined to the electric end of the business. I could look those volumes up, they are in the Library undoubtedly. There I would not require information particularly about gas,—general engineering and accounting information was required, not relating particularly to gas, unless I dealt with some gas properties, which I do not now recall that I did.

The data I had is not only disclosed in the forms they get to fill out, giving the total amount of gas manufactured, coal used, and labor expenses and different items entering into the manufacture of gas,—it is very much more extensive than that. That is a part of it, but it is only a part. I know that the form and details of the operation of these companies that you find in the public libraries throughout the country in published volumes, is not such details as you find in the office of the Commission. I had access to the published volumes of reports of the Commission of Massachusetts, but so far as that they don't carry you to any such extent as the records. No, it isn't true that it gives you all the results except the minute details. I don't go very far at all about physical
1454 properties. You can only get meagre results about the plant, but you can find out considerably about the results of operation generally, but when you come to the cost of the plant and what the equipment is and all that, you can't get a great deal out of the reports. You just get a summary statement of the assets. But getting into the office of the Commission, where you not only have the original returns, of which I now show you a copy, but where you have the drawings and a great amount of detailed data, which the company have to bring in in their applications for stock. The testimony isn't sworn to now, the Commission doesn't swear them now, but their reports are sworn to. When they apply for stock they are not put under oath but they have to give a great deal of information about their plants, and tell the cost of their structures, and note and describe everything; and bring in their original contracts and all that sort of thing, and that is on file in the office of the Commissioners, and that is what I referred to in saying I had found out a good deal about gas properties by studying the records there. Whether the only information you got that way would be by a comparison of one company with another largely to see whether the operation of one company as compared with another was better and more economical,—I would say no, you would find what specific things cost—here is a million foot holder, a 500,000 foot holder, a water gas set or the mains laid. The returns don't show the cost of laying mains so much, although you can in some years get a good deal of information out of them, but the testimony and exhibits in these stock cases show in minute detail the cost of laying the mains as reported by the managers of those companies, when they come in for their stock. In reading the testimony of the witnesses before the Commission and the reports themselves, and there

is a great deal about the cost of equipment or the cost of
1455 mains. Whether a specific item—say a water gas set and scrubber,—that doesn't appear as a matter specifically, but you follow this down company by company for 25 years and you will catch a good many reported items,—specific items of property—with the reported costs therefor, in all sorts of cases, equipment, buildings, land, mains and all right in these sworn reports.

I had nothing to do with the testimony with reference to the valuation of the Des Moines Gas Company's property.

In making up my valuation here, with reference to the method I pursued in determining the value of the physical property of this company,—I tried to make up my mind, in general, as to the cost of producing a like thing to the thing I found here, taking up all parts of the plant in detail that was operated down there, for instance, the old steel holder down there. I took up the value of the meters by themselves, whether I valued the meters first or the mains first it is past me now. Whether dealing with a list of fair completeness I should say no, there might have been some items lacking from my list when I made a part of my valuations, but in the main I should say my knowledge of the items that went to make up the property was complete before I made up a value of any of them. I don't think I could have put a valuation on any part of this property until I had a complete detailed report of the company's earnings, because I had the United States record which contains a detailed report of the earnings, at a very early point in the case. I think I must have had that before I put a value on anything in the case. Whether I had access to the company's records, and had all of the operating expenses, and annual reports copied and a detailed statement of all the company's earnings before I valued this property,—would say it may be possible that some of the years have been copied by my stenographer, but that copy wouldn't vary
from the copy of the Supreme Court record of the United
1456 States if I had it. Whether before I started to value the property I brought those reports down to the close of 1912,—I have no recollection that was done, if I did not, I certainly had no complete analysis of the figures, just how far the stenographer had gotten on the copy at the time I made the report for the City Attorney about earnings, I wouldn't dare to say. Talking about this last valuation I made yes, I think I had a complete copy of your so-called gas reports, which set out the income and expenses of the company down to the end of 1912, I haven't valued it beyond 1912. In analyzing those reports for the purpose of criticizing the operating expenses I have not entirely depended on the integrity of the copies made by the stenographers sent to the company's office. I have not myself checked in toto the copies made by my stenographer, I have checked parts of it myself, all of my copies were not made by my stenographer, part were made by Mr. Wiggins, Mr. Wiggins at my request checked these reports in the way that I indicated to him, sitting right there and having the report read off to him and checking it off. It is my impression that they have all been checked, as I said here that they have all been checked. I think I have

accepted the company's inventory of its property, pretty generally to base my valuation on it, and by that I mean I have accepted the statement that those things are the property of the company and are here. I had to make an inventory of the company's property when I made the valuation. I have the inventory made up from your records. I compiled a great deal from the records in the office of your company, in reference to mains, meters and pieces of machinery. I don't now remember where I found a piece of equipment lacking that your inventory hadn't reported, of course, your inventory about mains differs some from what I got out of your records, but for the purpose of avoiding a dispute on that point,—as the difference wasn't very much when you finally got through with your investigation,—I took your figures for the mains as appears in Mr. Lea's report. I recognized that he had some
1457 difficulty in getting that figure himself, and thought I wouldn't put him to any more trouble, prior to that I had been through the records and knew what the records showed. In the valuation of this company's property in 1907 and also in 1913, I have not included anything of any value for the item denominated as "going value", except in this way: That term "going value" is used with different meanings; I have know- it to be used sparingly with the meaning, as one also expressed it, of simply having the bearings greased and the belts on and things ready to turn around. I valued all of your property on that basis. I haven't valued any of your property as junk but as useful and ready to be used in the gas business, or that was ready to be used and being used, but I have not injected into it any business value. I haven't injected a bit of this value I have defined as "going value", but that other kind that people sometimes talk about I don't think is "going value" at all. I haven't included that. It is a kind of going value which means the plant is a going, usable and used plant, all of that value I have included, but no intangible "business value" have I included. I allowed $20,000. for working capital, that is the extent of my allowance, prior to that I had added nothing. In the valuation compiled prior to yesterday there was nothing included for working capital. In the operating expenses I omitted the taxes, they are shown just as they are shown. Referring to the 2.5% of the gross receipts imposed upon the company as an occupation tax, to the best of my recollection at this moment that is written into your reports—I took all that was shown in your gas reports. I don't remember that my analysis shows that figure. If that 2½% of gross receipts hasn't been taken into account by me up to this time, if that is the ordinance, I think that would mean 2½% a thousand off for gas at $1. a thousand, but I am taking all this on your statement, I don't know anything about this occupation tax. Whether instead of being $1 gas upon my figures it would be 97½ cents, I should not
1458 figure it that way. I should figure the gas at $1. and the tax in addition to what other taxes there were to the 2½, it would come to the same thing. If you had to pay that 2½ cents you couldn't avoid taking it off the $1. I should want to take that into account as a part of the operating expenses. If that had not

been taken into account in estimating your net earnings on the $1. rate I would most certainly have to reduce my figures if you have to pay that tax. If it is a legal tax burden I would have to take it into account. If it stands as an Ordinance in the form of a Court Order before feeling justified in making that deduction I should want you, or some other good lawyer, to advise me about the probability of this thing being finally sustained. Whether as an engineer I would make a deduction for it as soon as it was put in the form of an Ordinance of the City and a judgment of the Court,—I think if the matter were simply a contested Ordinance, and on which good lawyers claimed there was no legal effect; I don't think I would deduct it. I think that would be a matter of argument before the Court whether that was to be deducted or not. I couldn't assume to decide the case or deduct it. I think you could show what it was if it was enforced, and what it would amount to if it wasn't enforced. I think that would be proper, but I couldn't undertake to decide whether that was a value or not.

Whether on the item of working capital I gave $20,239.20,—will say my testimony was that $20,000. was right for it. I stated that those exact figures, $20,239.20, was not to be taken as a precise statement. I fixed on $20,000. as the amount in toto, the added dollars is a small item. I don't recall whether the court in the former hearing in 1907 allowed $50,000. I don't remember what the record shows. I should not change my figures, unless the record discloses something that I have overlooked. I tried to indicate in my direct examination that the basis of the monthly expenses plus the
1459 coke, coal and oil on hand gives a pretty fair item of the nexxessary working capital. I take the total expenses of the company for one month and to that I add the items of coke, coal and oil on hand, providing you take the coke, coal and oil in the situation they were in 1912,—of course if you take 1907, that wouldn't hold true because your coal was already included once in the expense for coal and labor. I would add the gas coal in, but in 1912 you bought your coal and paid money for it, but you didn't buy the coal for the same purpose so I added the coal.

Whether I would take any particular month's expenses and add that amount of coal, coke and oil to get the working capital for that month,—I wouldn't bring it down that precise. What I did here was to run down through the year 1912 and take out the largest total for the monthly expenses, and the coal, oil and coke on hand that I could find during the whole 12 months, and without accepting that as a hard and fast guide, I do think,—taking into account everything I do know about the matter,—and taking those figures into account, that sum for the year is a very amply working capital. I take the amount of coal, coke and oil on hand because the company has an investment in that for that amount. Whether it is because it is coke, coal and oil that I take it into account, or because the company has that amount of money invested in those particular supplies,—It is for both reasons. If it had that amount of money invested in bricks I should not allow it, but coke, coal and oil are used and have to be used and you have to have some of them. As to the company having

that amount of money invested in that amount in any broad sense that may be true; if taking each month it should turn out by their vouchers and bills that they had paid out that much money for coal, coke and oil on hand they had that much value in material there. It was because coal, coke and oil are supplies that are necessary, and because that amount of money is invested in supplies necessary in the manufacture of gas for the use of the company in its business.

1460 It would not follow at all that any other supplies the company is required to keep on hand in the conduct of its business should be taken into account just as much as coal, oil and coke. But any other supplies the company has necessary to be used in the manufacture of gas I should want to take into consideration, if gas appliances are referred to I don't recognize any obligation to the agency distributing gas to the public to keep gas appliances on hand and charge the loss of keeping them to the public. A man is entitled to have his gas free from such losses to the gas business. Gas pipe and gas mains are carried in stock for the distribution of gas would not be as much a part of working capital as the coal that went to the manufacture of the gas. I distinguish between the portion of the supplies carried for the distribution of the gas from that carried for the manufacture of gas because I have already allowed for the loss of interest on the pipe for construction purposes by the interest in the value of the plant, in the 7% on the other structural costs of the physical plant, computed on the plant that is actually in use, and upon the supplies carried in stock but as to them computed to cover the cost and loss of interest on the cost of the plant in use, before it went into use, and these same things that are going to go into use,—when they get to that stage,—will have the interest computed in that same way and will become a part of the plant, but you can't have it as a part of working capital and capitalize it besides. That pipe in stock, if it is a reasonable amount, will presently go into the plant and the return on it will be reflected in the value of your plant. I don't agree that the amount of pipe in stock is a constant amount necessary to be carried. Whether the amount of pipe stock actually carried is included in the list of supplies or not, but if it isn't I still fail to agree that it should be included in working capital because you- pipe comes and goes spasmodically in the fore part of the

1461 year and in the latter part of the year the pipe is nearly all used up; you may have a few random lengths of pipe, but you wouldn't be laying pipe in the winter time except for repairs, and when the next year comes around you buy more pipe to lay with the loss in interest on that pipe, as I see it; while during the several months it is out of use, a fraction of a year, is taken care of by allowing capitalization of that interest loss. When the pipe once becomes a part of the plant you expect to have a fair return of its value to the plant and you are entitled to it.

I stated my reason for not valuing the property that lies outside of the plant in which your money is invested, that is, following the method I followed, you are going to capitalize the loss of interest when that property goes into the plant. Now following this method you ask me to assign what the result would have been. You would

have been having that carried all the time as working capital and getting your interest on it as working capital during all the time it was out of the plant, when you get it into the plant you would have it capitalized for an equal sum. Taking the company's records for the average amount carried in stock I refuse to put that in here as a part of the working capital for the reasons I stated. My item of 7% covers interest, taxes, engineering and supervision, and some minor incidental expenses, not fully set out here. My heading is more brief than my testimony, it is just called "Engineering, interest, etc., 7%"; that is all it says there; I explained it in my direct testimony, I can't tell exactly what it covers, it is not fully set out there. I assume that I had available the inventory of the company as to the supplies and materials in stock at the time I made up these tabulations on working capital; I didn't ask specifically for it that I remember, but everything appearing in the office to be available by searching around and getting it. The details of the materials and supplies were
1462 set out in Mr. Lea's report giving each item and the value of it. His report did contain a list of such materials as you mention, namely, the amount of oil for enricher, amount of coal, and coke and tar; purifying materials, main stock, service stock, fitting stock, appliance stock, gas stock, water gas repair stock, pipe and fixture stock, loan account stock, and miscellaneous stock; I was looking to see what I had down about these in this schedule. I don't find those items in my valuation of the physical equipment. Distinguishing between the coal, coke and repairs on hand for water gas sets to manufacture gas so far as working capital is concerned, a reasonable amount should be included. I don't agree that I haven't included that amount in my statement of working capital. I haven't prepared and set out all the items, I tried to tell you that I am not thinking that all of that is working capital or that it is going to be invested in coal, coke and oil. I gave here the value of the amount the company said it had invested in coal, coke and oil from month to month, and to that I simply add the expenses of the company during the month. I didn't add anything for repairs carried in stock for water gas machines, nor I didn't add anything item by item: minor things that you have got to have,—you have to have a little purifying material that costs a small item, but I do say, looking at these figures and with the general knowledge of the gas business I have, that I thought $20,000. which I got at approximately by taking the total expenses of one month and adding thereto the coal, coke and oil you had on hand would amply represent the amount you would need,—not only for coal, coke and oil,—but all the supplies you would need to have on hand. I am not going to say that you would have to have $20,000. invested in coal, coke and oil; I take this as a convenient way of showing you how the larger items you have got to have on hand by the actual records by way of actual reports.
1463 I did not include the items in stock you carry because I considered these principal items you necessarily carry,—that I had made a sufficient showing to indicate them. I might not agree to the propriety of the general items to be carried in stock which you show as $16334.42, or might not agree to the amount of

them. As to whether I disagree on the coke, tar and purifying materials,—Tar you are not entitled to figure as working capital in any sense, you have already paid for it, you have paid for it in the coal. It is perfectly proper to have some money invested in purifying materials and have a return on that. I tried to make it plain on that point. I haven't attempted to say that you should have $20,000 invested in coal, coke and oil and the expenses of the previous month. I merely said, that to my mind, taking the expenses of the previous month and the coal, coke and oil you had on hand at the end of the month you would get plenty for working capital. I could name a dozen things that you would have to have to run your business. I include in my total expenses per month, the expenses as set out in the company's books,—all the expenses they say they were under. It includes pipe expenses, in so far as the company reported any. It is the expense for the purchase of materials that are charged to repairs and renewals. Take for instance, the bench ite-s, a large amount of $5000 in one year, that is all included in my total expenses figured in the month, taking the expenses just as the company reported them. As to the pipe,—the records haven't disclosed to me, whether or not these monthly expenses include any amount of pipe purchased for the purpose of repairs and renewals. I knew if it was a large sum it was apportioned over a number of months, that included all they charged to repairs and renewals. They charged a substantial amount to mains as well as to other things. These ex-

penses for supplies purchased and carried in stock were car-
1464 ried as a part of the expenses for the month. The item of tar is a by-product resulting from the manufacture of gas, and is carried by the company for sale just as they do gas, and when sold is credited to the operating expenses, it is a part of the income. You can keep your books that way. While carried in stock as merchandise I would not carry it as an item of working capital. I would carry it as a part of the assets like the money in the bank the company don't need to use. Your company is not entitled to a return on it any more that it is entitled to a return on the money it got in the last month from gas consumers. It is a part of the over-turn of the working capital.

The loan account stocks, being the appliances loaned to facilitate the further sale of gas, I wouldn't allow that at all from any standpoint. If the company wants to go into the appliance business and knock out the local dealers I don't think it should be allowed to charge it to the consumers. Even for the appliances furnished free to induce the sale of gas. The business of a public service concern is to sell its product at a fair price. I wouldn't think the company justified in furnishing the burners upon gas appliances in a house; the principle is wrong, regardless of the small cost. I wouldn't think it any more justifiable than to give a gas stove away to induce the sale of gas.

Whether the amount of expenses incurred during the month for the manufacture of gas are limited to that,—I don't think those dollars of expenses taken from the reports of the company represent necessarily at all the actual outlay of money; they represent the

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value of things used largely due to the matter of their method of ledgering up their repairs and renewals. They wouldn't necessarily apply to a particular month. The- represent the value of the things used.

Whether I would regard the amount of the gas bills due for gas the company had manufactured and sold and was carrying
1465 until the following month, as an investment to be taken into account in the working capital,—I would say that isn't an investment of the company at all, such as the money to buy coal and labor to make gas, the amount you are going to get from your gas isn't your working capital at all. Capital is what you put in, that is what you are going to get out. Accounts in the books due and unpaid such as losses are not working capital. The ones you are going to get the next month are already charged up and I have allowed for the making of that gas, that is, the cost of the materials and labor, and whether I should add the value of the gas after it is made, I say no. When I say I have provided for the cost of manufacturing this gas I mean that I have provided for the cost of the coal, coke, oil, labor and everything else; my $20,000 allowance includes everything,—every kind of material you need to make gas. The plant itself is used and used up to deliver that gas to the consumer and that is charged into depreciation. On the difference between the labor and material cost to make the gas and the cost of the delivery to the consumer, for a portion at least, the company should have a return and that is its annual dividend. If you don't get more for the gas delivered to the consumer than the actual cost of the gas the rates are confiscatory, if as the company contends, it is not earning more than the gas actually costs it. The actual cost of the labor and material is a part of the amount your company is entitled to have from the consumer; your company is entitled to have the cost of making plus a fair return on the property used to distribute it. If the fair return is eliminated from working capital you get it in your dividend, you can't take out your dividend every day, you still have your plant and you have $20,000 to go ahead and do business with during the year and you use your gas receipts to buy more materials and send it out as gas ag-in and at the
1466 end of the year you have in the bank on hand a sum sufficient to pay you a fair return on your fixed assets. As far as my testimony concerning working capital I don't say that you would be required to sell gas at 70 cents or 80 cents a thousand; the labor and materials entering into the making of gas wouldn't amount to anything like 80 cents a thousand. I give you credit for working capital what I believe is necessary to enable you to carry on the gas business; what the consumer owes you at any particular time has nothing whatever to do with the case. I can't see it that I am requiring your company to furnish that plant for the delivery of that particular amount of gas to that consumer without compensation. I think you- compensation is returned at the end of the year on your plant assets, and what you are entitled to for working capital is enough to start in the year to reasonable carry on that business

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during the year. Working capital, to my mind, has no reference to the sums due for gas consumed.

As to where I get my basis of one month's expenses plus coal, coke and oil,—I simply look at that, taking it in conjunction with this exhibit "394" where it appears that the income is substantially greater than for all the expenses, for instance, November 1912, the income was $25,562 from the gas business, and the sum of your expenses on your books, plus coal, coke and oil on hand was $20,239. Simply looking at the operations for that time I say that $20,000 is enough to enable you to carry on that kind of a business, in addition to the sums you get month by month from the gas consumers.

In figuring this cost of coal, coke, and oil, and labor cost of the gas, and bills payable I also took into account the depreciation on the plant in manufacturing and distributing that gas. I took into account all other expenses necessary for the company to incur when I say that $20,000 is necessary and all that is necessary to provide a working capital, to work with. I don't figure out any
1467 specific item for depreciation for the gas manufactured and sold the previous month: from some familiarity with these account- I see that their coal, etc., is running $20,000 in those months, and that, according to my best judgment sets an ample limit on the amount of working capital for them to have for everything. I don't mean that you would spend that all for coal and oil right away.

Motion to strike the answer as not responsive overruled and exception allowed.

I don't allow anything for the use of the plant itself as a part of the working capital represented in the accounts receivable, as a return on the value of the plant no. As to including anything for depreciation on renewals and repairs, I have taken your expense items, which includes a large sum for alleged repairs and maintenance charges as necessary to take care of small repairs, and large enough to take care to a considerable extent of depreciation. I haven't apportioned the percent of the total expenses for repairs and renewals; I simply allow $20,000, on this showing of income and expenses and said that was an ample sum to put into the business to work with, and I took into account what I think was necessary for the stock supplies on hand and the amount of money the company had to keep in the bank to conduct its business. I didn't have specifically in mind any particular amount you had in the bank, but have included any money the company must have had on hand. I could, on some thought, separate that $20,000, working capital into the component parts that made it up, as in the previously stated way it would be fair and reasonable at some times to have $5000. in the bank and $15000. invested in other things, but that ratio would vary; the next week you might have to pay out $2500. of that $5000. and the week after that you might have $15000. or $20000. as your gas receipts come in, it is a fluctuating mat-
1468 ter and any separation would be purely a temporary matter and would be changed by the next month's out-go and income.

I would take into account the amount of the pay-rolls in determining the amount to set apart for working capital; I don't remember now what that is, it is all included in your expenses. I don't recall whether it is $10000. per month. The aggregate amount of business this company does is something like $285,000.

I think that the working capital of $20,000., which would include the necessary supplies for the company to carry on hand for the manufacture of gas, would be sufficient, in view of the fact that in the regular course of business you get in more every month than the regular monthly out-go. I have taken into account the money necessary to pay taxes, that is easy where you have an income of $280,000. It would be easy to do that on a working capital of $20,000. where you are turning your capital over all the time and getting in your monthly incomes from gas. It would be a different situation if you wasn't going to get your pay for your gas until the end of the year. $20,000. is not the margin between what you get in and pay out. You receive and pay our $5000. some months other $10,000. the $5,000. is too low for some months just as the $10,000. is too high for some months. I set apart $20,000. for working capital which is outside of this income and expenses; there is a difference in the month of November 1912. in the expenses and income, you received that month $25,000. and paid out $15,000.

Referring to Mr. Lea's report of working capital and whether in fixing the working capital I took into account the amount the company owed, or had secured in the form of credit or on account of its credit, I should take it into account in this way: from the credit
the company had and used less the working capital it would
1469 require. If the company purchased on credit I wouldn't give
the benefit of those credits in the form of working capital. You are not intending to give the benefit to the consumer if you carry this business on credit entirely and don't pay for anything. The company sells the gas and gets the money from the consumer and necessarily have to lay apart for materials, it can't charge the consumer for the capital. Your working capital is ordinarily expended in the purchase of supplies and labor and repairs to your plant. The amount of $40,000. which I find as the total bills payable wouldn't be taken into account as measurable by the working capital. If the company actually owed $40,000. in bills payable I would still say it could get along on $20,000. working capital; the amount the company owes bears no particular relation to the working capital, if they owe that amount for stuff used in the supply of gas it tends to reduce the amount of working capital if you are carrying it along. If it was reasonable to buy $40,000. of stuff and pay for it in cash it would require $40,000. but it isn't necessary to do anything of that kind; you can buy your supplies on reasonable credit and the consumer, when he pays a fair return, is entitled to have you use good business judgment and take advantage of the terms you can take advantage of. To say that you haven't any credit and must pay cash would that be provided in working capital, is supposing a case that doesn't exist. Under such a necessity I suppose they would; I suppose the consumer would have to pay enough

of a return on enough capital to pay for everything spot cash, but the company don't have to do that way. The public is entitled to have the company so conduct its affairs that it will have the benefit of ordinary credits, and is entitled to have the benefit of such credits for which it pays the company its expenses and a fair return on its property. I don't take into account any certain amount of
1470 money the company has on hand in the bank as affecting its working capital, not as to the amount of that at any particular time. That wouldn't be any indication to me as to the amount, in the judgment of the management of the company, was necessary to have to meet obligations when they mature, on account of the manufacture of gas; it might have a lot of bond obligations; it might be accumulating money to pay dividends or surplus and nobody knows for what purpose; the amount of money it has in the bank don't throw any particular light on the working capital; it is what you must have in the bank or somewhere else to carry on the business. Whether there had been no dividends in the past ten years and none in contemplation, the amount carried in the bank would have no crucial value affecting working capital; I should not know the character of the obligations the management thought necessary to have on hand in the bank to meet, whether for financing other gas plants or accumulating bond interest. It is not necessary to know that before passing on the question, because the manufacture of gas is something we know about; we know what materials and labor are necessary to make gas, from the company's own reports,—I know what labor and materials are necessary to make gas,—the fact the company may have a large amount in the bank, and for what purpose I don't know, but that fact don't increase its working capital. We have companies in Massachusetts that have hundreds of thousands of dollars of surplus, that don't increase their capital by what they have to use for the benefit of the public. I don't agree that it is necessary to have a large sum on hand to purchase supplies and equipment to facilitate the manufacture of gas, you must have enough to meet your current obligations. As bearing upon this item of working capital I distinguish between credits extended the company in the purchase of supplies, and credits extended on its bonds secured by its property. I said the amount of money the
1471 company owed for coal, coke and oil or anything else in the way of supplies they purchased and carried on an open account that the consumer was entitled to the benefit of that credit and it should not enter as a part of the working capital; If you got a credit say of $333,000, to buy equipment for the plant the public would still be entitled to the use of that credit until it crystalizes in the plant that is devoted to the use of the public. Whether until it gets into the plant I would pay no interest on it,—I say I have allowed the company interest on all its money that went eventually into the plant for a reasonable time, but having got to the plant I think the public is entitled to ask the company to carry on its business in the usual way, getting the usual credits, and allowing the company enough money to carry that business on with if it got the usual credits. The company gets the ordinary credit of 30 days

on its coal bill, and it don't have to pay any interest charge. On the other hand if it borrows money for its plant it has to pay an interest charge right away and therein comes in the difference I have been asked to explain. With the ordinary credits of business the company is not charged with interest. I don't know about a rule in the practice that in the purchase of supplies for cash a discount is allowed equal to the amount of interest on that amount. In some lines you buy just as cheap on time, in others you get a spot disc/ount for payment in 30 days, many times your 30 day payment is the best you can get, you can't better it. It is considered a cash price.

Asked to assume a situation where a company was capitalized for $500,000. and makes provision for a return on that investment in the plant; and a second company is capitalized for $250,000. and gives its bills payable for $250,000. more in order to make its plant a $500,000. plant, and where the owner would get any return on
the second $250,000. if he didn't carry it as a part of the
1472 working capital or carry it in as a part of the plant,—Well,
I suppose if a man put $500,000. into a plant to serve the public he would be entitled to a return on $500,000. wherever he got the money. I should not care whether he borrowed the money or his folks gave it to him. If he got the plant to serve the public he would be entitled to a fair return wherever he got the money, that would be incidental and immaterial.

That wouldn't be true as to the item of working capital; the trouble is he hasn't invested the money he actually gets; he has invested what he put in at the start taking into account that he is going to get his money back from the consumer. The company hasn't got this money in October, just because it got in $25,000. in October; that isn't a part of its investment. The investment is what it has to put in apart from the profits or sales of gas in order to run the gas business. I have heard it said the company has $40,000. in bills payable, I don't know that it is either in the plant now, or in the bank in these items of deposit as shown by working capital, Mr. Doherty may have all of it for salary for all I know. Whether in determining the question of working capital I ought to know that,—I say no, that isn't the point, I don't need to know, the company put that in and it has nothing to do with the case.

I can determine the item of working capital without determining the amount of money the company owes on bills payable. It might owe for everything in this plant, on account of bills payable. I should want to know about the accounts receivable, if you got the amounts coming from the consumers, if you could carry on the business in the ordinary way. I should want to know that.

If I were valuing Miller & Paine's store and they had outstanding bills receivable $100,000, I wouldn't regard that as a part of their investment in the business. I should take it into account, I would
look into their business and see what they had at the end
1473 of the year that they had to put in in addition to putting
in their store of stock in order to run their store. That $100,000. would not necessarily represent working capital in their business at all, the man who says that don't know what working

capital is. I regard that credit extended in a business fixes the capital requirements of that business. If I thought it necessary for the company to have $40,000. in the bank to take care of its business, and $20,000. in supplies to take care of the plant and distribution of its gas I would take that into consideration in determining the amount of working capital, but I don't think they are necessary. If the company actually did that in practice it would be some evidence they were using their judgment about that, but probably the business they were taking care of is something besides the gas business,—gas appliances and other businesses,—I don't understand all the lines of business the company has but I have become convinced from the affairs of the company that they are not confined to making and selling gas. I have discovered that they furnish electric current. Outside of that I haven't followed that line of investigation very far, but I do remember of seeing some letters and telegrams where the company was considerably interested in building a plant at Fremont. It might have been for the purpose of generating electric current. Whether any of those items were finally carried to this company I don't know; I am dealing with the gas business and the money necessary to have invested in the plant in materials to make gas and the labor, but I haven't run down or investigated these other lines of business the company is interested in. I don't know what is necessary to carry that on. I say the company is extensively engaged in the appliance business, I don't know how much it amounts to in dollars but it must cost a good deal. I criticise the entering into the expense of making and selling gas the selling of things, the price of which is not subject to public regulation. By that I mean gas appliances. If you can
1474 do it with gas appliances, I don't see why you can't do it with a lot of other things and charge the loss up to the gas business and charge it up to the consumer. I am sure losses are entered in the sale of gas appliances in the business of this company, it so appears from its records. I wouldn't testify as to that as to each of the years. Taking into account the very extraordinary and extensive amount the company charged into its operating account I do say the net result has been a loss as far as the appliances themselves are concerned, it may not so appear on the face of its books. By that I mean the large percentage paid. Your company writes it down in some of its reports as a loss. The books show on their face a loss, I can't tell over what period it is spread. I say the expense is very extensive, there is a great out-go for expenses. I refer to the general expense record for one thing, specific entries for another thing; in both the monthly reports and the reports at the end of the year, but not necessarily for each year. I can't state now what years without looking it up, I have looked it up otherwise I couldn't testify about it, I haven't necessarily looked it up for all the years, I don't remember what all the entries amounted to for all the years.

Whether I regard the appliances purchased by the company for demonstrating the benefits of the use of gas as an investment it should not make,—I can only answer in this way, if there is some moderate expense that the company wanted to set up a sample of in this room to demonstrate the operation of, I should think that

might be well enough,—such as a new form of water heater,—showing how nicely you could heat water; if it means by demonstrating appliances by putting large numbers out over town at a nominal or no expense, except to the company, I should say that ought not to go in as a charge against the gas consumer.

Whether the sale of these appliances has promoted or tended to promote the sale of gas,—that, of course, is a matter of judg-
1475 ment; my judgment, is that the handling of appliances, to a moderate extend, do tend to promote the sale of gas. But to that extent would not necessarily result in a benefit to all the consumers. I doubt very much if it pays the consumer to promote the sale of gas to his neighbor at his own expense, I think the share of the consumer in that advantage is so small he had better have taken the gas at a fair price and let the neighbor look out for himself. I am acquainted with the practice of gas companies in this matter, and there is a great deal of variation, some handle very few appliances, some a good many. A large number handle gas appliances to a greater or less extent.

In determining the amount of working capital the amount the company owes and the amount owing by the company I do not take that into account. I don't consider that a proper element to be considered.

For the purpose of reaching the company's total valuation I valued the real estate, the improvements on real estate, works equipment, machinery and appliances at the plant, the investment in the distribution system and covered all those items of value of the company's property, except that I did not value the portion of the company's tangible property outside the limits of Lincoln; nor did I value the East Lincoln holder, which as I understand was designed for service beyond the proper city limits rather than for service in the city limits.

To be perfectly clear the $2625. for the real estate is the value I have fixed for the land, and that sum does not include any of the buildings; that is, only the land used and useful in supplying the city of Lincoln with gas. It may be that the company's valuation for the same item is $21,700. I don't remember, I haven't a copy of your witness' testimony. In reaching my valuation of the real estate, I was not influenced by the testimony of Mr. Reed, who values the real estate for the Railway Commission of this State. I didn't have in mind what his testimony was at all. Had I known Mr.
1476 Reed's valuation and his connection with the Railway Commission and his duties there his valuation wouldn't have influenced me. If I had nothing else to go on undoubtedly it would have an influence, it wouldn't have over-ridden my own opinion derived from evidence of actual sales, if I thought the sales were enough to give a fair basis for an opinion. I don't claim that I have qualified myself and am competent generally over the city to testify as to the value of real estate, but of the real estate of the company particularly I do, that is my view. In qualifying myself for that service my sources of information were derived from observation of the district in that part of the city; from a number of sales

which were collected and arranged at, and according to my request, sales in the vicinity of the land. That is, I mean the valuation that was the consideration named in certain deeds. I took the consideration as that stated on the face of the deeds, if I saw a nominal consideration of $1. I didn't consider that at all. In that case I dropped it, I couldn't get any information out of that, and that restricted me to a few sales. I haven't got my tabulation, I got tired of carrying it around and didn't bring it. I didn't enquire of the people who owned the property conveyed what the real consideration was, I simply went on the face of the deed, and on my judgment. I talked that matter over with the attorneys as to whether the consideration on the face of the deed was probably the real bona fide consideration, and made up my mind whether it was or not, if I thought it was I relied on it. I talked it over with the Attorneys for the City, I didn't talk it over with Mr. Strode. I haven't with me the list of those transfers, I can bring it in the morning. I couldn't tell at all how many of those transfers there were. I can't at-empt to tell where they are located with respect to this property without my plat before me.

Whether they were isolated lots, or a number of lots together or
1477 a block of ground together,—my recollection is there were a number of sales of separate lots, 1 or 2 or 3 in various blocks. I looked the thing over with some care to ascertain whether they were improved or not,—they were largely unimproved,—there may have been one or two improved lots in the bunch, I wouldn't say. I don't think I enquired what the Beatrice Creamery People paid for the block of ground acquired by them recently. I didn't learn in any way on which I could rely as to the price that that was for the transfer of half a block of ground upon which they constructed a large building. I have before mentioned that they got some land and I saw a building down there. Whether a very large building, I say it is a building. It is a short distance from this block upon which this plant is located, I should have to have the plat to tell how far it is. Something over a block I should say, possible as much as two, I doubt that, somewhere in there. I never got any information what those lots were sold to the Beatrice Creamery for. I heard a statement here in court but I don't know when they got it; the record of sales furnished me at my request didn't disclose, as I remember, anything about that sale, I naturally inferred the information wasn't available. I don't remember the consideration in the deed, whether nominal or not, I don't remember that I got any information about that sale, I may have got some. Mr. Foster furnished me the record of transfers of property down in that vacin-ty. My instructions were that I wanted every transfer that showed any substantial consideration, I didn't care about the $1. transfers. Whether there were more $1. transfers furnished me than anything else I can't say, the number of them didn't influence me any. They were worthless as far as the value or anything else was concerned. Whether I got all

the transfers of property that took place down there in the
1478 vacinity of this land,—I don't know that I have any hard and fast statement, that is what I asked for and wanted to get. I was furnished what is embodied in this tabulation which I have

presented to the court. I included all I got; that transfer for that land may be there, I don't know whether it is or not, it has been months since I testified about that. Those sales and my official observation was all the sources of information I had for becoming acquainted with the value of that land down there. I looked at the land and saw how it was situated with respect to other property. I don't remember how far back these real estate transfers run; I think they came down to a very close date, within a few months. I think those transfers were within one or two and some less than a block of this block of ground. There might have been some further away. I am asked to get down to figures where I can't give them. Of course, when I got this copy of the records as to the consideration for these transfers I considered the date when the transfer took place, and the location of the property with respect to this particular property. I had my mind precisely on that condition, I couldn't form an idea about the value of the sales unless I knew about the date. If these deeds didn't recite the full consideration I would be misled in my conclusion. I examined the property involved in those transfers to this extent,—I examined the blocks where the lots indicated in the transfers were located, I didn't examine it to the extent of tracing out the stakes. I went into the neighborhood to see whether the lots were in Salt Creek or above it,—well as to Salt Creek, I wouldn't testify definitely about that, I haven't taken any levels; I looked the land over. Whether I enquired of men, or think it desirable to enquire of men engaged in buying and selling real estate to inform myself of the value of such property,—if I had unlimited time at my disposal I should not reject such sources of information, but I thought these were better. I didn't enquire of those men, nor of any

1479 , men in the real estate business in Lincoln, not one, except what I heard in these hearings, I think I heard one or two tell something here about the value of those lots; I didn't ask them about it before they came, and don't remember now just what they said. I made no enquiry what anybody would pay for that block of ground, or whether there was a demand for *for* such a block of ground. I went down there and looked the thing over and got my information that way and partly from the deeds; those were my two sources of information. My recollection is that I did not get a record of the transfer to this company of this particular property. As to whether I learned from any source what this particular block of ground cost this company,—I learned partially, something on that line from the company's records, namely, that it was traded for another block of ground where the plant was formerly located; how much was given to boot or how much it got I don't know, but I know that much from its records. Whether I know more from the records or from the testimony offered here,—from the company's records as I remember it, I wouldn't be positive about that, I think I got that from their records as well as from the United States Report, I should have to confirm my recollection. If I got it from the company's records I have a copy of it down at my room. Possibly it was testified to by Mr. Adams, I am not sure of the source I got it from. Whether the property transferred in the vacinity of the plant had

any trackage, facilities,—I think some of it was so situated that trackage facilities could be provided for it. I don't recall at the time I looked at it whether any piece of property I saw the purchase price of on the deed, had a spur track on it at the time I saw the land. I took into consideration that this block of ground had a spur track upon it. I considered that added some little to the value of the land, but I didn't figure it as a separate element. I couldn't state the amount because I never separated it that way. I think it may
1480 be fairly assumed that it didn't depreciate it. I took into account that this block of ground was located in one body.

Assuming that a block of ground has 12 lots on it, whether I assumed that one lot sold in that vacinity would represent one-twelfth of this block,—I would say not necessarily, if I had I would have valued the company's land at less than I did. I added to the company's block of ground over what I allowed for some of these lots; I allowed the company more per unit of area than some of the sales indicated, because of the whole situation that entered into it; I am not assenting at all that an acre of ground is worth more necessarily per square foot than the ordinary size of building lot, just the reverse of that might be true. Assuming you needed a block of ground together, whether you would have to pay more to get the block together than you would for the same proposition per square foot per single lot,—I would say it might be, but I don't think it would be down there where the plant is. My impression is there is an available block of ground in that vacinity that could be acquired at a reasonable cost to this company, I haven't an accurate description now that I could give without reference to the plats, I haven't been over the situation for months. My impression, I regret to say for the benefit of the people who own the land, is that they are not improved lots, most of them. I can't designate any vacant lots without getting a plat if an accurate discussion of it is desired. I don't know of anything to indicate such conclusion that to buy a single lot would cost more than I have allowed the company for the whole block of ground. I allowed the company more for the whole block more than some of these sales indicate for just a single lot. I am talking about the sales I actually saw and consider them in this neighborhood, or near enough to bear on the value.

Whether I determine on the 2½ cents per square foot as
1481 the value of this real estate, I wouldn't even dare to testify whether I determined that from these sales I have mentioned or from other investigations I made outside, without looking up my records. I may have said that taking cities somewhere near this size, that 2½ cents per square foot is more than has been paid in recent years for land occupied by gas plants. The answer previously given by me being read,—I testified to that, I know about 2½ cents generally is the price. Whether I also testified "It is not at all uncommon to find such land bought for $1. an acre or leased", —Whatever price I fixed on the value of the company's land the value was governed primarily by what I was *led* to believe by the investigation I made, the land was worth in that particular vacinity; land often being gotten in other cities somewhere around $1. for

gas purposes; it might be in this city you can do that, I have that in mind. It is some guide if you don't have anything else as to the probable cost of land suitable for gas works. I had that in mind when I started to value this plant, for years I have been seeing it demonstrated. 2½ cents a square foot is about $1000. an acre, almost exactly, it isn't precisely. As to the source of the information that caused me to think 2½ cents was about right for the real estate,—I really took into account what I got on the face of these transfers. My recollection is that some of the transfers were a little above 2½ cents a square foot. I never had the opinion generally that 2½ cents, from my investigation of gas companies, was about the right figure for land for a plant. In a good many locations, in small moderate sized places my opinion was that 2½ cents per square foot is about what companies would pay for land for a plant. I looked at a good bit of land in Haverhill and every city of that size helps to confirm the general opinion I have arrived at from a general study of particulars, in Haverhill I looked at a good deal of land, and for cities of that size 2½ cents would not be an
1482 extraordinary figure at all for a good sized plant. I think in Haverhill the company would be justified in having 2½ cents per square foot invested in land for a plant, it might be justified in having more, it would depend on the land it had. Whether that 2½ cents applies generally to cities the size of Haverhill in Massachusetts, or $1000. an acre for land for plant purposes is about what the companies carry,—That isn't it at all; I haven't said anything about what you can get in many places the size of Haverhill, or this City,—I said good gas land at about $1000. an acre; I didn't say that the land upon which the Haverhill plant sets is worth that even for gas purposes, although it is worth less for gas purposes than for some other purposes, but I am telling you what you could go to Haverhill and buy a strip of land that would do for gas purposes, what you could get such land for in many places about that size and smaller, namely, $1000. an acre. To some extent I testified in the Haverhill case about this same proposition. My attention being called to certain testimony I gave in the Haverhill case as to my method of determining the value of land for plant purposes, and asked whether I recall that there I based my opinion on what I had learned of what companies in Massachusetts had invested in real estate for their plant purposes and stated to be in the neighborhood of 15 cents a square foot,—I will state I recall the first part to so testifying, but I disagree entirely with the conclusion drawn in the latter part to the effect that I testified that real estate there for plant purposes was in the neighborhood of 15 cents per square foot. I say that only a fragment of my testimony there has been read about the method of arriving at the value of the land in the Haverhill case. What was read may be about what I said in the Haverhill case, but the extract doesn't fully represent the
1483 purport of my testimony in the Haverhill case at all. I did testify in substance about as it reads there, but I also testified much more than that about my method of arriving at the value of the land in Haverhill, as a matter of fact I did not at all finally

fix on the price I applied to the Haverhill land by reason of the investigation I made over the Commonwealth some years previous that did lead me to a conclusion that the 15 cents was about the maximum price for land in any such place, and I was more directly controlled, as to my Haverhill figures by what I found in the city of Haverhill, just as I was here.

Whether I further testified in the Haverhill case when asked for my reasons for my judgment that 15 cents a foot was the proper price for that land, was as follows: "The value that I found for that real estate was simply its value for gas making purposes, not at all its market value with the gas buildings removed", as I recall I found that to be 15 cents a square foot,—I will say that I think that was the figure I arrived at, I am not positive, I haven't a copy of the Haverhill testimony here.

Whether when asked to state my reasons in the Haverhill case for the valuation of 15 cents per square foot if I did not testify as read from the testimony in the Haverhill case,—I say I might have said it. And further whether I did not say in that Haverhill case that I had given considerable time to this matter, and 15 cents a square foot was about the price for real estate for plant purposes in the Commonwealth of Massachusetts,—I will say it didn't go to that extent, and furthermore I testified a great deal further and gave a great deal more of it about my basis for the 15 cents which is not now chosen to be read from that record at all. All my basis for the Haverhill land has not been read. Whether there is any reason why it should be 15 cents in Massachusetts and but 2½ cents
1484 out here.

Objection as assuming something not in the testimony. Overruled. To which the defendant excepted.

(Witness continuing:) I haven't testified that it is 15 cents in Massachusetts.

Whether there is any difference here when I base my valuation on my knowledge and experience on what plants in other parts of the country have invested in real estate for plant purposes and bring that information here to apply to this situation whether that valuation should not be the same here as it was at the source I allow I got my information,—in the first place I first said I got no such information, as a matter of fact I didn't, the value of land for gas plant purposes in Massachusetts in a great many places, is very much less than 15 cents as I already testified. The value of land allowe- in Haverhill, if the question includes that, was there based to only a very moderate extent on my former investigations in other places, and to a very large extent on what I found to be the selling price in Haverhill, and this was a more determining factor than any of the others singly. Of the value, in those of the Haverhill gas land on which that plant sets, which is perhaps as great as $1.50 per square foot as to how I determined it would be $1.50, I heard the testimony of the company and consulted with various persons about the value and looked up some records of transactions and I found it was a pretty valuable piece of land, setting right in a

thickly built up district that the plant was on, it was a small piece of land,—much too small for a plant of that size to be on I concluded,—taking into account that there wasn't a great many square feet to be dealt with anyway, that the location of the plant in that point saved something in the way of lead mains to get the gas on to the town, and some other factors, I concluded to allow them as much as 15 cents per square foot as of value, although as it
1485 appears from my testimony in that case, I found lands, which I testified were equally as good or better for gas plant purposes which could be had at a small fraction of 15 cents right there in Haverhill too. I said that particular piece of ground in Haverhill was a small piece of ground that I considered worth from $1.00 to $1.50 as a piece of ground, it was worth that for gas plant purposes.

As to how I distinguish what it is worth as a piece of ground and what it is worth for gas plant purposes,—I distinguish it in this way, the sum of the parts can't be greater than the whole. If the gas plant has a value, a suitable piece of land plus the cost of erecting that plant on that land, but you can't take the cost of the buildings and machinery at their cost and add them to the cost of an unsuitable piece of land,—unsuitable because extremely high,—in brief that is the way I understand the decision of the Massachusetts Courts and that is the way I went at the thing. There are two values to this land one its actual value which in Haverhill cost from $1.00 to $1.50 per square foot; and the other is the value for gas making purposes. The land has one value for any purpose and another for gas making purposes, even less for farming and raising potatoes if you limit it to that.

In this valuation of the real estate here I have not given the value of this property for any other purpose than for gas making purposes, what I believe to be its highest value for any purpose. I think the company has a piece of land suitable for a gas plant, I think it is worth as much for a gas plant as any purpose I can think of. Set where this building is I should not think it would be entitled to the value of the land here added to its gas buildings. Whether I know of any reason why the company is not entitled to a fair valuation of that block of ground, what it could be sold for on the market in this land making gas just as it is now, or with the buildings off, or for any other purpose, that it could be sold
1486 for as a block of ground,—whether there is any theory that I have as an engineer that would deprive the company of a dollar's value in that block,—I would say no because I have said I think it is just as valuable for gas making purposes as any purpose I don't think that this company is in the Haverhill situation at all, with an extremely valuable piece of land. This company has a piece of land that isn't worth any more than for building a gas plant. Assuming the Beatrice Creamery people paid $10,000 for half a block and the company's block just as good and a whole block wasn't worth any more than $2250.00 and situated not more than half a block from the other,—I say their land is better located than the company's a lot better, still if they paid $10,000.00 for it and didn't get awfully cheated it would probably operate to raise

the land in my estimation. If I was convince- of that fact I should want to compare it with other sale- I found there. I don't know whether I could buy a whole block in one piece down there for just $2250.00, because I don't know but what some improvements would have to be destroyed to get a complete block. If you had to destroy the improvements to get it but rather it might add something to it. I still think that my valuation of $2250.00 is a fair valuation. If I did not think I was giving the company all they were entitled to in the value of that real estate I would double or triple it; that is what people are selling for. I didn't go to any real estate man to learn its value. I considered the Register of Deeds office a better source of information than to see so and so the real estate man, it is worthy of consideration for its weight and I thought the consideration recited in the deeds more weighty.

If there is anything I have said is to be construed as an admission that the price of a whole block of ground is the criterion, I wish to correct that; I didn't mean to give any such impression and I deny any such statement. I understand that a block of
1487 ground is a fair amount for the company and I think it has a block.

I don't know and I didn't try to find out how much the Burlington Railroad paid for a number of lots immediately adjoining this block on the east. I don't know anything particular about the transfer of the lots. I want to deny any impression at which a whole block of ground must be acquired for is any criterion of a fair value of land in that vicinity. I didn't intend to give any such impression, I haven't any such idea in my head, it is just the reverse. It might be some fellow wouldn't take a fortune for his land because his great grandfather was born there and he is attached to it.

I eliminated from my valuation one half of the land that the company owns in block 77. That is the block diagonally across the street where there is a small house occupied by a dwelling. I ignored it because I found the company was not using that but was using some other land suitable and I didn't think it was properly located to be used in connection with the gas plant. I didn't know what arrang-ment the company had made before it got to use the other land or that it got this other land in consideration for this block 77; I saw the company using the other land and I concluded it thought the other land was good to use and block 77 wasn't. The company seemed to be spreading out and I judge in time it will require more than one block, if it gets the spur track run into the next block that is about the right way to run it. I took into account the fact that M street had been vacated and one half of that street has reverted to the company on account of the ownership of block 79 I raised the amount of my valuation from $2250.00 to $2600.00 on account of the vacation of that street being on the basis of 2½ cents per square foot, I concluded the company's land should be valued at that.

1488 The ground in connection with the East Lincoln holder consists of lots 1 to 15 in block 2 and lots 1 to 15 in block 7

Pecks Grove Addition. I didn't value that at all, I didn't consider that it would be used or useful in connection with the gas business here. I left the lots just where the company left them and didn't value that real estate at the East Lincoln holder at all for any purpose. I excluded the real estate, the mains and the whole thing. I understand it is within the corporate limits of the city. I know that property is occupied by the East Lincoln holder and a booster house in connection with it, as far as the service is concerned the holder being out there and in connection with the company's system of mains, there is a sense in which it may be said to serve some territory out there in some degree, but I don't think it is necessary to use there for any service in the City of Lincoln. I don't think it good policy to have it there for that purpose or that the company would ever have put it there for service in the city, I don't think that was the reason the company put it there, I think it put it there to serve University Place and Havelock which the company began to serve extensively and to run its mains since it put that holder out there. Whether that holder was completed and in service before any gas was furnished either to Havelock or University Place I should have to refer to the record for that.

The fact that the holder was completed there and in service before any gas was furnished to Havelock or University Place I should take that into consideration in conjunction with all the other facts.—if I did show in my exhibit when the gas began to be furnished out there and when the company began to run its mains into these outlying districts. I know that before that holder was constructed the city complained of the service in Northeast Lincoln. I learned that there was a complaint about the service there and elsewhere in
1489 Lincoln. But that the company couldn't get gas out there under sufficient pressure to take care of Northeast Lincoln I don't assent to at all. I learned that the complaint was that the gas was not delivered with sufficient pressure there and elsewhere in the city, but as to the means the company had to increase the pressure out there I would say they have the same way open to them that would have been to supply all the rest and deliver where the demand was greater per acre and at the same price, namely, to raise the pressure and put on service governors as they done about the time and after the holder was built. The company did increase their main capacity to supply that portion of the city. I haven't made a sufficient analysis of the system that I would like to testify to it; if they did have to increase the main capacity so much the less reason for building the holder. It is a fact they built a larger main. I allowed for every foot of mains the company says it has got in the city; I consider that a part or portion of that main was constructed to serve Havelock and University Place and I allow the reasonable value of that larger main, but I refuse to allow for any holder because I thought the holder entirely unnecessary for the service of the city of Lincoln, that was my reason for excluding the holder. My recollection of the cost of service governors of the small size, such as the company commonly uses, cost about $1.50 as a matter of first cost, but there is an addition to that. I don't remember what I as-

signed as a reasonable addition for installation, the value of the service governors should go in and if I didn't put it in I am willing to do so.

Whether according to Mr. Lea's report 7170 of those service governors at a valuation of $19,107.00 and whether I would think that was an expenditure the company should have made to take care of the situation in Northeast Lincoln rather than to build the East Lincoln holder,—I would say the company appears to have
1490 made both, of course I don't agree to those values or agree to any such a value for service governors. I think the company should have expended enough in mains to supply that part of the city or else use the service governors. I have valued them, if I haven't I am willing to, but the service governors would take care of the other portions of the city and take care of East Lincoln just as well exactly. I don't remember the mains the company had in Northeast Lincoln and it is apparent to deliver that gas through those mains prior to installing the East Lincoln holder, I know that now they are fully as heavy possibly the mains running there before the holder was built are not the mains running there now, but they could have left off the holder and built the mains. I don't think I saw the engineer's report advising the construction of this holder when I was examining the company's records; I saw the report advising the raising of the pressure by the use of service governors. I don't think I saw any report advising the construction of the holder out there. I would like to have it shown to me. I recall that there was a record introduced in evidence by Mr. Adams dated some year or so before the holder was constructed and I think that advised the company to take some steps to relieve the situation in Northeast Lincoln and elsewhere.

Whether I think that the company was justified in building a district holder in any event in a city the size of Lincoln,—well, there might possibly be some circumstances that would justify it or some situation, coming down to the particular facts in hand I don't think the company was justified in building the East Lincoln holder for the City of Lincoln any more than it would be justified in building it on the other side of the city where the demand was just as great. I haven't noticed, seen, or had called to my attention any location where I think they would be justified in building a holder distant from the works. The matter whether the company
1491 should build a holder or just what they should do to relieve the situation in Northeast Lincoln is an engineering matter. Whether in the exercising of and passing judgment, even though it might not agree with mine, would I feel justified in eliminating any value for the property installed on account of following out the engineer's recommendations,—if I thought it was a mere difference in opinion or judgment in trying to arrive at the same end, I should hesitate a good while before say- that the property should not be included; but I don't think that at all. I don't think the company's engineer located that holder there for the primary purpose of serving this city but other cities. I have a whole lot of matter and all of it taken from the company's records which I introduced in con-

nection with my direct testimony, upon which to base that opinion, and I don't doubt but that will be stated again and tabulated before we are through. I don't happen to have the testimony here the exhibit which showed the company's service in other municipalities and data which dealt directly with that transaction here now. The chart introduced by me to show that more people were living in other wards wasn't the principle thing introduced, but that was one element, I paid attention to the ward line, in dealing with the location of the gas holder to serve Northeast Lincoln, but paid more attention to the population, or the vacation of the population in that part of the city. I also paid attention to the fact of the company's long main running out to that other municipality immediately after that holder was available to render service to them, and of the increased gas sales in those various municipalities as soon as the company had the holder to get the gas out there to them. Whether that would be a reasonable service for the company and a good investment in order to serve Northeast Lincoln if they could also use that
1492 investment to extend the sale of their gas outside the city I haven't considered whether, taking the company's whole business and all the business it expects to get in the next few years, I haven't gone into that question, I am not considering other business of the company because they have business outside of the city. I won't say that I want to charge that holder and that real estate up to Havelock and University Place, I don't want to charge it to Lincoln because I don't think that is the purpose of it.

With reference to this real estate, I don't now recall whether I consulted particularly the testimony of the witnesses offered on behalf of the city as to the value of this real estate in the printed record. I don't recall at the time I undertook to fix a value that the city upon the former hearing valued and offered testimony to the effect that the land in block 79 was worth $9,000.00. I did not consult the tax commissioner *fo* the city with respect to the value of the property, in block 79. I don't remember th-t the city had a tax commissioner whose duty it was to value the real estate in this city. It is pretty hard to say what I would have done with something that didn't happen, whether I would have accepted the valuation of the city tax commissioner of this real estate without knowing in advance what it was going to be, I don't think I should have been inclined to accept the unsupported say so of anybody. I would rather rely on the record, considerations in the transfers. It is true that the property is often taxed at a figure different from its market value for different reasons. Whether I would value the real estate or land for the purpose of rate making in block 79 at a lower valuation than the city would value it for taxation and feel justified in such valuation,—I would say the value the city put on the land for taxation purposes wouldn't have anything to do with the value I should have, if I were valuing it for the purpose of a rate case, or for the purpose of sale. I think the property has only one
1493 value, but as to what some city official mi*ht*t put on or what the taxes might be that were exacted from the owner, is immaterial. It might be of some help if I knew in particular on

what basis he based it on. I have been in cities where the practise was to tax it for just about what it would sell for, when I became convinced of that fact and believe that the assessor knew what it would sell for I should consider that factor. In the Haverhill case, to a certain extent I depended on the taxation to justify my figures. I didn't even inquire about that here, I chose to go to the records. In Haverhill I knew the gentleman who acted as assessor and was acquainted with him and thought I understood his practice, I thought it corresponded with the selling price which I believed would be the criterion of value; that is the only reason because I thought his tax values represented fairly the selling price of the property,—it isn't the tax values, it is the selling values that have a bearing.

I can't distinguish between one with a property for gas making purposes and one with a property for purposes generally, I didn't in the company's case, I do in general. I say that a property, land, may have an entirely different value for gas making purposes or for farming purposes from its market value as land only; and you can have for it as high a value for use as an office building that you can not have for use as a gas plant any more than you can have for farming purposes, to my mind the cases are very clear on that point.

Whether the property only had one value whether for taxation or for other purposes,—I say it only has one value when the use is restricted, it only has one value the moment you put restrictions on its use and say it can only be used for gas purposes, or some other purpose, you may cut down the market value. If the company
1494 had to go out and acquire the property the seller would not reduce the price because of the purpose you were going to buy it for,—no well advised person would buy property for a gas plant for $1.00 per foot when he could get good property for a plant for 5 cents a foot. I am not saying that this property is any more valuable for different purposes than for gas purposes. I don't think it is, and I haven't put in the price any less. I think the market value as in the Haverhill case I allowed 15 cents which is the outside figure to be allowed for that land for gas purposes, although I think its value for general purposes,—its value in the market for gas plants,—is as high as $1.50 a foot. I think if the gas company was to seek to acquire that property from anybody else they would have to pay $1.50 per foot. It was worth the full market value as unrestricted, but you can't have the full value if the buildings are for gas purposes, as an office building you can, the two things are inconsistent.

Whether if I here that land could be sold by the company on the market for $1.50 a foot; and for rate making purposes why did I value it at 15 cents in the Haverhill case,—I would say just the land alone, yes, but I valued that land and the buildings for all I thought it could be sold for, the two together, I think that would be a fair valuation providing the sale by the company at $1.50 per foot didn't involve any compensation for the buildings, and I think that is supported in the Troy Manufacturing Company's case in

Massachusetts and in the Drummond Suffolk vs. Lowell I think that is what the court decided in those cases. You can't have the parts added together greater than the whole thing; the whole thing is the land with the buildings thereon that you are valuing. I didn't value the buildings on this real estate on the basis that they were worth just what they would be worth for gas making purposes and not other purposes; I valued the buildings on the basis of
1495 their cost of construction less depreciation, assuming that they were worth all they would cost less depreciation for gas making purposes, consequently they were worth just as much for gas making purposes as any purpose, I haven't any doubt but they were. I valued them not at what they cost but what I estimated their cost. I didn't take the actual cost as a basis and fix the depreciation from that, I used the estimated cost less depreciation.

With respect to the item of buildings I found a net construction cost on my exhibit "231" of my valuation for 1913 of $28,135.00, those figures include the booster house which I later threw out so $27,617.00 is the net construction cost of the buildings excluding the booster house and as compared to that the net construction cost of the company was $35,614.00 but the booster house should not be compared with anybody else's figures that do not include that. I included the booster house with a net construction cost of $518.00 in my $28,135.00. That is the booster house out at East Lincoln whether I threw out all of that equipment at East Lincoln the holder, buildings and all,—I say I left it just where it is, I didn't think it at all necessary used or useful in the conduct of the gas business.

In valuing these buildings, for the purpose of my computations I accepted the quantities of material shown to be in those buildings by Mr. Lea's report; I don't mean to say that I certified that they are there, I check them up to know that they are there, and I am not contending against their being there. I made no independent investigation myself as to the character of the materials represented in Mr. Lea's report to be in those buildings, as to the quantities I looked the buildings over with some care; I might not agree with every statement as to quality of material, I don't remember that I said very much about that; I should not want to say that I agreed
1496 with everything Mr. Lea said about the quality, but for the purpose of my valuation I have assumed the quantities stated and have based my valuation on those. Whether I had the exact dimensions of the buildings as given in Mr. Lea's report,—I simply assumed the quantities; I don't think I dealt with the matter further than to take them and assume them for the computation I made. On the four items of brick, concrete, excavation and stone I took a lower unit price than Mr. Lea; on all other items entering into the construction of the buildings outside of the four items mentioned I assumed to exist not only the quantities as reported by the company but the unit cost. It is not so with respect to the excavation that I assumed a flat price per cubic yard for excavation throughout the buildings, holders and trenches for gas mains, one unit price of 40 cents per cubic yard. I stated the unit cost in all buildings at the plant at 40 cents a yard. I did not state the excavation for the

holder at 40 cents a cubic yard. In those masonery tank holders down at the plant,—as to wherein I increased or decreased it in this record so far as the actual compu-ation of quantities for excavation I valued them,—by considering what one of another type would cost without such quantity of excavation. I didn't apply any unit price for the excavation in connection with the masonery tank holders; I valued them all at so much per thousand feet from my knowledge and the records of what holders of similar capacity cost elsewhere. I didn't leave the matter of excavation out so far as my consideration of the holder was concerned, but I left the matter of the quantity of excavation in those holders out of account insofar as to fail to apply any unit price, and those holders are worth what a modern type would cost less depreciation. As to whether I valued the excavation for buildings and trenches for gas mains and services at the one uniform price of 40 cents per cubic yard,—it is pretty
1497 near that for gas trenches it amounts technically to 40½ cents on the trenches. I don't think it cost much more to dig a hole for the buildings then on the street. I have had some experience in laying water or gas pipe in the town of Middleboro, Massachusetts, where I helped lay some for the city at one time; it was water pipe but it wasn't used for water pipe, it was for electric conduits; that was along in the late nineties '98 or '99. It wasn't a great deal, I don't believe half a mile. If I kept the cost of sinking the trenches there on that work I haven't them now and haven't had them for consideration on this job. I have taken into account my experience in laying that pipe here for the cost of digging these trenches only in the most general way; I have had a great deal of other experience. I had charge of that work. I had complete control of it. Those trenches were sunk by day labor, I am not able to testify now how much the cost per cubic yard was, and couldn't tell how it compared with these costs here. As to taking into account the dirt to be removed from the trenches in any particular time of the year,—I considered it would be removed when the ground wasn't particularly frozen there might be a scum of an inch or two in October or November I assume substantially no frost in the ground.

I have had the kind of experience I indicated yesterday in the construction of buildings where an excavation was necessary for a foundation or basement. I am going to testify right along that I have had experience. I have not had the responsibility of carrying on the work but I had a responsibility to my client of finding out the cost of the work, not a responsibility to the owner of the buildings. I have not had actual experience on the job of putting up a building. I never helped actually to put up a building; but I have had actual experience in a great many cases.

Whether there is any difference in the cost of removing dirt for trenches in Massachusetts from the cost here,—in some places
1498 in Massachusetts yes, other places no; there is a different rate in Massachusetts and we do differently there. Before you form any accurate idea you must know the local conditions, the kind of soil to be moved, and the conditions under which it is to be moved. As to whether it would cost any more to remove it out of an

18 inch trench than to remove it from a basement for a building, I should think the removal from the basement would be apt to be less, I give the benefit of the doubt to the company and have allowed it more down there, 40 cents is big. As to how much more it would be I haven't fixed on that but I am sure it is more, I haven't estimated how much more it is. It is a little easier to allow a figure that you know is above the actual cost of such work than to estimate the actual cost, if you want to get the precise cost it involves more careful figuring and some practical experience. I have had a good bit of practical experience.

Before I made the estimate of the cost of removing dirt from the basement for foundations of buildings I investigated the cost of removing the dirt for those State Farm buildings out there I think I have the contract and bill for that here, that wasn't the extent of my investigations, I have been investigating that for many years, I don't remember that I have any other figures in Lincoln for the removal of earth for foundations in Lincoln, but the other class of excavation I have my opinion that it is so near to that. I had information on the buildings as to the cost of digging the earth which gives information as to the cost to build a building that I got from your records and the city. I did not get from your records the cost of digging the dirt from the company's buildings but I had information as to the cost of digging earth here in Lincoln from various sources, city records and other sources; I got it from the city records and from the State Fair Grounds and my testimony that I based it on the cost of excavating the two concrete
1499 reservoirs that was only in part. I produced more than the cost of the excavation than the contract for water pipe at Dewitt. I don't remember whether I produced any figures that I got from the City Hall, I think I had the figures from the water department when I testified before, whether I disclosed that fact my testimony will show, I don't remember. That cost was far below the cost I put on the sinking of these trenches; the reason I didn't use it was because I hadn't finished my annalysis of the figures and I didn't care to go extensively into them until I had finished my annalysis of those figures. I am ready now to go into it; furthermore I knew about the cost the Lincoln company has paid for trenches in earlier years, I didn't disclose that, but I will before I get through. The company's records are a matter of record. As to just what experience here in Lincoln or information I based my estimate for 40 cents per cubic yard for excavation,—I say on the reservoir contracts which I considered and on the street grading contracts, I don't think I sited them, and on the excavations of the water department on digging trenches for water pipe, and on one or two contracts which I should have to look up, outside of the City of Lincoln for digging trenches for water pipe; also on some early records of the company's as to the cost paid for trenches, I didn't go very hard on them because the records were so far back; and I had the Meeker & Dobson contract for digging for water pipe in the village of Dewitt; the other contract I give I didn't sufficiently annalize so I didn't present it, I had one where a lot of water works

construction was involved. I didn't investigate to determine what it cost the Telephone Company to make excavations for conduits before I testified, I relied considerably on labor costs in recent years of the Lincoln Gas Company's plant in digging trenches and laying pipe. I am not willing now to accept their records as to the fair cost for digging those trenches for piece meal work and tie
1500 to that, there are other conditions, but they would throw a good bit of light on it. My figures are less than what the company says it costs them, that is shown by the company's records what it cost them and I also had in mind the company's witness Campen's testimony which was a less figure than mine for digging in frozen soil. I am not willing to accept Mr. Campen's figures and estimate, I made an estimate of my own. I would not say that Mr. Campen's estimate would be a fair estimate, I thought there were things about his estimate that were grossly unfair; his cost of trenching which he happened to segregate was pretty low, when he didn't have the ground frozen but he run it up when he assumed the ground would be frozen. I don't agree with the statement that he assumed a real and not an imaginery case of what it cost the company to put the pipe in the ground in any month of the year. I agree to the proposition that in the construction of a plant by wholesale you would avoid doing the construction work in the winter months, but if you were running a gas plant you might have to occasionally lay a length of pipe where it extended through frozen ground. Where the service required it they wouldn't wait until spring if they asked for the service and wanted gas, but I think it is the general practice, the extensive practice that such extensions are made when the ground is not frozen, it is very exceptional to put in any amount of main when the ground is frozen. I allowed for some services that may have to be constructed in frozen ground, I have the company's main records of the cost of its service the way it laid them. As to whether I accept that cost as a fair cost, I would say it is not quite as low as it would be when laid at wholesale but it did pretty well if you will notice by comparison of the company's own labor cost with mine.

1501 I did not inquire of any of the men living in this vicinity as to the cost of removing dirt from the trenches or basement before I made my estimate; I preferred to go to the figures and not to go around and ask people on the streets. I know that there were men engaged in the business here of moving dirt, and the company has had some of them in here to testify. I didn't seek that source of information because I didn't think it reliable. I made inquiry as to the labor cost at the time I was making my estimate, in this way, by looking into the records of what such things cost in very recent times, and I made inquiry outside of the records of labor costs by getting the scale for trenching for sewer pipe in this locality from the city engineer, Mr. Dobson. I got them months ago before I made my estimate. I had that information to act upon, I looked it over and annalized it a little, I didn't have any full annalysis of it. It showed the amount per section paid to the laborer who digs the hole, that was in sewer construction. The city only occasionally does their

work by day labor, more commonly by contract where the contractor would have to pay for the labor that enters into it as a whole. There is no item of labor as far as I recall in one of those sewer districts that I can get from the engineer's office, I didn't get it, but I got the ordinary scale paid to the contractor for that labor and it was such information that I could act upon in determining the labor cost in digging trenches. I didn't get it out of the sewer districts, I got it from Mr. Dobson, I talked with him about that and I talked with one or two contractors, namely, Mr. Dobson was one, the son of the city engineer, he was outside of the City Hall, and he was the man that had the water pipe contract at Dewitt, I talked with him about that contract for water pipe at Dewitt and I got his contract. As to what information I had about labor cost here I had gotten the regular scale
1502 per section. I have that scale here, it seems to me I put it in here, if I haven't I will. This annalysis handed me of the price paid laborers for digging trenches two feet wide for sewer in the City of Lincoln as compiled by Adna Dobson the city engineer, I thought this was offered as an exhibit if it hasn't been I will put it in. As to whether this shows the amount per day to the man working in these trenches, I will say I relied more on the cost of trenching determined in another way than by that. I should think somewhere around $1.75 a day would be about right for that, from what information I have, but I want to remark that it is not customary in Lincoln to do it by the job. I didn't disregard what it would cost per day, but I thought the other was more accurate and I relied more upon it. $1.75 a day is about what I had in mind I think, only I don't think it would be done that way. I didn't figure out how many cubic yards one man would move. I made an estimate of about the number of cubic yards he moved for $1.00 when he digs it by the section he gets $1.00 per section and he moves so many cubic yards or cubic feet for $1.00 per section. I could estimate how much a man could move per day if you didn't work me all the time day and night, I have no information on that now. I haven't any practical experience or engineering knowledge as how many cubic yards of dirt one man would move in a day in a trench, that is to speak the figure right off, I have the data that it could be figured on, I haven't figured it that way, but as long as he is willing to dig the trench for $1.00 a section and I know how many cubic yards there is that suits me.

I figured the brick alone just f. o. b. and not laid, that entered into the buildings at about $7.00 per thousand; figuring that the company would get the brick on the cars at its works from people that sell brick, I don't remember the names now. I didn't investi-
1503 gate any brick markets in this vicinity to see what the company would have to pay for the brick any further than the company's own bills. From them I ascertained their cost to be $6.75 and $7.00. I have in my record some of the bills that I investigated on which I based that. Here is some brick bills from the Lincoln Brick Works on page 34 of this folder, it is not an exhibit yet but I am going to put it in, I am going to put in a whole bunch of them, I haven't had a chance yet.

Referring to exhibit "420" these two bills are in the year 1907, and I have that in mind, that is when the gas ordinance went into effect. Those are not the only two bills that I have, I testified that I had a number of others. I heard Perry Hahn testify, the man who put up the buildings, it seems to me it was the fellow who hadn't any of his records, they were all lost. Asked whether I wouldn't accept his word because he didn't have the records, because I am strong on records,—I would say I tried to get the facts. I don't remember that I heard Perry Hahn testify that these bricks cost $7.50 per thousand. He didn't testify until after I made my estimate, and I wouldn't change my estimate even though informed of the exact cost of the brick in the buildings, because it wouldn't be crucial as to what the brick cost, the question as to what they would cost at the time of making this estimate I have plenty of evidence of what the brick cost. In exhibit "422" I have a bill for 13,000 brick purchased I think, by the gas company; in exhibit "420" there are 3 items of brick here, that one at the bottom is hollow stuff sold at brick measure, I claim ther there are several bills there, a number of them. Here on September 6 there is a bill for several quantities of brick and here a bill of May first and another one of May first. The one of September 6th wasn't a purchase it was a sale but that would be the same. Those are all bills of the Lincoln company as
1504 I understand it. In exhibit "421" there are two bills for brick, as to whether there are other bills I say there are bills in the record, I didn't copy them. I have no specific knowledge about how many of these bills there are, I know I saw other bills that run about the same as those in price. Two of these bills in exhibit "421" show a price of $7.25, and two or three of the other exhibits show $6.75, and two or three at a price of $7.00 and I took the price of $7.00 as a fair price. I don't know anything about the character of those brick, what they were bought for or what they were used for, any more than is revealed by the face of the bills, they are from the Yankee Hill Brick Company and the Lincoln Brick Company, and I understand they were standard makers of brick; I took it they were the ordinary class of building brick from all the circumstances of the case. As to whether these purchases of brick I have identified here were made with reference to some particular time when the company was putting up any building,—Dates between which work was going up by the company. As to whether between each case of putting up a building one year there might be 3 or 4 years before another, and whether those brick purchased by the company and at any date that I have given here when these buildings were put up,—I would say that I would have to inspect the bills, I think they correspond. I don't understand that these brick that went into the buildings were furnished by the contractor Mr. Hahn and not by the company I didn't understand any such thing; Mr. Hahn didn't testify until after I made my estimate and the company has my estimate. There is a good deal of doubt in my mind how that work was done; I don't understand now that the contractor who put up these buildings furnished the material and labor; I can't get anything out of Mr. Hahn as to the price of how the thing

was done. I don't remember that Mr. Hahn testified that he
1505 had to buy,—not common brick,—but brick of extra quality and extra hard brick to go into these building-, anyway it was after my estimate was made and whether I would change or would not change my estimate even though it was wrong,—is a sample of the kind of cross examination, and I will let it stand so. As to whether if I learned now that those were not common brick from the man who put up the buildings and that he paid $7.50 per M for the brick that went into the buildings, whether that would induce me to change my estimate of the character of the brick that went into the buildings and their cost,—I would say that whenever I obtain reliable information that I have made a mistake as to these buildings or any other property I will change it. So far I haven't obtained any information that would cause me to change it. I didn't inquire of the Yankee Hill Brick Company to know what their price for brick was during those years, I looked at their bills to this company. I didn't inquire from any other source, I don't think that is the way to do it. I didn't go to the office of any people in this vicinity who sell brick to ascertain the price I am not sure that I went to any contractor who put up buildings in this vicinity to learn what they had to pay for brick before I made my estimate, I think I did talk with one or two in a general way. I think one of the contractors I talked with was the contractor who testified for the city, my impression is I don't think that was until after I made my estimate I don't think I ever talked with any contractor except Mr. Assenmacher as to the price of brick. I didn't talk with any contractor specifically about the cost of putting up the buildings. I didn't seek any information from contractors in this community as to what it would cost to put up one of these buildings, except that I conferred with Mr. Assenmacher, one of the City's witnesses here; I conferred with him. I didn't go around and ask them what they could put up these buildings for or that they would charge so much per M for brick.
1506 I wouldn't regard the say so of various contractors that you might ask about the cost of putting up buildings as reliable information upon which to base an estimate. I should not think the cost of putting up buildings throughout the country and throughout the Commonwealth of Massachusetts was uniform. It varies in different localities, the cost of materials and labor cause the difference in price. You seek the ordinary information as to the cost of materials and labor in the locality where the work is to be done. I do not seek that from the people who manufacture the materials and sell them, I more commonly go to the records of actual sales, that is more reliable, and people are not in the business of giving out prices just for the fun of it; as to whether I should want some further verification, I should want the records of the sales to find out what people pay for those things when they want them. When I went to the bills they wouldn't disclose just what the character of the brick were or what class they were, they might say ordinary building brick. I don't think these bills that I produce disclose anything about the character of the brick, any more than a knowledge of the general sort of brick manufactured by these concerns. There is a variation in price be-

tween different classes of bricks, but I take it these bricks the company would buy were fair representatives of the bricks it was using on its buildings, I didn't suppose the company was dealing in bricks, I thought it bought them to use. I should call the brick in the purifying house a good grad- of common brick. I would expect a bill that would show the sale of common brick to be a bill for such a representative price as went into that building. There would be a difference in those brick if they were hard burnt selected brick and not common brick; when you come to add specifications you can and do run up the price. Common brick are not necessarily the
1507 cheapest brick you can buy, there are different grades and there is a difference in the price of different grades of common brick. As to whether a bill before me showing common brick I am able to determine which they are from the price,—I looked at the bills and the buildings and I thought they corresponded. I thought the brick in the purifying house were common brick, that was built a good many years ago in 1892. I think the brick in the generator house are very common brick, they are not the highest class of common brick. There may be a difference in the class of brick in one part of the country from another, I couldn't testify positively. There is a difference in brick in one part of the country from another, it varies quite a bit owing to the difference in the clay. I wouldn't say that very common brick in Massachusetts might be a very high grade brick in one of the plants here in Nebraska, classifying the brick as common and poor, I refer more to the way brick are made whereas I was asked about different qualities in different parts of the country; I refer more to the materials from which they are made. When I figured $7.00 per thousand for common brick or assumed that was the kind the company purchased for these buildings I assumed that was f. o. b. cars at the plant. As to whether I assumed that notwithstanding I had the bill before me that told that wasn't true,—I say I think at least a part of the bills support that conclusion. Part of them are 25 cents below what I estimated and part of them are 25 cents above furthermore these are small purchases, whereas I am figuring on the reproduction of the whole group of buildings. When I figured $7.00 per thousand and referred to these bills in these exhibits as to whether there was a switching charge where these brick were placed at the plant, I think there is a switching charge of 25 cents a thousand or possibly $3.00 a car; I think it amounts to about 25 cents a thousand. I looked at it and I thought that $7.00 per thousand on the basis of those bills,
1508 switching and all, was right and enough for brick bought at sufficient quantities to rebuild the plant; I didn't take the lowest or the highest price, both of these bills here have a moderate quantity but not at all sufficient to rebuild the company's plant. The bill referred to in exhibit "420" under date of May first 1907 for 15,000 brick the switching charges were $3.00 that would show a little more than 25 cents per thousand.

In exhibit "421" the bill for the brick is a separate item, there is an item for bricklayers and labor, which doesn't disclose the quantity of brick and labor. The item for brick is $7.25 and in addition

has the item for bricklayers and labor to be added to the percentage of $7.25 showing here the cost or percentage, where they were doing some work on a certain per cent of the cost; that is one thing that bothered me with Mr. Hahn's testimony, he couldn't make it square. This was in 1909 the thing that bothered me I didn't hear anything from him about percentage, yet I saw the percentage stated in a number of these bills. Aside from Mr. Assenmacher I had no information from any contractor here about the cost of putting up these buildings, only from the company's records and Mr. Assenmacher, and I don't wish to testify that I sought information from him, I made up my estimate on the buildings before I talked with Mr. Assenmacher about the matter, and I did not change it any after I talked to him, he confirmed my convictions, I didn't change my estimate any. I had it made up and saw no occasion to change it; he made me think that I was all right when I talked with him. I didn't participate at all in Mr. Assenmacher's estimate of the cost of these buildings and I wouldn't be able to say without checking it over whether that was a fair estimate. I don't recall at all what the total was according to his testimony. I figured the brick at $7.00 per thousand instead of any other price; I figured the brick
1509 all together by count, I assumed that Mr. Lea's report of the material was based on the actual number of brick there,—and I am not at all sure of that point, I have my doubts about that,—but I assumed that. I figured $15.00 per thousand for brick in the walls, $7.00 of which represented the cost of the brick itself f. o. b. cars and for enough to do the whole job. I figured the $8.00 for the other materials entering into the job and the labor cost of putting them into the walls.

I heard Mr. Davis' testimony, the architect, as to the prevailing price and unit cost of putting brick into buildings in this community. I did not seek any information from any architect in this city to determine what the unit costs were, and what the prevailing prices were in this community for putting brick in the walls, and lumber into the buildings and stone into the foundations. I don't regard that source of information as reliable as the source to which I refer. Gratuitous information handed out by strangers isn't particularly reliable or desirable. As long as the city procurred my services and has a good contractor here that would do without hiring an architect I didn't deem it was of sufficient importance and reliability to justify the city in securing the services of any architect to advise as to the cost of this stuff in these buildings. Asked as to the fact that the contractor who put up these buildings estimated the cost of these brick in the walls at something over $17.00 per thousand and Mr. Davis estimated the unit cost for putting these brick into the buildings at something over $17.00 per thousand and whether that would influence me at all in reaching a proper price,—I would say I don't assume to say what cost he testified to on brick. I don't purport to remember his testimony. As to assuming that the contractor who put up the buildings and paid for the materials, estimated the cost of the brick at more than $17.00

per thousand whether that would influence me at all in giv-
1510 ing my judgment as to the estimate of a fair cost, I would say he would have to remember more about what he paid for things, and how he got at his cost than he did the day he came here, before I would be much influenced by his estimate. It was immaterial where he bought the brick, he seemed to be good on the points I didn't want. I didn't inquire from the people from whom he bought the brick as to whether his statements were correct. I didn't go on any fool's errands. I took it at what it meant to me as the man gave it.

I think I put a price on the stone that went into these buildings, I estimated the stone that entered into these buildings per cubic yard at $7.00, just the same as the brick. I don't remember how much that would be a perch, I would have to look it up if you wanted it figured per perches, cubic feet or cubic yards is a more convenient figure. It would be perfectly possible to convert that $7.00 per cubic yard into so many perches, a perch is so many cubic feet I have forgotten the number. It depends on the measurer as to how a stone wall is measured whether by cubic yards or by the perch. If I were measuring it I should measure by the cubic yards or cubic feet. I don't remember and I don't thing I have here how much I figured the stone itself in cubic yards would cost; it is rough rubble stone and I could make an estimate. As to where I got my information upon which I based my estimate of that cost,—I think I had some information about the cost of rough stone and made up my total estimate of $7.00. I thought I had some of the costs of that rough stone here in Lincoln, I have forgotten for the moment where I got it but more likely from some bills I saw. I don't recall having gone to any place where they handle stone to inquire about the price. For such stone as there is down there I should not care where they acquired it, whether it was quarried in Nebraska or not.

I didn't take into account where it would be secured, I took
1511 into account what I thought such stone would be worth here in Lincoln. There is a goot bit of variation between the price of stone here and in Massachusetts. The only thing I have right here as to the cost of this stone per cubic yard is the information I have given in the estimate of $7.00 per yard for the rough rubble stone in those foundations. I should have to look up my notes to determine how much of that $7.00 I figured for labor in putting that stone in the wall, I estimated that a man could lay so many cubic feet, yards or perches, in 10 hours, whatever might be the practise here. I don't think I specifically based that on any information I secured in this community; I more likely based it on my idea that I found on looking up the different data that I had. As to talking with contractors about what it cost to put in stone,— as to the amount of stone a man will lay I didn't talk with any — before I made my estimate; I may have talked with Mr. Assenmacher afterwards, I don't remember specifically that I did that.

As to the source from which I got the amount of brick per thousand and cubic yards of stone in these buildings; I intended to take the quantities which Mr. Lea had used and thought I had.

With reference to the purifying house, and whether I have the net construction cost to be $12,577. as against Mr. Lea's $16,620., I would say you correctly quote the cost I found for construction, I don't remember Mr. Lea's figures. Concerning whether that is what I regard as the net construction cost,—that is a term I have avoided, being to me an inconvenient circumlocution; I regard that as what you would have to pay for material and labor to put up that building; and in addition to that I would add 7%; that 7% is not included in the $12,577. I have here the sum total of the purifying house, the total of which I applied the prices for excavation, stone foundation and brick. For the purpose of computation I
1512 accepted in that purifying house the amount conforming to the net construction cost that is shown in Mr. Lea's report, not only the quantities but the cost both. I also assumed the amount of covering in that building and the net cost of that was as reported by Mr. Lea. I also assumed the roof framing in that building was in the amount, as far as quantities was concerned and cost, to be the same as reported by Mr. Lea; I made that assumption on every item except excavation, stone and brick.

I didn't make and produce an estimate of the cost of framing and steel and corrigated iron in that building because I thought I could very profitably devote my time to other things; those were comparitively minor matters and I didn't think they were so far off from other things as some of these things were. It was required of me that I either accept the quantities he made or make some investigation myself. It isn't true that by simply taking the items of brick, stone, concrete and excavation you could without knowing anything about the buildings, and knowing the quantities make an estimate of those four items, bur when you get beyond that you would have to know something about the details of the buildings,—that isn't true. I could accept the quantities and put a price on them for the lumber or the steel just as well as for the brick and excavation, it don't involve any greater knowledge in one case than in the other. If you are going to estimate the cost of the other covering and the item of labor you would not have to know any more about the building and about how much labor would be required than you would for laying the brick. There is no hard and fast rule by which you could say that the word covering would be so much for labor. You couldn't make any hard and fast rule that the brick in the wall would be so much per thousand, there is different prices, different kinds of walls, etc,—take such construction as there in the
1513 University buildings, you couldn't expect to get these brick that the company got down there in the gas buildings. I have assumed all those quantities, for the purpose of my estimate, and accepted the price of Mr. Lea's for the roof other framing and steel, the wood covering with corrigated iron and tar felt in the roof, and the flooring of wood, concrete, steel and cast iron, all of the prices and quantities of those as found by Mr. Lea in his report I assume, I haven't accepted any, I don't certify that it is correct excepting to say that I assumed it. It isn't true at all to say that I accepted the material, quantities, labor and prices as reported by

Mr. Lea for the stairways, doors, window openings, carpenter work, gutters, down spouts, electric wiring, wood framing, covering, miscellaneous lumber, hardware and nails. I haven't given any estimate of the cost of those parts of the buildings myself, that I have said in substance, assuming what Mr. Lea said were in the detail at so much money, I haven't certified to it. I made no direct estimate of my own, before Mr. Lea testified and furnished his report, I looked at the estimate the company's men made in the United States Court and did a little thinking about that, but I didn't make any estimate of my own.

I treated all the other buildings, the generator house, retort house and all the other buildings in the same way that I treated the purifying house. I assumed for the purpose of this computation all the materials excepting the four items mentioned, and the price of the materials I didn't accept I assemed them for the purpose of this computation, I didn't think the prices were correct but I haven't gone into that. As to what makes me doubt that they are correct I have this information, in going over some of th-se unit prices for steel and excavation and those things I wasn't able to agree with Mr. Lea at all; I assumed that he followed about the same line
1514 through his work as I have in my work, so I wouldn't be able to agree on different details in those buildings. I made investigations as to the price of steel in this community. I read it in serveral contracts.

Referee: Do you think we had better go on with that sort of cross examination where there is no dispute; no cross examination on that can change the result, I might administer a rebuke to the witness otherwise it would be valueless. The plaintiff excepts.

(Witness continuing:) Whether on the items of works equipment I have the net construction cost $160,069.00 as against $218,358.00 in Mr. Lea's report,—I have the figures here for the works equipment $160,069.00, with what anybody else wants to show as a matter of evidence based on the same thing I am not concerned. That is the net construction cost of the works equipment per my cost with the items eliminated such as the East Lincoln holder. My figure $160,069.00 does not include the East Lincoln holder equipment. And as against that assuming that Mr. Lea gives his figure at $218,358.00; that is right, but his figures includes some items that mine didn't. My report would omit some things and his put in some things, but I think it is true that all items of property are entered. I did not in any way shape or form, apply any percentage of Mr. Lea's net construction cost in reducing that cost to the cost I gave as my net construction cost, I didn't derive my cost from him in any way. I did not consult his cost in arriving at my own except to form my list, I did take his quantities for foundation of the apparatus for concrete foundation, I did not take his price, I accepted his quantities or Mr. Brodnax's quantities, I accepted the quantities as shown in the testimony of the company for the excavation and foundation necessary to make them up.

1515 In a general way where I found the 6′ water gas set and the Springer set I took the two sets and found what a new set

with a capacity equal to those two would cost; and then depreciated that new set according to the ages of those two old sets and in that form and way I arrived at what I considered the labor and material cost of those two old water gas sets was. That doesn't include anything for anything of my 7% for overhead charges. That doesn't include the engineer in supervision of it on the part of the purchaser, it includes any supervision that the contractor would do, or have over his men in putting it up at the contract price; it does not include supervision on the part of the purchaser in looking out for his interest. As to whether I have had any actual experience in the purchase of any of this equipment which I have valued here,—I have repeatedly gotten quotations that I might have closed up if I wanted to buy. As to whether I got those quotations for the purpose of buying, I got quotations in connection with the Ypsilanti work and I thought we would buy at the time. Whether the prices for this equipment are uniform and remain about the same all the time,—I can't say that exactly the price for machinery such as is generally involved in such open market prices as you get on floor and steel rail, but are prices that may be known to anybody that takes the trouble to look it up. They run about the same within the period of years we are talking about, the tendency has been down a little; they wouldn't run the same between different purchasers, taka concern that makes water gas sets they will sell to one man two or three hundred dollars more than to another. Asked whether I know that from any actual experience in purchasing,—I have sold and made machiner- for years. I never sold any gas machinery, but the machinery market doesn't differ very much whether it is gas or electire machinery; machinery is sold at a little different price to different buyers according to the circumstances of the case.

1516 Whether I took that into account on this machinery, I didn't use the lowest price, I used what I thought was a fair price.

Baulen & Hargood, Isbell, Potter Co. of Newark, N. J., Western Gas & Construction Company, E. Little Brown in Boston with the works at Waltham; Bartlett, Hayward & Company of Baltimore, and Davis & Farnum Manufacturing Company are the princip-le manufacturers of gas equipment. In this western country the Western Gas & Construction Company, the Kerr Manufacturing Company, Stacey & Company of Cincinnati is an old house; and of course Sturdevants are making a good many gas blowers, they didn't use to be in that business. When it comes to benches the St. Louis people sell considerable of their goods. I can't say off hand whether I am lower than Mr. Lea in his net construction cost on all of the water gas equipment, it may be so. I can't either affirm or deny that all the blowers, exhausters and in fact all of the items, with the exception of possibly 3 or 4 items in the entire works equipment whether I am lower than Mr. Lea, I should not be surprised to learn that it is true since my total appears to be less. I should say that in the vast number of items which go to make up the works equipment there is only 2 or 3 items in which my valuation is not lower than Mr. Lea's, I should say that is possible, that is all the equipment that can be purchased or is purchased in the open market, and sold by such men as

Mr. Steinmuller who testified here; I think he represents the one concern that supplies in this western country more than any other concern engaged in the manufacture of gas equipment; they do supply a good deal of stock out here. If I were expecting to buy the appliances or were going to build a plant here I would expect to take the matter up with Mr. Steinmuller but I should expect to get better prices; he said he could better those prices if there was a chance to make a sale. I should have taken that into account if I had
1517 heard his testimony but I didn't hear that until after I had made my estimate, that was when the company was putting in its second case. I would expect to be able to get the better price, and am not at all sure that my prices are higher than his, I thought he gave some prices that were down not very far from my estimate. He gave the cost of the water gas set itself at $8,000.00. The particular water gas set in this plant purchased from the Western Gas & Construction Company which was sold by Mr. Steinmuller, and asked if I didn't make the cost at $7,506.00,—I would say that I don't assent to that that there was $500.00 difference for exactly the same thing between Mr. Steinmuller's and my figures; $8,000.00 might cover something else besides the water gas set that I had $7,500 on. He testified very fully on that but I don't assent to the proposition that if he did include anything else I wasn't able to discover it; I think on a comparison of his figures and mine you will find any such discrepancy. I should not — all hesitate to stay by my own judgment about the cost of that equipment in view of Mr. Steinmuller stating that the fair price of that water gas set was $8,000.00, and particularly in view of his company furnishing it; not at all by his figures because he was testifying just as I am. I know the selling price of quite a number of gas sets, and he probably knows more than I do; he said his price he gave here in evidence wasn't a hard and fast price but says it is a price that might be bettered under some circumstances. In estimating the fair reproduction cost of this plant I would have to assume in all of these items of equipment that I would have to pay the market price, but Mr. Steinmuller said if he was putting in the whole thing he would get less than his figures. Whether you could afford to spend the time going out and jewing him down,—I would say people who know you are going to put in a plant will be here if they think you have the money. I
1518 never built a gas plant but I have watched a good many. I have built other kinds of plants and sold other kinds of machinery and have been in the business a good many years. I have been devoting myself exclusively to engineering between 25 and 30 years, I began in 1885 and have been at it ever since. It has been in connection with a number of manufacturing plants, I have been the manager of the sales department and the engineer for plants manufacturing machinery and have been the manager and superintendent of public service plants, not the last 10 or 15 years it was all before that; I have devoted my time during the last 15 years to engineering matters, but I haven't forgotten everything I knew before. Of course, there is some information here, about the price of these things since I ceased to operate any property, in which there

has been some changes in conditions, equipment and price, but I keep in contact with it by watching the prices other people pay for this kind of stuff, I mention it if desired. I am 49 years old and 15 years off of that would bring me back to 34, it is more than 25, and I have gotten in the habit of saying 25 years but it is rising.

In my exhibit I have given what I estimate to be the life of various items of equipment in the plant, based upon my study of the life of gas equipment in a great many plants. The life of equipment in various gas plants varies somewhat in different cities; it is affected slightly by climatic conditions but in climates that I am familiar with it might make some difference; it might in the tropics or some particularly hard place the life would be shortened, but take the climate between here and Massachusetts, while I suppose there are some minor items I would think other factors would be apt to obviate any great difference. As a general proposition I should think so far as the mere physical capacity or physical existence and use was concerned the life of an equipment would be substantially the same here as in Massachusetts; various other factors have
1519 to be considered in figuring the useable life of a piece of equipment. I think the life of this plant should and would compare well enough with a good many plants in Massachusetts. The life of these various pieces will vary in Massachusetts, which I have proved in tracing out the life in Massachusetts. I see no reason why a water gas set purchased from the Western Gas & Construction Company, why the life of that equipment would vary in this plant from the same equipment being installed in a plant in Massachusetts. In giving my estimate of the life of this equipment I took into account elements excepting the decay and wearing out. I took into account the element of adaptation to the business and inadequacy; I thought on the whole the figures I assi*n*ged were as fair estimates as I could make as to the probable life of this equipment in this situation. I took into the account the element of obsoles-ence, although I didn't give that its full weight in all cases, for instance, the Springer set, I think that set is really depreciati*o*n beyond the point where I depreciated it; but I gave, as I did in giving the full value of the mains that lead into East Lincoln, I gave the company the benefit of the doubt, I am not anxious to cut it down to the last dollar. As to what other elements I took into account in estimating the life of the appliances in this plant,—I considered in the first place the capacity and the physical existence for use, which is decidedly greater than the actual useable life of a piece of equipment. Taking the water gas set I think to some extent a part of that estimated life is affected by the element of inadequacy. That 6′ 6″ water gas set is a standard unit of construction but there are plants where a 7′ 6″ wouldn't be useable at all, it would be too small. But dealing with this plant in estimating the life of that water gas set I didn't shorten its life by any considerable extent because of inadequacy, that was simply one of the factors that go to make up my judgment and figured in a minor way in making up that judgment; I
1520 certainly did not deduct from either one of those 7′ 6″ sets any specific sum on account of inadequacy. Leaving out the

Springer set and the other 6′ 6″ set and taking any other appliances, the scrubbers, exhausters or blowers, I don't think any specific measurable allowance or deduction for inadequacy went in anywhere else except these water gas sets,—apart from this consideration that in making up my mind as to about the fair life of these sets I necessarily have to refer to the lives of similar sets in a number of other plants and undoubtedly these lives were to some slight extent expressed in some particular instances to a large extent affected by inadequacy so that may be reflected in my judgment, but don't go in a direct way in those sets. I didn't deduct any specific sum in considering the distribution system where the gas mains would be too small to meet the demands of a particular portion of the city, as to any gas mains. I could not form any conclusion and give any division between inadequacy and obsolescence on account of the actual wearing out of the machine if any. I have given it at the life based as best I can. Whether I have an opinion at all affecting the division of those elements that enter into the life of equipment,—none that I can express by mathematics, by minute inquiry into the different pieces of apparatus I might get at the weight of those particular pieces, but their weight would vary. The general life of appliances in this plant as to some appliances would be the same as similar appliances in other plants but not all others because the life varies in different plants. I would not say that the estimated life of the gas holders down here would be the same as the estimate of the life at other places throughout the country, it is longer, take at Springfield, Ill. where I made an estimate, I estimated a shorter life, the conditions affecting the life of a gas holder in Springfield and not affecting the life here were that they are going to move their plant just as this company did a few years ago outside of the ele-
1521 ment of moving the plant the conditions are similar, I don't know as they would be absolutely the same. Whether there are any fixed estimate- by which engineers estimate the life of appliances of that kind,—the only way I know of is to take in the first place about the time that apparatus will last if given a chance to last, apart from decay and inadequacy and obsolescence and see how far those factors of inadequacy and obsolescence are going to come into play and see if they have affected it, as at Springfield. I don't think there are special conditions that affect the life of this equipment that are not present in most any gas plant. I would give the life of this equipment as I regard it, as the normal life in a great many places. I haven't been able to discover any uniform standard recognized by engineers as the normal life of equipment as found here, the engineers don't agree; it might be true that some engineer don't even agree with himself, a conscientious engineer sometimes changes his opinion, I should want to know all the facts before concluding the oftener he changes his opinion the greater the indication that he is consciensious.

I testified as to the life of equipment at Racine, Wisconsin and furnished a tabulation and stat-ment advising that commission that I had spend considerable time and had given the matter considerable thought before I reached a conclusion and at that time about 7 or

6 years ago when I reached that conclusion and I have been studying ever since. I would not testify that a brick building as well as appliances or anything would be uniform throughout the country, a great many fact- might affect it. I can't think of any reason why a good brick building in Racine, Wisconsin at the plant wouldn't be as long lived as a brick building at the plant here, on further study I might find some reason. I said that where I gave 1% annual depreciation I meant that that equipment had an assumed life of
1522 100 years. I don't know whether I estimated the life of the retort house and purifying house in the Racine case at 100 years, if I did I have since changed my opinion. I don't recall just when I changed it, but I haven't given that life for brick buildings in recent cases, for instance, the Haverhill and North Hampton cases. I don't recall what I gave as the estimated life of the gas holder at Racine. I don't remember whether it was 100 years or not. I got the information upon which I based or assumed the estimated life of the equipment at Racine mainly from plants in Massachusetts. At that time I had studied these reports and records for 6 or 7 years, not only the records but I had been to the holders and look them over at that time I thought from the information I had a gas holder had an estimated life of 100 years. I thought that was fair at the time to give it. I knew of data that tended to support that. I have since accumulated a good deal more data and concluded that that was too long. I might have done the public an injustice by not knowing what I was advising the commission. I wouldn't say the company but these are matters of estimate and we make the best estimate on the data we have.

I presume I estimated the life of the benches at Racine; I may have estimated that life at 50 years, I don't remember all the lives I gave. I know my opinion as to the life of gas equipment has changed since I testified in that case, possibly has changed on every item of equipment connected with a gas plant, I couldn't testify as to that. In assuming the life of this place and the figures assumed by me I have not given figures that gave me an easy computation. Asked whether I assumed a large amount of this equipment at 66.6 and a large portion at 33.3 and did it because in one case that is 1½% and the other case it is 3% depreciation and whether I did not to that for a mere mathematical convenience,—I say I did not, I did on the ¼ of a year for an easy mathematical computation. I didn't
1523 consider that my information was sufficiently accurate and precise to fixing positively as to the fraction of a year on depreciation so when I think it will last about 33 years I didn't hesitate to give the company the benefit of ¼ of a year and make it 33¼. If there are any engineers who can fix depreciation accurately I would like to here them talk.

When I got to Cedar Rapids it was in 1907 or 1908 and at that time I gave the court my opinion as to the estimated life of the buildings and equipment. I think my opinion at that time was that the lives was somewhat longer than I gave the court here, consequently the annual depreciation less that should be charged in the operating expenses. The result didn't count it was the fact I was seeking, I

only pointed out the consequences. I didn't point out the result whether it would be more or less in the operating expenses; I am not looking to be unfair in one case any more than the other, I am trying to find the truth. In Cedar Rapids I gave the buildings at 100 years in Racine at 80 years and at Lincoln to 66.6 years, which shows that it is consistent, what the reduction will be next time we can't tell until we get to the next case.

Possibly I estimated the life of the gas holder in Racine at 100 years; at Cedar Rapids 80 years and in this plant at 66.6 years.

And possibly the benches on which I estimated the life at 50 years in Racine, 40 years in Cedar Rapids and 33.3 years in Lincoln, possibly they were similar benches.

At Racine I think that all coal gas and that is my best recollection; that was 7 or 8 years ago and I am not sure; I know that they had coal gas there and it seems to me that is all they had.

The scrubbers and condensers at Racine I estimated 50
1524 years at Cedar Rapids 40 years and I estimated them at 40 years here too. I reduced their life 10 years between Racine and Cedar Rapids, my figures changed, whether that is more than one year between Racine and Cedar Rapids it might be computed in various ways. In this plant I have the scrubbers and condensers at 33.3, an easy computation, I rather think that is an oversight if I had it to do over again I think I should put all the scrubbers and condensers on the same plane; they will fairly last a little longer than the shells that contain the fire; I should think 40 years was all right, I thought I had it that here; that was my purpose and would be my judgment now and 33.3 as it appears here should have been 40 years.

As to wrought iron mains in Wisconsin I probably gave their life in Racine if they had any wrought iron mains; I think it is safe that my opinion as to that life has shortened somewhat since the Racine case. If I gave the life of the mains at Racine at 100 it seems incredible, I should not assent to that, that I thought wrought iron mains would last 100 years if I gave cast iron mains in the Racine tabulation at 200 years and wrought iron mains 100 I certainly have shortened on that now.

At Cedar Rapids I gave the life of wrought iron mains at 80 years so I came down 20 years there. Here in Lincoln I gave the life of cast iron mains at 50 years and I have given that in a number of other rate cases, the other figures are going back a number of years; I have changed my opinion as to the life of gas equipment; they were very angry in the Cedar Rapids case because I made it so long.

Whether at Cedar Rapids I gave the estimated life of the tools at 40 years and Lincoln 10 years.—I don't remember about Cedar
Rapids, 10 years here is all right I don't recall the estimated
1525 life of the tools at Cedar Rapids at 40 years. History and my own observation of these structures of different ages as I look at them is the tangible thing upon which I base my conclusion of the estimated life of these various items of equipment. The opinions of engineers vary from one case to another and it renders that source of information of very questionable value and very little used

by me; where I use the information of engineer, it is more particularly where they are reciting facts and giving opinions in engineering transactions. Whether the engineer in this case took into account the final result in the case we were seeking to obtain in fixing the life of the equipment I don't know, I can't say about others; I didn't have it in mind, and didn't have the slightest idea how it would affect the company. I know that the life I gave of this equipment materially affects the question of depreciation and the amount that should be taken out of the operating expenses to cover it, just as it affects the value of the materials. I know that the longer life you give the important items of equipment the less you are required to take out annually to cover depreciation, and the shorter the life the more. A change in the life of the equipment changes the amount that must be allowed for depreciation. I don't think that is an item of sufficient importance that there ought to be some fixed standard by which one engineer would use the same method and same result in all the cases he has testified in, I think he would be a very dangerous man to tie to any one result. I don't think he would be if he wasn't tied to the same result. I think it would be more dangerous if they didn't change it when they got additional information; I have to change mine constantly and have in the last 7 or 8 years.

When testifying at Cedar Rapids I had been a student of the Massachusetts reports for 7 or 8 years at the most; in that 7 or 8 years of study of the Massachusetts report I certainly acquired sufficient information to estimate the life of equipment to have some fixed opinion about it and have since then. I have obtained a great deal more information, from the Massachusetts reports and some other sources, and from the complete schedule that has to come in officially giving the life of almost all companies' equipment in the Commonwealth of Massachusetts which I have had access to and a copy of, which I didn't have when I testified to the life of other companies where I have given similar lives to that which I have given here. The conditions as to the lastings qualities of the apparatus were similar where I have given similar lives or I should not have done so.

1526

I appreciate that if I lengthen the life of this equipment it will reduce the company's operating expenses below what it has reported and below what I have allowed. I allowed so much for depreciation, I couldn't have allowed that if I had given this company the same life that I testified to in Cedar Rapids and Racine it would have been a less amount. If I had shortened the life here I realize that I would have to provide out of the earnings of the company a sufficient amount of money in returns to take and care for that equipment for the shorter period of time. It would require a higher rate to care for the equipment and the company would have to have more money for depreciation annually; and you would cut down the value of the existing plant correspondingly. I never testified that it is a matter wholly indifferent to me whether you make the life long or short as affecting the rate charged here for gas. All I have meant to say on that point is that if you change the rate of depreciation you change both the value of the property and the operating expenses;

you change them as regards the interest of the consumer, but in opposite directions so they tend to compensate. I never did say that they did compensate unless you take some suppositious case.
1527 When I fixed the life of the gas holder at 100 years at Racine that would mean that the consumers would have 100 years within which to accumulate sufficient out of the earnings to care for the cost of that gas holder; and when you shorten it to 50 years you would have to double the rate that the consumer would pay to take care of that holder, I have always figured it that way; I haven't made any mathematical gymnastics in that connection, but I have in making 33.3 to this 66.6 and 33.3 of those particular amounts.

I didn't make any inquiry in this city about the life of wrought iron pipe. If wrought iron pipe is used in the water department I don't know about it, I didn't inquire. Commonly they use cast iron for mains, sometimes steel and sometimes wrought iron for service. I inquired whether they used cast iron pipe in the water department. I didn't inquire as to the life of the cast iron pipe, and there wouldn't have been any particular use in making that inquiry; the best I could have done would have been to find the extent to which mains have been replaced during the short period they have been operating. You understand I have the record of the Massachusetts mains for almost 100 years in some gas plants. When I testified at Racine I had an opinion as to what the life of cast iron and wrought iron pipe was, which I have since concluded wasn't correct. Asked whether that was based on 100 years in Massachusetts I say I didn't have the knowledge of that 100 years the experience was there but it wasn't in my mind and not all of it in my possession. I didn't inquire of the water commissioner of the life of these cast iron pipes were here in the water department; I didn't think the information he could give me would compare in weight with the information I had. If I had inquired of him and he told me the life of cast iron pipe was somewhere between 10 and 20 years as to whether that would affect
1528 my judgment on that pipe I would say I would have thought something terrible was the matter, I should have tried to look up the matter to see why it only lasted 10 to 20 years. The question of alkali in the soil affects the pipe; gas don't injure the pipe, I can't put any limit on it as far as gas is concerned whether it would last forever or not. Electrolysis, sometimes the change in the requirements as to the size of the pipe caused by the shifting of the population makes it obsolescent, so before you could determine how long it should last in the ground you should know something about the character of the ground. It may be that in ground like the Salt Creek bottoms here you wouldn't expect it to last very long. In some soil the pipe wouldn't last any longer, I haven't seen any of it and the company hasn't got much of it there. I have examined the soil away from Salt Creek as well as I could. I can get some idea of the soil by looking at the pipe, this is good soil in Lincoln as to the pipe to the best of my information. Asked whether if I wanted accurate information on that I could get it from the University Agricultural Department where they have a man whose business it is to test soil,—I would say that so many burdens have fallen on me that I

didn't get around to the University but I am going to if the case is kept going long enough. I have put in a good many records of actual cost into this case, actual facts aside from opinions; the question of the life of pipe is an opinion and will still be an opinion if I get up to the Experiment Station of the University and found their test of the soil; I don't claim that I have exhausted the situation at all.

As to when I testified in the Cedar Rapids case I am not sure of the year, my impression is it was about 1907 but I am not going to tie to that date. I think I testified in the Racine, Wisconsin
1529 case within a year of the other date whether in 1909 I can't say as to that but I will endeavor to look up the record.

My recollection is that the Racine case preceeded the Cedar Rapids case but I am not going to tie to that until I look it up.

My attention being called to the following question "In these various places where you say you appeared as an expert Watertown, Salem, Cedar Rapids, and Fall River, were those contested matters," it would appear from that question that Cedar Rapids preceeded Racine but I would have said the other way.

My attention being called to what I did in Racine in the way of examining the property and to my testimony that I had spent perhaps not more than two or three hours looking over the company's property with the superintendent and that that was the length of time I spent in making that examination, if I made that statement it was correct but it was not such an examination as I would make if I was going to value it by any means. Upon that examination before that commission my testimony was not wholly a matter of criticism of the operating expenses and values of the property furnished by the company. I had the schedule of that property, it was made a part of my opinion. And the statement that I didn't spend more than two or three *house* at that property before I was ready to testify as to the value of the property is an entirely mistaken stat-ment; it took me a number of days before I was ready to give any testimony but there was no use of my standing there at the plant and looking at the equipment.

I have no recollection that I based my valuation and undertook to justify it by being informed of the total amount of gas the plant manufactured in the year, and found out how many consumers on what the company valued its property, and found from the
1530 valuation return of the company of its property and the amount of gas it sold and delivered would be $6.00 a thousand,—I certainly never anywhere used that as an entirely precise basis of determining value I may have suggested to someone at some time in connection with that case or elsewhere that so many dollars per thousand was a common amount to find in gas plants. I did not value that property in that way. I want to be understood all along about what I testified to at Racine and Cedar Rapids I am not assenting to any specific years of life that counsel suggested; I have answered the question freely but I don't assent to any such thing. If I testified in the Racine case I have taken the figures I find in that report that 155,972,000 feet of gas were sold December 31, 1907, I have taken the figures $936,010.00 being the totals as exhibited and

showed the number of items 1 to 12; I have taken that total and divided by the thousand feet of gas sold and I find it gives the $6.00 according to my arithmetic and my best judgment is, considering the way the City of Racine lays, the best judgment I can give of it that is certainly an excessively large figure to do the gas lighting in the City of Racine $6.00 per thousand annual sold." I would testify the same way now. I took that valuation of $936,010.00 and criticised it upon the basis that that would give them $6.00 per M feet of gas sold annually, and that was an excessive amount for that valuation. I said I thought that $6.00 per M was an excessive amount and I guess they agreed with that by what they did. They agreed with me generally and reduced the price of gas and cut off some equipment used for outside services.

Asked if that is a short cut to a valuation of a gas plant,—I will say I didn't value the plant in that way, if anybody chooses to do so they may. I have very recently heard the ex-president of the Gas Light Association of American used it and some Commissions use it,
I consider its use a very short cut. You can give a line on
1531 whether it is up or down but I have never used it as a means of an accurate valuation.

In connection with that statement of $6.00 per thousand feet being an excessive amount for Racine whether I didn't make this statement: "Now as I said at the start I haven't been asked to and haven't attempted to value this property," I don't remember whether I made that statement or not. I made the division by finding the number of thousand feet of gas and took the valuation the company gave of its own property and divided it and said that resulted in $6.00 per M feet annually, and I said I thought that was too large per M feet of gas in Racine that wasn't a valuation of that plant and didn't purport to be.

Taking the dist*irub*tion system in Lincoln I found the cost of labor and material entering into the distribution system corresponding with the net cost as found by Mr. Lea, and I found the amount to be $324,659.00, but I am not at all sure that that includes the service governors; if that doesn't include the service governors I wouldn't add as much as $18,000.00 for them, I would add what I thought they were worth. What the item is I would say they would be worth I would have to look up I haven't the exhibit here. As against that item perhaps Mr. Lea has the net construction cost of $529,736.00 I haven't *the* it before me.

The amount of the gas mains, that is the length of them, and the size of the gas mains I have taken as corrected by the company's own witnesses. Whether also as corrected by Mr. Lea in his report, I didn't see the corrections in his report; I don't understand that the figures I used are found in Mr. Lea's report, if they are I didn't see them. The corrections were made by the company's if that document called a report was filed. I don't deny that the corrections were made by the company, but I said I took the company's corrected figures. I am glad the company discovered the errors
1532 itself. Here is a schedule of mains that I used. The combined amount or total feet of 1¼ and 1½ inch is 2,258; the

total feet of the 2 inch 315,708; the 3 inch 406; 4 inch 94,274; 6 inch 25,873; 8 inch 4,568; 10 inch 9,810; 12 inch 3,613; 16 inch 1,269; 20 inch 1,472. If Mr. Lea finds and reports in his report the exact figures I have given for the size and length I should say that I assumed his figures because I did assume the figures in the company's correc- statement. Whether the difference between my valuation and Mr. Lea's is the difference in cost, because we agree on the size and extent of the mains,—I should say we don't agree at all on the size of the mains, we agree on the diameter but Mr. Lea thinks they are heavy pipe and I think they are light. I have assumed the length stated, so the difference between us finally is one of size and cost, the size affects the cost because you buy it by the ton and the size as to the weight and thickness of pipe I am talking about. The weight is only material as it affects the cost. I haven't sufficiently annalized Mr. Lea's report so that I may testify about it, and as to whether the difference o. $200,000. in the distribution system lies only in the matter of cost I didn't testify to it on direct and I don't propose to now in the way of an annalysis. When I come to the distribution system and taking the 4 inch pipe I presume I do reach a different result on the cost and value of that pipe in place of that found by Mr. Lea, I don't have Mr. Lea's figures in mind, I have mine.

I don't recall in the trench that was to be dug for the 4 inch pipe whether I made a narrower trench than Mr. Lea; I can tell the width of my trench; for the 4 inch pipe my trench was 18 inches in width; if the width of the trench used by Mr. Lea was 22 inches he used it too wide. In the width of the trenches I referred to in the water commissioners' office upon which I assumed to compute
1533 the amount of cubic feet of earth removed in the laying of the water mains and being asked if that was 24 inches I reply 18 just as much as 24 and the schedule I figured out yesterday was 18 and 24 inches; it contained both figures and was figured out both ways, that was for deeper trenches in the case of the water works. As to the proposition whether I took an 18 inch trench for 4 inch pipe as against a 22 inch ditch as assumed by Mr. Lea,—I am not testifying what he assumed. I did not make any inquiry at the gas office or the foreman in charge of the work of putting in gas mains to ascertain from him whether it was an 18 inch, 22 inch or 24 inch, trench but I measured at least one gas trench, I am not sure whether I talked with the superintendent of construction or not. If I did I have forgotten what he said. Whether he would be the party who knew from actual experience,—I was too — when I laid the rule across the trench. That was in one of the earlier days I was here, before the company found out I was such a bad fellow. Where it was you can't find out because the witness don't know where it was nor when it was except it was in the early part of the time of my being here, I can't — the date or where. I haven't found anything in the gas company's records that show anything about the width of the trenches. I haven't found whether there are any general specifications or directions issued by them to their foreman in the laying of these mains. I think I did talk with Mr. Backster the superintend-

ent of construction about the width of the trenches, but that is indefinite in my mind and I don't remember it. Whether I would rely on it,—it would be worthy of considerable consideration. I am sure I made inquiry of Mr. Backster about the depth of these trenches. I would not have to get my information as to the depth of the trenches from the man who put them down I could measure them as I did. I measured the depth of them and I found them to be about the depth I have allowed 3 inches over the pipe. I measured
1534 one ditch and found the width and depth and it had 2 inch pipe in it. It was not upon that one that I based the width and depth of the trenches of this distribution system, that was only one element; I talked with Mr. Backster and with a number of other people, and with the water works people. The impression from all the information I could collect was that the depth of the trenches that I have shown was the proper width and depth and was a suitable width and depth. I haven't made the trench narrower or shallower, I don't know what the company made it, I had a great struggle to find out from Mr. Lea what his trenches were, if it is in the record I don't know it. I don't know that the specific information with reference to the width and depth was in the record and always has been. If I had known that I certainly would not have acted upon that information as I found it was a mere estimate of Mr. Lea's, as the testimony of these figures were already in the company's records. When the company presents to me their statement of the width and depth of these ditches whether I would accept that for anything,—I would say a statement out of the company's records I should accept for all I thought it was worth, and give it a good deal of consideration; but when a man goes and makes an estimate about a plant and testifies that all is stuff that didn't come from the records at all I don't deny and don't look to see what they show, they may be right and I may be wrong but I am not bound by it. Mr. Backster told me what they have in feet and I paid more attention to that. Mr. Backster didn't say that these trenches were 22 inches wide. If Mr. Backster does say that these trenches are 3 feet 6 inches deep for 4 inch pipe there is no telling what I will do about accepting that unless the company gets him here. I had information acquired through different sources, except this trench I examined and what Mr. Backster told me also the city engineer and the water
1535 people, and I have gone to see these trenches and also one or two contractors; I inquired of the contractor about these trenches I didn't inquire at the same time about the cost of putting up buildings some contractors don't do that work, I happened to strike a contractor that I though- would tell the truth, that was young Mr. Dobson. I won't attempt to tell what he said but as a result of a series of talks this fairly represents the width of trenches in Lincoln. If I am mistaken in the depth and width of trenches if they were wider and deeper but I am satisfied that this is ample, I have seen considerable water pipe and it don't change it any bu any gas or water or whether those lighter pipe that this company claims went into it. I took their written reports. I think it is close to 17 pounds per foot for 4 inch pipe. Because the company went down

to the plant and weighed the 4 inch pipe and drew my attention to the actual weight of the pipe in use and found it to be over 19 pounds to the foot, during the time that this testimony was being taken I don't consider that a criterion of what had been laid 25 years when the company's records *records* belie that. I claim there is a record of the gas company that will support my claim that the 4 inch pipe only weighs 17 pounds. I don't claim that the company's records show 17 pounds to the foot but I claim its records support that; that is exhibit # "212." I didn't say that the record of the company was that the company's 4 inch pipe weighs 17 pounds to the foot; I said the records of the company support it, I didn't say I got it from the records theoretically. I will refer to the records that tend to show that the 4 inch pipe of the company weighed 17 pounds to the foot. I have a lot here of the company's vouchers showing the shipments of pipe but have not assembled any back of 1901 because I couldn't find any and they said they didn't have any. I assembled all I found vouchers for showing the character of the purchases; and the weight is shown on those
1536 vouchers in every instance, and the weight, and price per ton and size is shown on the vouchers in every instance. I assembled an exhibit in the same connection with those vouchers showing the cost the company paid through many long years back for 4 inch pipe and all other sizes. That exhibit is known as "212"; my recollection is that in that I included all of the purchases as shown in exhibit "210" and the method I followed was to take the vouchers and showing the weight and size of pipe and reduce that to the weight per foot and then shows the cost of that pipe per ton in exhibit "212"; I think I got everything in exhibit "210" and also into exhibit "212" and the result of the purchase of the 4 inch pipe as shown by all of the vouchers included in exhibit "210" and showed by the weights I found per foot was that the 4 inch pipe weighed 18.8 pounds per foot as against over 20 pounds assumed by the company's report; and as against 17 pounds that I assumed; and that only goes back to 1901, back of which the weight was lighter in earlier years.

Those weights shown in exhibit "210" are not only shown in the vouchers of the company but I got this purchase in 1892 of 93.7 pounds for 16 inch pipe out of one of the company's ledgers, and there is a lot more that I couldn't find the vouchers for; you take in the cost of pipe there are some purchases that I couldn't find any vouchers for back of 1901, but I have purchases in exhibit "212" away back to 1876 but that don't show any weight except light weight. The voucher dated January 17, 1913 and the pipe shown to have been purchased there *in* looks like one of the weights I have in exhibit "210", it looks like it, but there seems to be a variation of one pound in the total weight but I should think that was the item; 175 pieces of 4 inch pipe weighing 39,487 pounds the voucher says 39,488 pounds there is one pound difference. The vouchers also shows 200 pieces of 4 inch pipe weighing 44,838 pounds and these average weights are only 18 pounds and a fraction, the latest
1537 purchases of pipe. When I assembled the cost from these vouchers I don't know whether I included the price per ton,

I intended to. I haven't any purchases here for 1912. This voucher I used for the purpose of getting the weight I would say that I did not use the highest price per ton for that pipe found in the records of the company, it don't come anywhere near being the highest price there are totals higher, that price is $31.55 for 175 pieces. I don't know whether I assembled in this exhibit all the vouchers except the one I used in the weights, I intended to get the same vouchers I used in the same tabulation but I didn't get any vouchers in this tabulation of prices after 1912 whether I included the vouchers of 1909 showing the cost price of $30.00 per ton on the vouchers I used for weight,—will say that I intended to get them all in, I hope I did. In 1910 I intended to use the price per ton varying from $27.55 to $30.00 per ton from all the vouchers I used to get the weights in exhibit "210". And in 1911 I intended to do the same excepting the price was $29.00. And in 1912 I used the same to get the price of $29.55 that I used to get the weight. Whether on the vouchers following that which I used to get the weight shown in price of $30.55 per ton and that I didn't include,—I would say that table was made up later than this price table. I made up that table of weights after I made up the table with a copy of the bills showing the price per ton which I run down to the year 1912 and stopped and didn't go into the year 1913; when I made up the later tables showing the weights and deductions, I appeared to have got in a couple. I took whatever I had and rejected nothing that I had when I made up the respective tabulation. Whether there is more than one voucher for 1913 than the one shown in exhibit "210",—that will show the same date, that may be on the same voucher, they are two

1538 different bills and that is what I went by, I didn't pay any attention to the company's various office bills; I got hold of both and put them into this weight tabulation. I didn't put in the cost but I have contrary to statements made several cost of pipes in this tabulation that are decidedly above that $31.00, but they are back of 1909. I think the item of cost os $31.55 per ton is more per ton than I allowed in my estimate of cost; I should not consider a small purchase of various priced pipe that you made here in Lincoln would be as low as if contracted for in one transaction. When I found these bills of weight the reason I used the 17 pounds instead of the 18.8 pounds, in the first place I got from an investigation of the records of various companies that the gas pipe used ran lighter prior to 1900 than since. The 4 inch pipe we are talking about particularly was made regularly for many years by one manufacturer down as late as 1901 at 15½ pounds, and that is R. D. Wood & Co. Whether I have been advised that they don't furnish any pipe out in this country I will say I know they do furnish it. I have used Kent's Pocketbook and found the weight of pipe in that a good many years. Asked if it wasn't Kent's Pocketbook that told me the weights was 17 pounds per foot,—I know as stated, as a general rule in the earlier years prior to 1900 gas pipe was lighter than since then, The American Gas Light Association in 1898, the then authority or association representing gas interests advised that 17⅓ pounds for 4 inch cast iron gas pipe and R. D. Wood & Company made it

15.5 pounds down as late as 1901, and before that; and the Addyston Pipe Company advertised it at 17 pounds in their standard list which is represented in Kent's Pocketbook and the Addyston Company was one of the combination of companies, as shown by me in exhibit "217", that I assume made pipe of about the same weight, they were working together in a business way; and it is in brief my main reason for thinking that 17 pounds, taking the entire record
1539 of the company was enough for 4 inch pipe. The American Gas Light Association in 1898 recommended that the weight be 17⅓ pounds, but Kent's Pocketbook fixed it at 17 pounds a difference of .33 of one pound, so back in 1898 at least I think it might have been lighter than 17 pounds. One maker,—R. D. Wood & Company, one of the oldest in the country,—I never heard of them making 4 inch pipe for gas purposes greater than 15 pounds. I had access to the company's records and know pretty well from whom they purchased their pipe because I have given it here in exhibit "212". I don't think I found anywhere in the records any purchases of pipe from R. D. Wood & Co. I didn't examine the company's records in Des Moines to find out where they bought their pipe. I know that R. D. Wood & Co. do sell pipe in this country, I just looked up a lot of their records of selling stuff up in Wisconsin. Whether they ever sold the Lincoln Gas Company,—I will say that I can't get the record back of 1900 because the company's vouchers had all disappeared. Of the company's vouchers that I did get of them of the purchases of pipe back of 1901 I don't think one is purchased from R. D. Wood & Co. And in one of them showing pipe as light as 4 inches, I entered it in my exhibit, but on the contrary for other sizes they show even lighter. The idea is this the weights of different sizes run together.

At this point the referee admonished the witness to eliminate unnecessary discussion and answer the questions.

(Witness continuing:) I have shown here the weights for the 6 inch pipe based upon these vouchers running back to 1901. The average weight for the 6 inch pipe was 31.4 pounds, but the average I mean the average of the purchases on which I could determine the weight, it is four purchases here. I took the average on all I had data to get the average with. I intended to add the weights
1540 of all the purchases I could together, and all the lengths and divide the total weight by the total length so you would get an absolute average of the total amount of the pipe. That average was 31.4 pounds and the average I took was 30 pounds. I haven't a transaction on 10 inch pipe in 1910 which I got from the company's records; which weight is more than I assigned for the 10 inch pipe. I got a voucher for 12 inch pipe and found the weight 70.4 pounds, and I assigned 70 pounds or .4 of a pound less. Asked whether in all the pipe where I found vouchers showing the weight if the pipe as shown by the vouchers weighed more per foot than I assigned in my report of the weight per foot,—I say that isn't true, all the records I found was 396 feet of 16 inch pipe; I found that in the ledger; the company had no voucher at all for that. The ledger the weight — 37130 pounds. Outside of that one purchase in 1892 of

16 inch pipe all of the rest of the pipe is shown on vouchers of the company and by trifling amounts weight more per foot than the amount I say this company has in its distribution system per foot, I am speaking on the average; I don't say the company's hasn't any pipe heavier but I think that is a fair average to allow them. The fact that the company has 4 inch pipe in its store which weighs more per foot than 17 pounds, influenced me in determining whether 17 pounds was the right weight, because if they are using heavier now than before that raises the average; I think the company is laying heavier pipe than it used to. The weight of the pipe is not so much as the cost, in exceptional matters it is only important as going to the cost of the pipe. It would affect the life of it a little whether it was 17 pounds or 19 pounds to the foot but I should not change on that basis; my knowledge isn't accurate enought so that I could give
1541 the different life for 17 pounds or 19 pound pipe. The weight has something to do with the cost of pipe, it figures through into the cost because the pipe is sold at so much per ton. A ton is 2,000 pounds it used to be 2,240 pounds, now it is commonly 2,000 pounds but in older years it was sold at the longer tonnage. The price per ton of the 3 inch cast iron pipe I used $30.00. And for the 4 inch I used $28.00 as against $32.00 used by Mr. Lea; for the 6 inch and larger I used $26.00 as against $31.00 by Mr. Lea and for the 8 inch I used $26.00 and like on all the larger sizes I used it all at $26.00. I say there may be $2.00 difference a ton between the 3 and 4 inch cast iron pipe, I have seen them sold at the same price per ton, the practise differs in that there was only a little 3 inch and I allowed a good big price for it not because it was a small amount did I think it would affect the material result, that isn't it; it is a fact that the 3 inch size is very little used, is more difficult to get car load prices on it you can rely on for 3 inch pipe unless you are taking an absolute bid; I haven't as many prices on the 3 inch as on the larger size. Whether the price of pipe per ton in 1902 was more than in 1912, I can't say that without looking up my records. I have one purchase of pipe in 1902, that wouldn't necessarily represent the whole year, but taking that one purchase in June it shows the price of $33.60 per ton. I wouldn't take that as about what the company would have to pay for pipe in 1902 in large quantities. All I took it for is that the company had some pipe that they did buy in June of that year for $33.60 per ton, for that pipe in my estimate I allowed $28.00.

In 1903 as shown by the records of the company I have just one record given on March 26, 1903 where they bought 4 inch pipe at $36.60, that is all I got for the year; for the purchase of that pipe I have allowed the company $28.00 per ton, notwithstanding the fact
1542 that they paid $36.60 per ton for that pipe back in 1903; I am not valuing the property as of 1903. In 1905 I find the company purchased as shown by my exhibit "212" 4 inch pipe at $30.60 per ton on one purchase that I have, and I allowed as of January 1, 1913 for the purchase of that pipe $28.00 per ton, notwithstanding that the company paid $30.60 for it as of that date in 1905 in 1913 I allowed $28.00.

In 1906 I have three purchases of 6 inch pipe showing $32.35 per ton for a small amount, and as against that I think my allowance was $26.00; I am estimating the cost of reproducing such pipe January 1, 1913. Asked in estimating the cost of reproducing such pipe as of January 1, 1913 why I don't take the bill of the company for purchase of pipe under date of January 17, 1913,—I will say in the first place I have no knowledge of the time I ever saw that bill, in the second place I should not consider that one transaction a criterion to go by in the purpose of enough pipe to replace this great gas system. Whether I find there a purchase of more than $1,000.00 worth of pipe under January 17, 1913, I didn't see the date of the second voucher I assumed they are the same date, they are the same price per ton and the two amount to figures just over 1,000. I absolutely do not think that the purchase of $1,000.00 worth of pipe January 17, 1913 would be a fair criterion of what that would cost when bought in quantities necessary to reproduce this system. Mr. Lea estimated the value of 4 inch pipe at $32.00 and this bill shows that 4 inch pipe cost $31.55 January 17, 1913, I just testified to that. In this cost of $30.00 $28.00 and $26.00 per ton for this pipe I figured for drayage or storage down at the company's work or at the station; that would include switching charges because I think the company from whom you purchase will set the pipe at the gas works, any pipe in large quantities; ordinarily purchases f. o. b. Lincoln wouldn't include switching charges, it would be in the yards of the
1543 railroad company. For these costs that I give about pipe I assume that I am going to build a plant within one year and buy all of this pipe for its construction in a period of one year; it is under those conditions that I put the value on this pipe at $30.00,—$28.00—and $26.00 per ton. And in the digging of the trenches, whether I assumed that the work is to go ahead as one piece of work it is reasonable to say that you would go ahead as fast as you can with all the force at your command desirable to have to carry it along to completion. But a substantial percentage I think in a situation of that kind you can do the work a little more cheaply than you could do as the company is required to do. Commonly called the valuation I am seeking to get at by my method of computation is the reproduction cost of this plant, by that I mean the building of a plant like this one. That is by taking it all as one job you could get your materials cheaper, do the work cheaper and build it cheaper than the company built it in the course of its business. And the whole proposition of that is to get the one item of reproduction cost so called. That is not the value you expect to get of the matter of determining what the company should be entitled to here in the way of return these things all being old have shrunk some. I think the per cent value of this property is the value that must be determined for the purpose of fixing the rate, that is one way of getting at it but not necessary, it is one of the elements that the court will necessarily need. The evidence of the reproduction cost is only offe-d by me as just a step in the direction of guiding the court as to what the present value of the plant would be; that is all it is. I deny the proposition that the per cent value of this plant is more than the reproduction

cost because the plant can be built as one contract and the supplies purchased as one purchase. If I were to answer this I will
1544 say that I am not supposing necessarily that you let your entire contract of buildings and mains and works to the same party, I merely say that you can go about the matter at the same time and carry it ahead; I understand the company's original works to have been built in just that way. This is a small works, and I think you can go right ahead. Whether I would assume that the present value is what you could reproduce that for under one contract, I would say you might let it under a half a dozen, I didn't limit the mains to one party. If the company was required to pay $31.55 for gas pipe as per this voucher under date of January 17, 1913 I say it is not of that value for a rate making case, because you could buy a large amount of pipe at a less cost than $31.55 hence in valuing that pipe it is certainly not worth $31.55 notwithstanding they paid that for it. That is my idea of value for rate making purposes, or for purposes of a transfer here of this property to sell, nobody would give the company that, and that isn't this property based on that price per ton for pipe.

Joining materials, incidentals and specials in addition to the pipe for the laying of these mains which enter into the construction of the 4 inch gas mains. Under the heading of specials I have included the drips, valves although that might be questionable on a strict construction of the language whether the term specials might include it, that is what I mean to include, the special pieces of cast iron. All of the regular specials, drips and valves would be included under the heading I denominated as specials. The regular specials are quite a number known as crosses, T's, L's and reducers. Reducers are special castings for mains, by which you change from one size of pipe to another, then the drip pots are not uniformly included under the term of specials. The valves I include in the specials are the valves of the gas system, used to shut off one part of the system from another, the large valves of the mains at different points,
1545 there are a few in gas mains, and a good many more in water mains. The T's and L's are used where there would be a change in direction or the crossing of pipe,—suppose you are running out O Street and want to run out 14th Street,—you would put in a cross. On the small 2 inch steel or wrought iron mains you use some specials; they are in some cases where you run off a service, you generally get a special when you run off the lead gas mains; you commonly tap your service right into the main. My specials only refer to specials in connection with the main, the estimate does not refer to any pieces of material used in the service pipe, that is covered in the service pipe *ti* includes the specials connected with the service where you have a 2 inch wrought iron pipe, it is intended to include too that to be cut into the main system itself. In addition to those specials referred to I also include under the same heading drip pots and valves and have added to what would ordinarily be required as specials and valves at least the drip pots, I think they can fairly go under the heading of specials. Drip pots are for the purpose of getting the condensation out of the system, various vapors are

condensed into liquids and they will give trouble and stop up the mains and you have to have drop pots to catch that. There is no uniform rule of determinging by the number of miles of mains per drip pots. You determine the number of drip pots by getting a record of what it has been in a system, by making a fair estimate based on other systems. The companies commonly keep a record of drip pots and their location. I haven't seen the record of this company, it seems to me there is a reference to it in Mr. Lea's testimony that he stated he got it from some record. I didn't assume a specific number from Mr. Lea's report to be in the system, I added a percentage which I thought was a sufficient number. As to how frequently in
the course of construction of a mile of mains a drip pot would
1546 be necessary, that all depends on the changes in the elevation of the pipe profile, you want all your gas pipe to slant one way or the other towards the drip pot so you may have you- condensation run towards the drip pot; you want your main to lay flat or sag down to a low point unless you put it at the point, I can't give any uniform rule, I don't think there is any. There couldn't be any such rule, you would have to take the local conditions whether it is a flat or hilly town. I don't think there is a rule as to how far ordinarily they could go without putting in drop pots, if there is I don't know it. There isn't any such thing as the smallest per cent of pipe that you could use, you might adopt some small percentage of grade, but you couldn't lay down any fas- rule. It is not absolutely necessary to be on some grade, you might lay the pipe on the level, but the moment your liquid begins to accumulate you would have to make a fall towards a drip pot one way or the other. That wouldn't be desirable nor it wouldn't be the best construction. I don't think there is any regular practise in the grading per length of pipe. I don't know that it is 3/16 of an inch drop in a length of 12 foot pipe, it might be that in a good many cases. I don't think there is any hard and fast rule about it. To assume that the engineers for the gas company had determined that the minimum of 3/16 of an inch in a distance of 12 feet where you could have to put in a drip pot in that main, you would reach a point where you are getting too deep in the ground, so you would put in a drip pot to bring up your pipe and start on an upward run or you would be getting too deep in the ground. I think you could go more than a block in actual practice without putting in a drip pot. I don't know how far you could go on 3/16 of an inch, counsel said that I didn't. There are
differences in the character and construction of these drip
1547 pots, you may have a regular cast iron pipe or have a little pipe siphon. I don't know where the drip pots are located in this system. I didn't know that there was a pipe running out from the mains to the curb and the drip pot is below the curb with a pipe leading up. If that was the situation that might be a slightly different item of cost than on some other plants, but it would be a very minuet item compared with the entire cost of the pipe itself. It would involve the construction of a pipe from the main to the curb and an excavation for the drip pot and a pipe from the drip pot to the curb and a casing for that and a cover I should think. Where

drip pots are in connection with a main in the street the means employed to get to the drip pot is to have a pipe from the drip pot covered up so they can unscrew it out in the street with a casing leading down to it. I have just testified that I hadn't in mind whether those casings are used in the street over the main or over the curb, but the 3% for specials allowed is ample to cover their cost in either event, that is 3% of the weight of the cast iron pipe. These pots regularly are somewhat greater in diameter than the main, in the shape of a cast iron pot; as to how much they will hold in gallons I should have to look that up, that would enter into the percentage of the specials but the point is I know about what percentage these specials amount to. My putting it in as 3% and Mr. Lea as 4½% for specials whether I think I should increase my percentage,—I should say where a thing is a matter of estimate and not a matter of actual enumeration it is impossible to estimate it as to minute amounts, but the value is so small that any variation though very slight runs into dollars; I wouldn't want to be so egotistical as to say my estimat- covered the precise amount, I think it is a fair estimate, but not as accurate as if any size, number and location was scheduled out, some statements are less, but I think that is a fair estimate. I
1548 have used sometimes 3% and sometimes 4% I have never used more than that and I think I have never used less than 3%. If anybody convinced me that it would be 4% I should not quarrel with them, it wouldn't make but a small difference in the valuation. These specials are sold by the pound, in general cost just about double what the pipe cost. In fixing the percentage of specials I did not take that into account in the cost of the pipe; I figured up these specials on other systems bought as to the relative weight and relative cost of pipe; and relative weight will be always about half as much as the cost because they cost twice as much a pound. When I took $30.00 a ton for pipe that covers nothing but the bare length of pipe, and I took 3% and added it to the pipe for specials, the $30.00 don't cover the specials, drips and valves. Being asked whether 3% of the bar cost of that pipe did not represent the cost of the specials because they cost more per pound than the pipe,—I will admit the statement that they cost double but don't admit the conclusion that 3% don't cover it. I finally got the cost per foot of pipe and specials by adding 3% of the cost of the pipe to the other costs, I think that 3% of the cost of the pipe would include the cost of the specials. I didn't say that 3% of the weight of the pipe is represented in specials; I said the percentage of the weight would be about only half the percentage of the cost, it wouldn't weigh that if the valves were included as I have don- here. In addition to the specials I add the joining materials, incidental materials, and a little fuel for hot lead that you occasionally put in a joint, that is here in exhibit "238". That is for the materials delivered here, I do not add anything for storage as a segregated item, I have given what I think would be the cost of the materials and the drips. I meant that $28.00 for the 4 inch pipe in connection with the cost of delivery I allowed would be the cost at the trench. I allowed nothing
1549 specifically for storage. My allowance per ton or per foot for hauling the pipe and specials to the trenches is not segre-

gated for the hauling apart from the other labor it is in that item of carting and laying which on the 4 inch pipe amounts to 3.4 cents per foot. The hauling of the pipe and specials out to the trench is in one item and is so shown here in my estimate; I didn't make any separate item of the hauling. I don't know whether I ascertained from the water department what it cost per ton of pipe to haul it from the point where delivered on the cars to the trench, if I did it was certainly after I made this estimate; I don't know that I did. I have in mind various figures of what it cost to haul the pipe from the station to a point where it was delivered to the trench, you take 50 cents a ton is a very good figure on a good big job, sometimes they haul it for less and sometimes more than that; 50 cents a ton on big jobs and on always up to a mile or so. Taking the ordinary job such as take place here and the ordinary hauling I think 50 cents a ton here for this work taken as a whole as one job the contract to haul all this pipe and specials. I would not say if the city in hauling its water pipe paid about $1.00 per ton for hauling it to the trenches was a fair estimate of the cost of gas pipe unless they paid it for the construction of a large main system like the gas pipe system here; if they paid that on the ordinary laying of pipe from year to year that wouldn't be a fair criterion, if they paid it on a few jobs it would be worse. It would cost considerably more if the pipe was hauled at different times than if it was *than if it was* hauled as one job, the hauling of a pile of pipe, it is greater if it was hauled piece meal than if the man made a contract to haul pipe, or if the party putting in the pipe by the day made an arrangement
1550 to haul that much pipe in the course of the pipe season. I don't think it would be fair to allow the company what it cost because it hauled it out in small lots, because it isn't my idea of a reconstruction cost.

I don't pretend to decide between the two propositions. One made up of the investment cost less depreciation, the other taking what it would cost now to reproduce the whole thing less depreciation, it may be that is the proper basis, but it isn't for me to decide. I am asked to give one price and I have given it. I haven't given what it cost to have this work done, that comes in an analysis of the compan-s construction account. I don't segregate the item of the hauling, I include that with laying the pipe. I can't tell, I never have apportioned to the laying of the pipe, I could make up a detail having that apportioned to one or the other. I could arrive at the total in one way by giving the cost of doing that work in a lot of other jobs that I thought was similar; jobs that I watched to a greater or less extent and annalized the case and doing it like this case here in Lincoln. I claim to have something in the way of records that show the cost of carting and laying pipe per foot under the classifications I have here, it shows that in connection with other cases of carting laying and the entire labor connected with the job. Carting as a separate item isn't in the company's gas reports, I have forgotten whether it is in the main work orders or not, if it is I haven't cast it up and segregated it; I have taken the entire labor cost which I presented. I did not base my carting

and laying upon the company's record of what the cost was per — only in the sense that I have compared and checked it up with the company's cost, that being somewhat greater than I have allowed; I don't think the cost on a wholesale construction should have to be the same as on piecemeal. On some of those I thought you should not be allowed what it actually cost the company, on other
1551 things that have appreciated the company ought to be allowed what they are now worth, either taking all things at what they did cost I *and* deduct*ing* the depreciation or taking all things at what they would cost now and deducting the depreciation.

When I take all things that have cost as of January first 1913 I wouldn't object to taking what the pipe cost on that date in the quantities required I am not going to take piecemeal quantities or $1000.00 worth of pipe. I haven't taken quite the same equipment the company has if I were going to estimate on the reproduction of the plant and located in the same place it is and determine the cost of reproduction. I varied some in the matter of the holders, I got at the value of the company's holders by seeing what a fellow would have to pay for a more modern type of holder, but in the main I have taken the equipment the company has now and measured the new cost of the equipment with it in order to get at the value it has now, in a few instances I valued it by considering what a different thing of equivalent capacity and efficiency would cost. Whether the reproduction of property means the reproduction of the same property, I would say that I am arriving at and stating to the court for its benefit what I think the value of this property is now. This thing called reproduction is but a step in arriving at the value of an antiquated piece of machinery I don't think you are obliged to reject, or allow you to assume that anybody now would be so foolish if he wanted such a thing, as to have to have an antiquated piece of machinery or structure reproduced in kind, he would get something for his use and purpose that was its equivalent. That antiquated machinery wouldn't help out any on the reproduction of the mains, I haven't assumed that of the mains.
I assumed and have taken the cost of what I believed to
1552 be such mains as the company has on the average; I think its weight of pipe varies, and I have struck on what I think would be a fair weight. In determining the reproduction cost of mains I would figure on what it cost to buy the pipe now at wholesale. I wouldn't necessarily put it where it is now. The view I take of the main situation, is that some of the company's mains lay where well-advised persons wouldn't lay them, they wouldn't dig through all of that pavement where they could dig through soft soil, and I have done for a means of arriving at the value what a person would give for it who would like to lay some of these in different places from where they are now. I say that is the reproduction of mains, of similar capacity or adapted to perform the same work. I don't say that the mains are in the same place, I specifically advised that I would put them somewhere else; and think that as a matter of reason, you are too reason that it would be placed somewhere else;. The value of the thing that exists, where

it is, takes into account what could be done to get something else to do the same work. I am trying to arrive at the value, and value means what someone may give for it or an equivalent thing to do the same work.

1553 It is an absurd question to state that if the gas company was engaged simply in furnishing light for illuminating purposes and I was trying to get its equivalent and could get it through the construction of an electric light plant that I would construct that and offer it as a substitute for the gas plant,—I would not try to substitute an electric plant as an equivalent for gas for use.

I included something in the labor item of laying the pipe per foot for calking but I haven't segregated that. I put down the labor and material cost of pipe per foot and I could segregate it by reference to my data into the different items of laying the pipe, carting, putting in cement and lead to make joints, etc., but I haven't it here now, I consider it entirely unnecessary to make any such segregation. I have seen such samples of segregation, and have made them myself. Whether there is any fixed rule by which they set apart any fixed amount per foot for laying and carting pipe,—I should not think any well-advised engineer would set pipe that way, you couldn't lay 16-inch pipe for the same amount as 4-inch.

As to what amount I figured per foot in Haverhill for the 4-inch pipe I have that figure at the hotel and will have to bring it in the morning. The cost per foot ordinarily increases as the size of the pipe increases, sometimes I have added some small cost per foot to make it uniform, like I have know- specials to be estimated per foot; it is a rule of thumb, it isn't accurate; it may be accurate enough for total but not for pipe of different sizes. A part of my joining materials and incidentals the cost per foot for them I cover in miscellaneous items, in joining materials you have a little lead and considerable hemp and considerable cement, and in addition to that a few additional materials, such as fuel, little pieces of lumber for soft places in the ground that may be needed.

1554 I based my estimate upon what I have found these mains cost in different places, that aided by such an*n*alysis as I am able to make of those costs. I haven't the lead and hemp items separate from other things, I figured most of those pipes laid with cement joints; by taking ½ cent a foot from the figure I here show for joining materials and incidentals you will have remaining my figure for lead, hemp and cement. The total figure for joining materials for 4-inch pipe is .88 cents per foot and taking out ½ cent it leaves .38 cents per foot for the cost of hemp and cement you would use in making joints, plus a small percentage of joints which I figured would be laid with lead, it is sometimes desirable at intervals to put in a lead joint. I haven't separated here the amount for lead joints as to cost and labor, I don't think on the whole this system has lead joints, it is largely laid with cement joints. Concerning the source of my information that this system was largely laid with cement joints, I made some inquiry and found that they were laid largely with cement and I thought that

was a fair assumption that it was laid with some amount of lead and a reasonable amount of cement. I don't recall whether I made any inquiry of the gas company whether these joints were lead or cement. The gas company's officials haven't shown any disposition in this case to give me any information as to the facts. Concerning whether it is a fact that these joints were practically all lead throughout the system,—I would say it would be an unfortunate thing that the gas company would get a costly thing where a less costly would do just as well. I regard cement joints cheaper and just as good and because generally used in gas business. I assume they are generally used here. It has been my experience in the operation of gas plants that they are generally used; I don't mean to exclude all lead joints, I allowed for a fraction here being laid with lead joints my experience is that a greater number of
1555 cement joints are used instead of lead joints.

In the matter of services if I am right in my computation my valuation includes 8546 services laid from the main to the meter, and 124 stub services. I have now forgotten whether I got the number 8546 services from Mr. Lea, or from the company's reports on the number of services laid year by year, I certainly got some from the gas reports but I have made an allowance in the first year,—1902,—for the additional services claimed by the company's testimony, if not I would have to look that up. Mr. Lea has 8201 as against my 8546 services that would look as though I went by the gas reports as I understood them to be; I have 124 stub services as against 114 by Mr. Lea and it would be my opinion that I got this data from the company's records; I know I got the services laid year by year and as to the total number if it doesn't agree with his number I think probably I got them from the company's records.

I think I have a computation in my valuation showing the number of house services under paving and the number which are not under paving; I haven't that here but I have set down here as the services under paving that is, to be laid under paving in the event of building a plant like this one 3550, that is a mere estimate. I haven't determined from the records of the company just the number of house services under paving. Assuming that Mr. Lea shows in his report 3069 house services under paving and my estimate is based on 3550 and assuming Mr. Lea shows 114 stub services under paving would make 3183 house and stub services under paving as per Mr. Lea as against which I estimate 3550, mine is an estimate assuming the service to be pro rata distributed along the main.

The net construction cost of services laid in unpaved streets as shown by myself is $69,453.00 for house services and $486.00 for stub services, making a total of $69,939.00. I haven't Mr.
1556 Lea's figures before me but possibly the item of $111,689.00 is his item for house services and stub services in unpaved streets. Mr. Lea's report and my valuation appears to be the same namely, $486.00 for stub services; I didn't take his valuation but reached the same valuation, the way my valuation on stub services shows in exhibits "247" and "248" where I give the items. There may be a difference of at least $42,000, practically in the item of

house services and stub services between Mr. Lea's valuation and my valuation but I haven't his figures before me.

With respect to the house services I assume the length of the average service was 50 feet and very likely Mr. Lea assumed the length of the average service to be 73 feet and I think the difference between 73 and 50 feet very largely accounts for the difference in valuation between Mr. Lea and myself on that item, I think that is a very large part of that item. I got my data — which I based my assumption that the house service- were of the average length of 50 feet by considering the width of the city streets in Lincoln, on consideration of that width I concluded that 50 feet was a fair average figure to take for the part of the service that lies between the main and the property line, and then in connection with that I notice in the company's gas reports it appears to be charging the consumers for a large portion of the service pipe on the average, and I concluded it was fair to allow the company for the part that lies in the public streets. That is the only part I intended to allow the company for in arriving at my 50 feet, I thought that was fully enough*t* and I assumed the company owned 50 feet. I assumed that the average width of the streets from lot line to lot line is not to exceed 100 feet on the average, I assume that taking all of the company's services in the city. I didn't assume that the width of the average street from lot line to lot line in this city was
1557 100 feet. I deny that if the average width of the streets in the city were 120 feet from lot line to lot line that that portion of house services that lie in the street would average 60 feet. I would have to know that the company's services were pro rata in the streets of this width and that the services are equally distributed between the wide and narrow streets. As to how I determined upon that 50 feet would be the average service, I determined that by learning the fact that some of the streets are substantially less than 100 feet, some over run it, and some are 100 feet and I thought on the whole that 50 feet for the service pipe was a fair average to assume for the portion of the pipe laying in the public streets.

Concerning whether the records of the company show that for many years the services from the main to the meter was paid for by the company,—I will say that I think the records show a great variation. Some years the company pays for most of the cost of the service. In other years the greater portion of that cost being charged against the property owners. I don't think that the records do show that for many years this company paid the entire expense for that service from the main to the meter. I think the rule was that for many years the consumer had to pay it; I learned that in some years the company did pay for the greater part of the service. I took into account what the company had paid on these services during the time it paid the expense from the main to the meter, but I couldn't base a mathematical computation on it. This record about the cost of services only runs back to 1903. On the question of the length I took into account I thought as near as I could make up my mind from the fragmentary and partial extent of the
1558 records on that point, that by allowing 100 feet as the average width of street, that would be giving the company all that

was coming to them if it was assumed that they paid for all the services in the public streets. I don't think they paid for all the services in the public streets at all times. I think the record was that the consumer paid for a portion of the service beyond his lot line. I have this computation here in exhibits "206" and "207" showing the cost and amounts paid by consumers in total beginning with 1903 and ending with 1912 which I took out of the company's gas reports. Exhibit "206" or "207" shows a less cost per service paid by the company than the amount I have allowed for in the services for 50 feet that I have allowed them for. In exhibit "207" I have compared from the records of the company the total cost of the service pipe since 1903. As to the number of house services for years prior to 1903 I concluded that 2911 was the proper number to use prior to 1903 that added to what was put in since and including 1903 would be the total I have allowed, except there might have been some discontinuances, something of that kind, it would approximate that. In 1903 the number I used was 2911. I haven't assembled any data with respect to those house service-, I think there is some statement in the company's corporate records about that, but I haven't been able to assemble any data. For the year 1903 my exhibit "207" shows the total cost of services to be $9060.73 and of that amount the consumer was charged with $81.23 for 1904, and I think this shows all services house and stub, it is headed total cost services, for 1904 this item was $7,956.36; and for
1559 that year $81.91 out of that amount was paid by the consumer; 1905 the total cost of services was $8,528.05; and of that amount $490.75 was paid by the consumer. Whether for those three years that is a fair indication that the company was paying for the cost of construction of house services,—I would say in those year- that was the great bulk of them, services of all kinds. That wouldn't indicate in face of some of the entries of the corporate records, that for 1902 probably the same proportion of the total cost of services was borne by the company as shown in 1903. The information was not available to my so that I could have compiled it back of the year 1903 just as well as for 1903, that is the extent of the information I had of the cost of the services, else I would have gone right back with it.

In the matter of placing the mains out in the park way in order to reduce the reproduction cost I don't think I would experience any difficulty in these house services in such construction, I thought that over and I didn't see any difficulty about it. Whether I said 41% of the mains are under paved streets I haven't purported to change part of the services under paving, exhibit "243" shows that. I haven't assumed to change the percentage of services that lie under paving at all, it is only the percentages of the mains. In the reproduction of this property at the cost I have indicated 20% of the 1¼, 2 and 3 inch mains and 32½% of the 4 inch mains I have assumed as the percentage of the total mains now under paving that would have to be put under paving if you were going to reconstruct another plant.

The statement is wrong in saying that I would put 80% of the

4, 3, 2 and 1¼ inch mains now under paving out in the park way. I wouldn't necessarily put them all in the park way. I have information that I am going to introduce to the effect that there is a very large amount of unpaved *allies* parallel with paved
1560 streets and I still reserve the choice to use the *allies* or park way. I wouldn't necessarily reproduce these mains in the streets where they are now. I wouldn't necessarily take them out from where they are now simply to avoid the expense of paving, there is no particular reason for laying them where they are now, in a great many cases the paving is a narrow strip 30 feet wide in the midst of a 100 foot street with more than 30 feet on either side, that strip varies. Whether the principle reason for wanting to take it out from under paving is to avoid the cost of paving,—I would say there is no particular reason for laying it in any particular place, and where it is a costly thing lookin*t* at it from the standpoint of cost and value, I would take the cheaper place to put it, and I picked out the park way and the *allies*. I have decided definitely about the *allies*, I hadn't been able to get the length but I have it now, I had my eye on the *allies* ever since I have been looking around the city.

Whether in distributing this 80% of the 1½, 2 and 3 inch mains and the 67½% of the 4 inch mains in some other place than now to avoid the cost of paving I would go back of the *the* curb line into the park way,—I would just take it to the curb line, the actual location you would occupy would vary some with the location of the trees, if I went into the park way at all, I might lay to some extent in the all*ies*. On some of the park ways in the streets of Lincoln there are a great many trees and shrubbery. Escaping gas from gas mains is kind of hurtful to the trees. I had heard in a general way that the company had paid some damages to somebody caused by the escaping gas from gas mains killing trees, but I haven't followed that up or made any compilation of it. I would think if the work was properly done there might be a little additional risk assumed by moving the gas mains back from the streets. In the construction I am not
1561 figuring on putting in more than one gas main in the streets where you move the gas mains back into the park way; I don't find two gas mains in a street very much there is only one service needed to put these under paving. Whether I would experience any difficulty, if I moved the mains back into the park way, in carrying the service across under the paved street to bring it on the other side to put it into a house for service.—I thought some of that problem before I suggested the location, and the reason of that was I thought there might be some difficulty in choosing a new location I had to think of those problem- that might be involved but I have concluded it would work out. In many cases the park ways are not graded to the level of the pavement; in many cases that portion of the street which lies between the curb and the lot line is several feet higher than the paved street. You have to *to* go deep enough in the park way to get below the pavement with your gas mains but I don't agree with the statement that you would have to sink your gas main 4 feet in the park way before you got to the top of the pave-

ment, unless you had a park way that came up like a vertical wall, which you haven't got here, it slopes gradually from the curb and that would allow the main just inside of the curb, that is where your 4 feet goes. If you run your main from the service to the curb the proposition is you would slope your service from the main up to the premises, to each consumer just as you do now. Asked whether he would slope it from the main to the curb to get under the paving,—I would say no, you would slope it all the way from the main to the house on either side of the street. In such construction whether you brought the gas main down to the bottom of the pavement on either side of the street. Asked if you would have to cross under that pavement on a level I say no, I would cross with a rise towards the
1562 service of the house to which it was going. I figured on having the main low enough so that the service can slope upward from the main to the houses on both sides but that don't involve putting it any deeper in the ground than now. I didn't figure out what grade or slope I would be justified in carrying a service across the street, say from the east side to the west side of the street, assuming that the street runs north and south; I should more conveniently allow several inches of a drop of the service under the paving which is only about 30 feet wide. As to how far it would be from the main to where the service would enter the house on the opposite side of the street,—if you take a 100 foot street and lay your main just inside of the street on one side is run to the house on the other side you would have 60 odd feet to get to the lot line and then you would have whatever distance the basement of the building was inside of the lot line, in addition to that 60 odd feet, you would have a very long service on one side and a very short service on the other side but the average service would not be changed any. Whether I know of any gas plant where such an attempt at construction has been made, I understand that a few of this company's mains here are in the park way, more than 10 miles of the water mains are there, I put in an exhibit showing a good many miles of water mains. I understand it is in the company's testimony and from some of its maps that the company has a few gas mains in the park way now. I don't understand that the company put in two mains, one on each side of the street. I don't think it would have to. What the company may have done I don't know, but I don't think that is necessary at all. I think this extra depth for the cross mains is imaginative. Asked if the park way was 5 feet above the pavement whether the extra depth is all imaginative when we talk about a main 5 feet deep,—I take it that the park ways in the great majority of instances slopes gradually up from the curb. If counsel says they don't you have lived
1563 longer here in Lincoln than I have, but where they don't slope up gradually I would say that isn't a good place to lay your mains in the park way.

Asked to draw a diagram showing just how I would put the mains back in the park and extend the service across the street under the paving and construct a service into the house on the opposite side of the street,—I would say that I am not going to draw anything to be reproduced; I don't care to make a drawing and wouldn't do it in

the record unless I have a chance to make it properly. The statement that where you have taken a main out from under the pavement and put it back in the park way, whether I understand that in all such cases the park way is above the top of the pavement,—I deny that, it is above the side but not at the center, the center of the pavement is about on the line with the top of the curb or park way, substantially on a level with the top of the curb. (Witness here produces a paper) That represents in a rough way the situation as to the cross section of the street, I am not a very skillful draftsman, I have exaggerated the relative width of the pavement, ordinarily it is only ⅓ the width of the street it is supposed to have it cut right down through the street. In the diagram I have drawn I have assumed that the park way is level with the top of the curb. My attention being called to exhibit "260", I notice that it is substantially the same level right next to the curb, I should lay the main right below that in the park way inside the curb, the city has miles of water pipe laid in that same way. I would not lay it right up against the curb, but in a line substantially beneath it, the curb don't go down as far as it would go, it only goes down a little below the bottom of the pavement. My idea is right near the curb, near the vertical plane of the inside of the curb. I don't understand that if the city graded the portion of the park way and bring it down to grade that

1564 I would have the benefit of having that point graded, the park way is substantially the same level as the curb without any grading; the park way is the distance between the curb and lot line that is the place where the side walks are. In this city the park way or side walk space isn't brought to a level with the pavement, in the edge of it, but touching the curb is substantially the same level in most cases; there are a few cases where you have a vertical wall running up, I wouldn't put a main in there, but there is no such illustration as in that picture, there isn't more than 1/10 of foot difference in the level of the curb and the park way next to the curb, otherwise the earth would fall over into the street. By doing that I think I could get the proper level for the pipe across under the paving and get it out on the other side and into the house on the opposite side of the street I wouldn't suggest having any jog in the service pipe, I don't think it would be the sound and practicable way to do it, if I couldn't run my service across without putting in a drip pipe I wouldn't do it at all. You could run a service pipe that would carry an elbow in it where the ends were higher than the elbow where the elevation is up. You can run that service pipe all right. I don't see any necessity for making a joint like that with the end up to get a pocket, before you would have anything up in front of it, you can't get the liquid to stand in it if it slopes. But if it came down to the house on this side of the street (indicating) and across the street you would have to have a drip pot. You must have your gas main low enough here (indicating) so you can come across the street and have the pipe all the while slope towards the main. That is what I said at the very start, I didn't suggest anything that didn't involve a slop- of the service pipe towards the main. If the main isn't deep enough

in the ground to carry that pipe across into the paving with-
1565 out a slope up I wouldn't risk it, I would either dig the main deeper or wouldn't lay it in the park way. If I dug it deeper that would involve an additional expense. I would lay out a plan for the ditsribution system where I would have to have drip pots in the service but that is a different proposition putting drips in the large pipes used for mains,—as compared to putting them in the 1¼ inch pipe for service.

Being asked to give the cost I assigned to repaving over the mains that would be laid on the reproduction purpose and asked to assume that the net construction cost of the paving over wrought iron mains as shown by Mr. Lea's report is $57,448.00 and the net construtcion cost for paving over cast iron mains is $53,917.00 making a total of $111,365.00 that Mr. Lea figures as the cost of paving over mains. My net construction cost of the paving over all mains wrought and cast iron is $34,518.00 or a difference on the item of paving over mains of $76,847.00 assuming that counsel has correctly stated Mr. Lea's amount. I suggested the construction of a plant of the same capacity and size as this one but laying the same mains in the park way. And that by doing so I would save $76,847 assuming Mr. Lea's figures to be as stated; I assume that it would cost $34,508.00 to cut and relay the necessary amount of paving over mains that I would suggest as installing to take the place of the present mains. Mr. Lea's figure for paving may be somewhat greater than mine that ought to be allowed for whatever it is, I think I have guarded myself against that by assuming the cost of paving to be as represented by my cost of paving $34,508.00 if our unit cost per square yard were a little different that would make a difference. My unit cost per square foot is 25 cents for cutting the paving and putting it back; I took that as a figure to be applied to all kinds of paving indiscriminately. There is a little difference in the cost
1566 between opening asphalt paving between the cost of opening brick paving but I have taken 25 cents per square foot as a fair figure; I have a computation somewhere. I had access to the contract with the city in preparing that computation. 25 cents a square foot is $2.25 per square yard which is a price above a great deal of the prices paid for contract paving here, and I consider it a fair price to allow for this paving. I aim to get what would have to be paid in the case of the reproduction of a plant similar to this plant, just what the arrangement may be between the city and the paving company for cutting a little piece of paving here and there I haven't in mind; my 25 cents wasn't based on that but on the general paving per square yard in the city for a number of years. Whether I know I wouldn't be permitted to go on the paved streets and open them up without permission from the city, unquestionably the city has control over that. I am not sure that the city wouldn't permit,—where a contractor had put down the paving and guaranteed the life of it,—anyone else to open that up and replace it; at any rate I haven't been bound by any such regulations as that; I think it is open to me to assume fair conditions and in opening the paving that is what I have done.

So in my figures about the reproduction of these mains that the company if I didn't expect to reproduce these mains under the paving as they are now at the figures I suggested; that clearly appears, there is no mystery about my estimate.

To get the total cost to the owners of the property for putting the necessary length of mains as I compute under the paving I would take my $34,508.00 as the cost of the material and labor for the paving and add to that the 7%. The total of my $34,508.00 of cost plus 7% for engineering and other general expenses would amount to $36,913.00 I don't denominate that as the reproduction
1567 cost, I haven't used that expression. Assuming that the reproduction cost of the paving in Mr. Lea's report is $129,184.00 there would be a difference in that one item of paving of $92,271.00. Asked whether that same difference would be carried into the present value,—I would say I depreciate the cost of the paving at the same rate that I have the mains underneath, and when the main is gone the paving for the company's purpose and that value is gone.

There are two Haverhill cases, I used 4% for specials in estimating the cost of the cast iron gas mains in the later Haverhill case, I am not sure now and don't remember which figured I used in the earlier case. The one in which I valued the property as of January 1, 1913 I used 4% for specials, drips and valves. Whether I denominated the item "Pipe and 4% for specials" I don't remember the exact heading I can tell it in the morning as I have the schedule at my room, that was 4% on the cost of the pipe, instead of 3% I put on the plant here.

Without reference to the cost of service pipe here in the unpaved streets I have a tabulation showing the cost per service which is $8.13 for a 50 foot service for 1¼ inch pipe which I took to be a representative service. Whether Mr. Lea's figure was $13.56 on that item,—I don't know what his figure was.

Asked whether the cost of the 1¼ inch wrought iron pipe itself for which I gave the cost to be 13½ cents per foot for the 1¼ inch wrought iron pipe as against Mr. Lea's 18½ cents,—I will say I don't know what Mr. Lea's figure was; my figure for the pipe apart from some special fittings and meter cock is 14½ cents shown on exhibit "247", there is an additional charge of 50 cents besides the 13½ cents. I don't show on exhibit "247" the cost of the pipe alone: it says there 50 feet of 1¼ inch pipe laid at 13.5 cents and at
1568 a lower point in the column connected to the main 50 cents; I chose to separate my labor cost that wan and assign 50 cents for labor of connecting the pipe to the main. The 13½ cents contains a substantial amount of labor cost and the 50 cents is the additional labor charge in toto that is 1 cent per foot, in that 1 cents per foot I include the items of labor for connecting up the 50 feet of pipe, one street "T", two street elbows, one plug, and meter cock and the 50 cents for connecting that up and the labor portion of the 13½ cents. I put a portion of the labor in the 13½ cents and gave separate item in the 50 cents because I thought that was the right way; it is a little special job connecting a main to the pipe, it isn't

like laying so much pipe to get at it evenly in my own mind, I sometimes put it that way. If I was laying that 1¼ inch pipe as a main and not as a service pipe, a long length of it, that would be 13½ cents a foot. Under ordinary conditions if I was laying it as a service pipe I would add 50 cents with every 50 feet if I had to make a special connection to the main it would cost more for labor so really the basis I take is 13½ cents in position connected there to that stub.

In the stub service I get $3.92 per service, including the cost of the pipe and the cost of putting the pipe in the ground and connecting it up. Whether Mr. Lea's cost for that same pipe is $4.27,—I don't know what his figure is. In that case I have 23 feet as the length of the stub service. Assuming that Mr. Lea has 23 feet of pipe and on that pipe I get the difference of 35 cents I will say that if I am expected to answer the question I find my stub service estimated to cost $3.92 and counsel stated the stub service per Mr. Lea cost $4.27 on which the difference would be 35 cents.

I think I presented a tabulation showing the number of services in 1903 and the number of services added each year subse-
1569 quent to 1903 down to and including 1912; which data I got primarily from the gas reports of the company, with the aid of some assistance I figured it out myself.

From the same records I presented the number of meters in 1903 and then gave the meters each year up to and including 1912 which number I make 8326 meters. I got the figures for that tabulation out of the gas reports of the company. I don't think I included in my number of meters any meters that are in stock I think those 8326 meters were all in use. I think I only took into account the meters in use. In valuing the property to get the reproduction cost I don't think I included any meters in stock. I have before me my exhibit which shows the total cost of the meters and the tabulation of the cost of the three light ordinary meters. I did not give the cost of the meter itself at $4.50 because my exhibit does not show the individual meter reduced to its cost; I started with the list figured that way and then took my discount off; the list was $7.50 for the three light ordinary meters; I figured 40% discount which gave me $4.50 that was f. o. b. Chicago, I added $1.40 for freight, setting and connections. I don't remember what I ascertained the freight would be on the meters. I haven't with me the details to show how much of the $1.40 I included for connections, it is down to the room and I can bring it in the morning. I did have it before me when I made the computation. I made it up from the details and can bring the details I have. I can't state what I included in the $1.40 if anything, for the setting of the meters because I haven't the details here as stated, and as to testing of the meters and setting and for incidentals I can not now state how much of the $1.40 applies to those items. I haven't any details with reference to the freight, connections, setting, testing and incidentals in connection with meters. I have the cost of the meter here, the years that they would acquire in
1570 depreciation figured on those various details. Taking the meters all together I have estimated the cost of the labor and

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materials on the three light ordinary meter at $1.40 for the freight, setting, and connecting. Asked for the total cost of this one three light ordinary meter,—I can only get it by adding $1.40 which I have taken as the fair average to the amount of $4.50 which makes $5.90. I added $1.40 to cover all the cost of freight, connections, setting, testing and incidentals, I used that as a fair average figure to apply to all sizes, as a matter of fact the three light would cost less than 100 light, that is those incidentals.

Turning to the item for engineering, interest, etc., of 7% which is included in exhibit "231" which is the valuation of the Lincoln Gas Plant as of January 1, 1913, that item is on the page carrying the items of lands, works equipment and distribution system. I did not figure on the 7% as covering the interest charge during all of the period of construction because you have advantage of the ordinary credits, but during the construction period you wouldn't have the advantage of the credits on each particular part of the plant. I don't mean to say that you are going to have interest for the entire fraction of a year the plant was building on everything, but you are going to have interest on some things a longer time and some things a shorter time and for whatever that is I have included 7%. I do not assume that if it would take one year to build the plant the interest should be computed on the amount it would cost for operating half of that time, nothing like that at all as to what portion of the time and about what portion of the total investment I did figure this interest on, I should get it by figuring the percentage of interest on the whole investment, it might be ½ of one per cent. It don't make any difference about the period
1571 of time for the year if you get the investment and the percentage you can call it one year or ten. I reduce the time by reducing the item of interest, that is I cover the time by fixing the ½ of one per cent; I am not giving that as a hard and fast rule, but that would be an approximate figure for it, taking the total cost of the plant; I computed ½ of 1% for interest and considered that about sufficient to cover the item of interest, it might be as great as ¾ and it might fall below ½, but somewhere in there would be about right. I do not include the balance of that item in engineering expenses. As to what other things, enter into that item besides interest and engineering I would say some little incidental travel/ing expenses, little incidental office expenses and a little taxes, they would catch the company with a little taxes on this property if they were lucky. You would have to pay some taxes, but part of the taxes you would pay would go into operating expenses; you would get the plant started long before the close of the year and a part of the taxes would be in the operating expenses, but you couldn't capitalize all of them. Outside of the taxes and traveling expenses for the men building the plant and everybody connected with it ordinarily the engineer, possibly some other persons would be included, or some of his deputies. I didn't figure exactly how long the engineer would be expected to be in the service of this plant; it depends on how many other jobs he had to get his plans and specifications all made and arrangements completed to begin work.

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I wouldn't get a substantial sum unless I did quite a chore about it, more than I required in building the plant. It would not depend on the amount of other jobs I had but I would be about it from the time it began until it ended, I say the whole time, I would be about it just as the whole time I am about that Ypsilanti proposition, it depends on whatever jobs I have, you have to
1572 divide your time up as well as you can. I didn't fix on an absolute percentage for engineering expenses in connection with this plant, it would be somewhere between, 4 and 5% for the engineering and supervision of a plant of this size. I determined this amount of 7% partially from actual*ly* experience I have had in that work, also from the experience of other companies I know about. The companies I have in mind that I know about are some companies in Massachusetts and some elsewhere; I have in mind the water works plant at Milwaukee and some railroads here in Nebraska I don't remember the railroads in Nebraska, I haven't that folder here with that in, I can bring that in the morning and a number of gas plants. I have the data of several gas plants in Massachusetts about engineering charges. I learned something about the engineering charges allowed by the Commission of Wisconsin when in the Racine case and I have learned something since. I learned that the Wisconsin Commission used a 12% item for some additional things I haven't included. It seems to me they included in that 12% some things they called contingencies, one or two other matters, that is Mr. Pentzer's testimony anaalizing that before the Commission.

In this item of 7% I do not mean to cover the item that Mr. Lea covered in his item of 16% under the heading of engineering, etc., including engineering and supervision 6%; casualty liability 2%; taxes and loss of interest during construction 4%; omissions and contingencies 4%; total 16%. There are some of those subdivisions in Mr. Lea's tabulation that I omitted from this 7% namely, omissions and contingencies and the rest so far as they are to be included I included them in so far as they are an actual expense; I have taken anything into account in my 7% that I think would be incurred under other heads in my valuation I have allowed for omissions and contingencies all through my tabulation but not as a
1573 separate item. To take care of the omissions and contingencies in giveing the cost of these meters for instance, I made the item substantially large to cover all expenses I believed, for the installing of the meters. I neither added nor subtracted I made what I thought was the right price, and that is just what it would cost. I allowed for contingencies by allowing what I thought they would cost. There would be contingencies in there, I haven't a doubt but it would cost less on a good deal of this work.

It is something usual and ordinary in contracting work for engineers to figure up the total cost of the work as far as they can determine it and the- provide for an additional amount for contingencies and omissions; it may be sometimes done that way. I have allowed a price for this work it could be done for by contract right through, if the contractor wants to figure a part of his price

for contingencies that is immaterial, so in my mind I have allowed enough for this contract. I don't say that I have allowed 4% in the amount that affects the value, but I have allowed enough to cover any incidentals or contingencies, I didn't testify that would be 4%.

As to how much I figure of this 7$ for taxes,—that would be a small fraction of 1% it might be 1-10 or 2-10 that would fall on the property while it was out of use. 1-10 of 1% would be ample I think for that. I mean of course the kind of taxes that are really collected, the general property taxes; I omit any special occupation taxes.

As to when I would expect to commence the construction of this plant or the portions of the machinery I would say the construction of the machinery would be commenced at any convenient time of the year, I have in mind the first of January. I didn't make any computation definitely as to the amount of materials and
1574 appliances I would expect to have on hand by the first of May. Whether it would be necessary to do that when it takes 1-10 of 1% for taxes,—if I was fixing that as an absolutely fast sum to be arrived at by a certain mathematical computation I would say it would be necessary; but I don't think it would be necessary to carry it to that refinement. I simply think from some knowledge of the business and of taxes that 1-10 of 1% would be a plenty on the property to cover the taxes that would fall on the property out of use.

I would not necessarily expect to have all of the money here and available for the construction of that plant in the beginning. I haven't made any computation about raising the money, I assumed that the parties would have the money to build it with. It is very doubtful whether they would either have to pay the taxes on the money or the plant because you might have your money in New York getting interest on it. If I was here I would be expected to return the money here for taxation if I expected to build a plant here I would say I don't think so, you would have to pay interest on it in New York unless you could dodge it in some way, if they got you, and all of these ifs should come true I think 1/10 of 1% is sufficient for the property while it is out of use.

Assuming that all of the taxes of the property of the gas company if fairly and honestly returned here in Lincoln might be more than 1% if the company had it all here, the company wouldn't have it all here, during the year; a considerable part of the taxes would — on it wherever it was and would be applied as a separate expense, it wouldn't all by applied as a construction cost.

As to what information I have that justifies me in assuming that this plant could be built in one year I would say these contracts for gas machinery; and I put into an exhibit here the other
1575 day the length of mains laid by different companies in one year's time which contributed to that opinion. If I came here to build the plant as an engineer I would not necessarily expect I would have to get a franchise from the city, they might have one when I got here. I would not necessarily expect to organize a company, a private individual can engage in a public service business.

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I haven't said I would expect to come here without a franchise and without a company and build a plant, I said the company part is unnecessary, and the franchise part might be got before I came. I certainly haven't testified anything about the expense of a franchise, and I haven't included any such cost here and don't know anything about the cost of franchise. I don't know whether it is true or not that the city assesses this company for the purpose of taxation, in the amount of $100,000.00 a year over and above its tangible property, for a franchise. If that was true I didn't take that into account in valuing the physical plant of the company it pays taxes on a certain amount, it should not be considered. I am not valuing the franchise of the company. Whether if I didn't value it I should not have to take it into account of the earnings of the company in some form I should say that I should take into account all taxes paid by the company in trying to arrive at the idea of their profits; it would be informing to the court I suppose as to what rate should be charged. Taxes would only come in as operating expenses, they are paid ultimately by the consumer whatever they are and would be charged up against the income. I should not capitalize taxes or franchise.

In the Ypsilanti plant I worked a number of weeks on the plans and specifications for that plant I can't tell how much. Under the plans and specifications that I prepared we never got so far as to definitely — on how long it would take for the construction
1576 and completion of that plant, I never had the idea it would be a year. I didn't. Whether I fixed any time in my specifications,—I didn't get that far. I didn't prepare any specifications that would accompany the contract, not in the primary form; I prepared preliminary specifications describing and outlining the kind of equipment, etc., so as to get at an estimate of the cost I made on the plant; and it is true that is the nearest I ever came to building a gas plant.

1577 I was asked to bring in the details of my net construction cost of the meters, more particularly covering the item of $1.40 per meter for freight, connections, setting and testing of the meters, that and some other things; I haven't brought in that item but certainly expect to. I explained that I used the one uniform sum of $1.40 not as representing the cost of the setting, connections, freight etc., of a particular size of meter but as a fair amount to allow for the range of sizes and prices here. I have a detail apportioning the part of that $1.40 for setting the meter unless I have lost it. I don't often lose things, but it will be impossible for me to give that until I get my detail here. I now produce my Haverhill valuation on everything, I don't know what point was in counsel's mind when I was asked to bring it in.

In the Haverhill case I put in the weight of the 4 inch pipe prior to 1901 at 17½ pounds per foot; and subsequent to 1901 I put it in at 19.4 pounds per foot. In Lincoln I put it in at 17 pounds per foot.

I am considerably acquainted with the practice of engineers in allowing interest during construction of a plant,—the amount

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allowed and the period of time allowed. In proper amounts such an allowance is a proper item. I can't name any single rate that I would say was the common rate to allow, but something like 6%. As to what portion of the total time required to construct a plant interest is allowed on the amount required to construct the plant,—I would say it varies a great deal, there is no uniform amount. It is no more common among engineers to allow interest at 6% on the total amount invested in the plant for one-half of the period required for the construction of the plant, than various other practices as to the amount of interest allowed. It is not to my knowledge, and I have no reason to think it is a common allowance by various Commissions throughout the country as well as the Courts. I don't have any such precedent of that kind specifically in mind.

1578 I should not doubt there might be found a precedent where someone had allowed that amount perhaps. The only standard among engineers to determine the period this interest is to run is to try and get into accord with the facts, which will vary according to the construction. There isn't any uniform rule of practice which takes the time the total investment will be put into the plant and compute the interest for one-half of that period, and I don't agree with the statement that it depends on what the particular engineer sees fit to place on it. The amount of interest I have allowed on this plant is the total amount per year at 6% for 30 days, I don't now recall of any adjudication for that specific amount. I wouldn't necessarily expect, if I came here to construct this plant, to have all the money arranged for before I entered upon the work, for the purpose of constructing it, it might be furnished as the work went along well enough. As I have testified a number of times if I were going to borrow the money and it was to be furnished as I went along, I should pay the interest on the money during the period that the different parts of the construction was out of use after the money had been invested in those parts. I haven't testified that I should expect the work of constructing the plant to proceed uniformly throughout the year. I should expect to complete the plant as rapidly as was consistent with proper construction and reasonable methods. Whether my investment per month would be about uniform going into that plant to complete it within 12 months, I don't think so, I think the investment would be lighter in the earlier months. I would not necessarily have to make an investment in the real estate before I started, but that would be expedient at some very early part of the year, you couldn't begin to construct your works or definitely decide on the proportions of the heavier part of your main system until you knew where your works would be. I think it is fair to this company to compute the interest

1579 upon the reproduction of the equivalent to this plant and compute the interest on that for 30 days; I think I testified that it might be as great as ¾ of 1%, but I thought ½ might be enough, I should not want to hold them to just ½ of 1%, but ½ of 1% would be ample.

In addition to the interest upon the investment I put in the con-

tingencies and omissions in my estimate of cost, I would not eliminate those. I said I had provided for them in the amounts I allowed.

In figuring the quantities going into a brick building, I figured that the company could let the contract for all the buildings it has, taking into account only the element of brick now, on the basis of $15. per M and the contract for that would save you harmless as to the brick, on that basis the contractor would take all the risk and cover it by his contract price of $15. per M gladly, that is what I figured. I didn't consult a contractor here until after I had come to that conclusion. Then I only consulted Mr. Assenmacher, and that confirmed my conviction.

In my 7% I figured only a very small and indeterminate amount for casualty insurance, or liability, the contractor would carry most of that, to which the company's witness Mr. Steinmueller testified, but there would be a little that would not be covered by the various contracts and I considered that a very small fraction of 1% would go for that purpose.

In my exhibit "347" showing the total gas sales of the Lincoln Company from 1905 to 1912 on the basis of $1. per M cubic feet, that is an estimate of mine. Whether I took the total sales as they were made during those years and applied to those sales the rate of $1. per M cubic feet,—that is not quite accurately stated.—I make a reduction of 20 cents per M feet from the income of the sales made in the respective years and get the income, I take the actual income as reported in the gas reports and deduct therefrom 20 cents per
1580 M. I took the stated income and the stated feet of gas sold in Lincoln only, and on that stated feet of gas I computed the amount at 20 cents per M feet sold and deducted it from the stated income. So that exhibit "347" gives my estimate of what the company would have received for each of the years from 1905 to 1912 had the gas been sold at $1. per M cubic feet. I don't show in exhibit "347" the number of feet of gas the company would have sold during each of those years from 1905 to 1912 at $1. per M, because there was sold more than shown in the exhibit; I took the amount they sold and what the final result would have been, but the $1. rate would have substantially increased those sales. I haven't shown any such estimate; what it comes to I have simply taken the amount of gas sold and applied the $1. rate to that during those years. If it had resulted in an increase of sales I didn't estimate that nor take it into account in this exhibit. I haven't taken into account any increase in the operating expenses of the company due to any increase in sales if there had been any, I simply dealt with the expenses as they were, and with the sales as they were in those years, and made the deductions for the lower rate and also made a certain revision of the expenses; I started with the expenses in those years and haven't made any estimate about the change of expenses on account of the volume of gas sold. There are no expenses shown in exhibit "347" and I didn't estimate any there, but in exhibit "348" I did.

Undoubtedly there would be an increase in sales if the gas rate were reduced to $1. from 1905 on, and there would be an increase in expenses from what I have estimated,—I don't say it would be an

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increase in expenses from what the company reported,—I don't think it would be as much as that; still there are variations in the expenses between my estimate and your company's report in one de-
1581 partment—that of the general management of the business—whereas the greater increase in expenses for the output would come very largely from the manufacturing department, so I couldn't compare the matters very well, because any that were made for the greater output of gas were made by the expenses of the manufacturing department. That would be an additional amount added to the expenses.

In exhibit "343" I show the total operating expenses for the years 1905 to 1912 inclusive as estimated by me, starting with the records of the company and making such changes, deductions or revisions in those records as I think should be made. So that in the year 1907 my estimate comes to this: Assuming your expenses down at the works which you say were $141,621.49,—I am not certifying as to their correctness at all but just taking them as you have taken the items,—which I have classified as expenses down at the works as correct and adding all other suitable items my estimate amounts to $127,135.18; that was arrived at, in part, by an analysis, criticism or examination of the items entering into the total operating expenses of the company for that year, I did not apply a percentage of reduction to any particular department of the operating expenses to get the 18 cents at the end of my $127,135. In a sense I picked out particular items in the operating expenses for that year that I considered excessive and deducted a fixed amount for those items, because I segregated certain items and added them up and found that they amounted to a certain number of cents per thousand and concluded that was too great—too excessive a number of cents per M. Whether it was a question altogether in my mind of finding out how many cents per M the expenses should be in any department and if the amount actually incurred by the company was in excess of that amount, whether I reduced it to the amount I thought it should be,—Will say that I looked the items over in a general way in that connection, and I also took a pretty careful general view of the way
1582 the expense was run up to the amounts quoted. Answering whether in exhibit "348" I have not taken the accounts of this company where they have actually spent the money to manufacture the gas and distribute it and have said to the court it could have been done for less money and the company should not be allowed the expenses it actually incurred,—I say as far as actually incurring the expense, I didn't testify as to that, all I know about what the company incurred is what its gas reports say, and I have certainly said it didn't need to spend the amount it said it had spent. I did not say the company did not spend the amounts its records show it did spend, I simply refuse to certify that it did spend it. I don't think any such amount was ever properly spent; if it called the money the company parted with in the way it did part with it to make up these expenses for gas expenses the company may so call it but I shall not label it that way. My attention has been called to

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no particular items, the enquiry has been about the bunch and I am trying to answer as well as I can on the questions asked.

In referring to those items I say were not proper items, and in making this reduction for the year 1907, I have the items set up here that I criticized in the aggregate; I haven't got the certain specific items, but have taken a group of items and given my estimate for the total charge for that group as set out in the exhibit. I had before me then the items to consider as entering into the operating expenses for the purpose of determin-g the amount that should be deducted from those amounts for any particular year, those items for 1907 are given in exhibit "285".

I haven't eliminated specific items in this group shown in exhibit "285" and I have said too that taking those items together amounting as they do to 20.58 cents per M feet sold that the aggregate of the alleged expenses for such group of items is excessive in that
1583 year, although it is less than two-thirds of what the company has charged in a later year. By a good deal of additional work I could eliminate specific items; the only trouble in trying to do that is of knowing exactly what services were charged under the different heads; the services in the company's books are charged under a large number of headings, and it is impossible to determine, without a great deal of investigation, beyond what I have made, just what things were done for the different amounts given under the different heads as shown in exhibit "285".

As to whether I did that those operating expense accounts and set down for the purpose of examining and determining any particular amount or item of expense that should be eliminated, or that I considered excessive,—I would say that I consider these items here of general expenses and management very excessive, as a whole. It is true that by reducing to so much per M feet reduces no particular item,—not because it is impossible, impracticable or that I couldn't,—but because it is more difficult and a long process of investigation required, of just what necessary work was done for the particular expense the company set down. I haven't made a deduction on a percentage basis. I deny the proposition that I undertook to fix the operating expenses at so much per M regardless of the items entering into the operating expense account.

The statement that in exhibit "348" I have eliminated certain items appearing in the operating expenses for each of the years from 1907 to 1912, isn't a correct statement; I have just testified that I didn't eliminate the specific items, but took a group of items covering a certain class of the company's expenses, namely, general office expenses and management, and I concluded that group of items covering that part of the work of the company aggregated too much, and not being able to tell just what parts of that were charged under each of the many items the company has it separated into, I
1584 made my deduction on the basis of allowing so much on that part of the work done by the company. Exhibit "348" does not make the deduction in a lump sum on the basis of so much per M feet sold,—I have an exhibit where I say what the amount of the office and general expenses of management should be; exhibit "348"

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included the company's own statement of the manufacturing expenses and materials and labor at the works that I have simply copied in and assumed to be as the company stated, for the present purpose.

To state precisely, I would not say that exhibit "348" shows my total estimated expenses of the company for each of the years from 1905 to 1912. The heading of one column is "Dollars estimated expense", as against the different years, but that has already been fully explained to mean the company's stated expenses in the materials and labor of making gas plus my estimated expenses for o-her items, so that that column heading is only a part of my estimate and a part of the company's statement. It is the total expenses as I estimate the expenses to be for each of those years, assuming that the company's statement for that purpose to be correct; I am not going to cut myself out of the opportunity and right to criticize the Company's manufacturing expenses, which I may wish to do later, and that is just what is in my mind in making this reservation. With that reservation in mind those expenses under the column "Estimated expenses" are intended to include all of the fair expenses of the company for each of those years in the manufacture and sale of gas, but not all the money it spent. That is, not all the money the company actually did spend, but what I think would be a r-asonable and proper amount to spend, assuming the company's statement of material and labor is reasonable as I have copied it into that column, from their books.

I think in exhibit "339" I have undertaken to show the gross earnings of the company, in its gas department, for the years 1905 to 1912 inclusive; that is the purport of the exhibit.

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1585 As to whether exhibit "339" shows just what the records of the company shows the gross earnings to be for each of those years,—I am unable to recall now that the column headed "Dollars income in Lincoln", varies in any way from the fair import of the records as to Lincoln. I don't remember whether the company seggregates its income in Lincoln from the other; I rather think it does not seggregate it. I included in this table as income in Lincoln not what the company got from some outlying municipalities. I don't remember that the records on their face show that seggregated income, I think it would involve a computation to get that. But by fair inference all of them are found in the records of the company. So I would say that this tabulation is intended to show the gross income from 1905 to 1912 as the gross income shown by the records of the company for the sale of gas in Lincoln.

I show a column in the same exhibit what I estimate the total operating expenses in Lincoln alone for each of those years should have been,—always with the proviso that I am assuming part of that operating expense by the company, it has reported it,—and part not,—not necessary to be, but resting in my estimate.

Referring to exhibit "345", as to whether that exhibit shows the total operating expenses of the company in Lincoln alone, as shown by the records of the company for each of those years, as I found it in the records for the company for those years,—I will say that I am inclined to the opinion that,—while it shows the total expenses for the years mentioned, taking the fair meaning of the gas reports of the company,—that it does not show the expense exactly as set down in the gas reports. That is taking what I consider to be the fair meaning of the report. I think I had to make a change on account of the way the residuals,—coke and tar,—were treated, not thinking that the reports really meant in all cases just what the final summary figures would indicate. In other words: I went into
1586 the substance of the record and tried to get at the fair meaning of the report as a whole, rather than take just the footing of the total expense for a year, so I rather think that would apply to exhibit "345", that is my best recollection. Whether that would make a slight difference in any case,—I wouldn't dare to testify to that, it might make quite a difference. It was a habit of the company in its gas reports to charge in coke at the cost of both the labor and coal to make it, that had been paid for and charged to expenses in the same account. I present in exhibit "345" what I understand the records of the company to fairly mean taken as a whole, that is, the gas reports to mean taken as a whole, and without meaning to say that the figures are necessarily found in just that form in the gas reports. Taking the year 1912, as I understand the records of the company they show the total operating expenses for Lincoln alone, to be $170,507.82, and according to my exhibit "339" my estimated expenses for 1912 for Lincoln to be $136,145.01, or about $34,000. more than they should have been. The .01 cent is the result of an

estimate of so much per M feet of gas sold for a certain portion of the expense; I am not particular about the 1 cent, I would just as soon make it 2 cents or drop it off entirely. I don't think that indicates that I was using some general rule to reach the amount of expense applying a certain amount of cost to a certain 1000 feet of gas sold to get the result,—the company's expenses are just the expenses it did have that runs into cents. I deny the statement that I was using a general rule.

Exhibit "306" shows the net earnings of the company, as per the gas reports, for the sale of gas in Lincoln at $1.20 for each of the years 1905 to 1912, as shown in the records of the company. It was prepared by me showing what the net earnings of the company was for each of those years, as I understand the records, without saying that any of the company's excesses should be changed for some others,—just taking the records as they stand.

1587 The exhibit "304" shows the amount of the expenses of the company in the respective years as I understand it, on the full meaning of the records. Whether for the expenses alone for the sale of gas in Lincoln alone, I don't so read the exhibit, and a*n* not able to state from pure memory that it is so limited, it appears to apply to all of the reported expenses of the company. I say it is the entire expenses of the company for Lincoln and outside, basing that on the face of the exhibit, which I believe to be correct. The total estimated exp-nses of the company for 1907 was only $127,671.40 as estimated by me; for 1908 $129,693.72; for 1909 $121,300.04; 1910 $119,069.95; 1911 $121,261.28; 1912 $140,399.11. I don't know that those six years make a total of $759,395.50 *i* haven't that total. Whether assuming that to be the correct total, the difference between the actual amount expended by the company for operating expenses for those six years and the amount I estimated, for those six years is $134,261.82. — — I am not able to take all those additions off-hand. I specify a large group of items in number and I say as a group they are all together. I have neglected to seg*g*regate the specific items because of the labor involved and not knowing just what labor was performed under the head of each item. I never did seg*g*regate them, I have set out the group of items covering certain definite sorts of services that must be performed by the company to carry on this business, and I have said the amounts charged in the company's gas reports for those services is excessive, in the amount of $134,262.82, assuming that is the correct figure for the addition of those six years, which addition I haven't made. I have pointed out the particular items that are too big, and as to that now call attention to exhibit "290", in which I give in the company's own language 19 items, as I count them, under the headings that occur in the gas reports of the company, and the aggregate of

1588 those items is 31.12 cents per M feet sold in that year. Now looking at those items on their face, it is uncertain to me just what services may have been performed under the head of a particular item, and it would require a very extensive investigation into the company's methods of working to be sure. If I said certain expenses under one item was too big because they involved the do-

ing of a certain work that wouldn't cost as much, I might be met with the suggestion that some other work was included in that item. So I have taken the whole cost of the items constituting the general office and management, all those services that must be performed as indicated by the company's headings and I have said that, measured by the experience of other companies and this company's in earlier years, when the gas out-put was less,—that 31 cents is an unnecessary charge for those services. I reduced that 31 cents to about 12 cents as I remember.

The problem of picking out particular items is complicated by the fact that the company has two departments—gas and electric—in which they apportion those general expenses, and also by the large number of entries under which they have their services made here; suppose I take the item of executive salaries $8917., or the item of promoting new business $19,692. and I attempt to say that one is too big because it don't cost that much to do such work as it ought to be done for under that heading; I will be liable to be met with the suggestion that there is a lot of other work that I hadn't thought of — done under that heading,—work that I thought was under one of the other headings,—so the only way is to take work of a given kind or character, you might have all of these charged under 100 different headings, that wouldn't change the amount to manage and pay these salaries,—the way you divide it in your books,—the company might divide it into 100 different charges,—and how could
1589 a man, without a great amount of labor investigating as to the company's office methods to see which particular labor came under each head.

Whether I would have difficulty in stating my criticism of the $8000. item for executive salaries because it is something specific and the amount of salary ought to be tested out to determine whether it was excessive or not,—I would say if I could find out exactly what the company got for its alleged expenditure of $8000. I should not hesitate to criticize it, there would be no trouble about it. If the company will tell me here exactly what is obtained for that item I will be able to tell whether I criticize it or not definitely, or tell what I would reduce it to. I can assume what I ordinarily understand to come in the classification of executive salaries. Upon that assumption I would be able to tell whether it was excessive or not, but a more direct and comprehensive method is to tell whether it comes under this whole bunch, that is just as easy to tell as under one of them. A good deal easier and more direct, it don't give a chance to jump around and say it is charged to that or some other heading. The company has a definite general classification of the work, namely, the general management and payment of general office expenses apart from taxes, depreciation, materials and labor making gas, it is the one I have dealt with year by year and I haven't thought it worth while to try to find out from the company's office, how these services are charged under these different headings, I didn't know to whom I could go to find out. The exact classification mentioned as produced here was never offered to me. I don't recall that I asked for it; the company had a large printed book of

instructions which I didn't think was profitable, in view of the time at my disposal, to wade through; I wasn't sure where I would get to if I did, as to what particular charges the company charged under each one of these general headings. Whether I just took the
1590 general rule of so much per M feet because it covered all of the expenses in the department of salaries and executive officers and taxes at so much per M here or anywhere,—I would say no, I didn't include taxes; I allowed their taxes they say they paid as an entirely separate item.

It is absolutely untrue and unfair to say that outside of the actual labor and material expenses at the plant, everything else that lays outside of the naked expenses of the plant I lumped off as being covered by an estimate of 12 cents per M. It includes all of the distribution expenses except materials and labor making gas, repairs, renewals and taxes,—all of that is under one heading in my exhibit "290",—and that expense I treated under the one general heading and in the year 1912 was the allowance I made running up to the earlier years we are talking about.

You can't answer by saying simply all of the expenses of manufacturing gas should be about so much per M and let it go on that same basis, because the money for manufacturing gas is money the company has to pay to other persons that are not under its control, but its officers can reach their hands into the treasury of this little corporation and take out what they will because they control it; but the man who sells it coal, it can't do that to him, he has to sell in the open market and all the company pays him is the competitive price for coal; I assume what the company pays for coal to be a fair price in this part of the country, and so for oil and so forth in order to come to the amount in exhibit "290" of 31 cents. Whether I want to reserve the right to criticize,—I say I do, but I haven't yet that I may find wrong for any purchases of coal.

Referee: The reservation will stand without making it special; criticize everything. To which the plaintiff excepts.

1591 In exhibit "341", as I understand the records of the company, I have shown the actual amount of money expended by the company for gas making materials labor and taxes that I found in the records of the company for the years 1905 and 1912.

Being asked to refer to exhibit "304" and to state whether I have there shown what I understand the records of the company to show as the total cost for gas making materials and labor plus taxes for each of the years 1905 to 1912,—I say I haven't shown the sum of the materials and labor plus taxes alone; it is plus various other expenses also. I have shown in exhibit "304" what the records of the company show the cost to be for materials and labor making gas under one seperate colume from 1905 to 1912; and in the same exhibit show what I say the records show the taxes to have been for each of the years 1905 to 1912 in a separate item; so by adding those two items together I have the cost for materials and labor in making gas plus taxes for each of those years, but the addition is not made in that exhibit, however. As I understand the records that exhibit shows what the records of the company shows with respect to the

items mentioned. I didn't estimate for each of those years the proper amount for gas making materials, labor and taxes, I took what I understood the records to show, that appears in exhibit "341".

Exhibit "341" does not show my estimate of the amount for material and lab*le* making gas plus taxes, I haven't estimated those items, I have added them. The heading is for materials and labor plus taxes per gas reports not per Adams. I accept them with the reservation I made that I might want to explain them further.

I show in my exhibit "342" my estimate of the proper amount to be expended for salaries, office, distribution and general expenses for each of the years 1905 to 1912, in cents per M cubic feet of gas sold. And also in dollars showing what it would amount to. I also show there the number of M feet of gas sold for each of those
1592 years. And I obtained that by multiplying the amount per M feet 12 cents as I found in 1912 by the number of feet to get the total amount of expense I say should have been incurred for those items. It is absolutely untrue that I obtained it in that way without any reference to any details in the reports of the items making up the expense for salaries, office, distribution and general expenses. Turning to exhibit "302", I have undertaken to show what the records of the company show was actually expended for the years 1903 to 1912 for salaries, office expense, distribution and general expenses, but I have left out here my usual precise designation as to the source of the figures; I believe the figures in exhibit "302" to be from the gas reports of the company giving their statement of the expenses for these particular items which are the same items I refer to in exhibit "342". Whether the difference, as stated by counsel, between the amount actually expended by the company for the items stated for the years 1907 to 1912 as shown by the records of the company and the amount I estimated to be the proper amount for those items for the same years, is $168,567.13,—I haven't made any such addition, and don't consider it particularly illuminating and I haven't got it; moreover, my figures run from 1905 to 1912, I don't know whether those are left out purposely by counsel or not. It is true that my estimated expenses and the company's reported expenses shows 1907 to 1912, the addition I can't certify to.

Whether by that process I eliminate $168,567.13 of the actual operating expenses of the company,—I don't admit that the company ever incurred any such expense, I don't think it can fairly be said that the way the money is taken out of the company's treasury that the expense is actually incurred. The money goes whether that can be called actual expense. That wouldn't have gotten away from me if I was in charge of the interests of the stockholders. You couldn't beat the taxes very well, but I have allowed them
1593 all; I don't think you could estimate them.

Exhibit "304" shows the amount I understand to be charged for repairs and renewals for each of the years from 1907 to 1912. I haven't any definite suspicion that the repairs were not eventually made, I doubt if they were made just as charged, I have a suspicion that they were not, but I don't doubt the repairs were

ultimately completed, as shown by these exhibits here and in the amounts shown, but I don't want to be understood as saying that they were really repairs so charged, but things the company calls repairs.

In exhibit "341" I don't go quite so far as to undertake to show what in my opinion should have been set apart and retained out of the earnings of the company, for repairs, renewals and depreciation for each of the years 1907 to 1912; and dictate to the company what they should do with the money they got. The exhibit indicates what, in my mind, would be fair to allow for such of the property out of the income, for each of those years. If the company chooses to put it in New York or put it into the plant, they would have to bear the burden, I am not dictating, but that I think is a fair amount. I have added depreciation in exhibit "304" to the item of repairs and renewals. That accounts for all of the difference between the amount shown in exhibit "304" as expended by the company for repairs and renewals, and the amount shown in exhibit "341" as the amount that should be carried for repairs and renewals. I don't accept the amount charged as repairs and renewals in the company's records for many purposes as a sufficient and proper amount; it would be impossible to properly estimate the amount of repairs and renewals without taking into account the depreciation; when the renewal occurs it absolutely takes care of the thing renewed and I can't express any opinion about the proper amount for repairs and renewals without including the element of depreciation. As to whether I can give its entire cost where

1594 I can't separate between repairs, renewals and depreciation,—would say that I can separate approximately between repairs simply as such, and renewals and depreciation, but renewals are depreciation; but taking care of what counsel asks for,—I can't separate a thing from itself. I can't do it. In one of my other exhibits I separated the amount of the proper charge for repairs and renewals; in exhibit "232" I have the annual depreciation in dollars as $10,914.26 in 1912, that includes all renewals,—the cost of renewals and depreciation cover the same items, and dividing that by the thousand feet of gas sold that year would give the amount of depreciation only. I include renewals and depreciation as one item, they are the same thing, and the balance of the amount I find in exhibit "304" is for repairs pure and simple as near as you can separate it.

I have figured it all over carefully and the amount that should be set apart fairly for repairs per M feet of gas is the difference between what I have allowed for depreciation and renewals and the total amount I have allowed per M feet sold, that is this allowance here in exhibit "343" for which I have allowed the company 9 cents right through that period of years for repairs, renewals and depreciation. For repairs alone somewhere around 3 cents, 3 cents is an ample allowance for repairs. 6 cents would be for renewals and depreciation. I allowed the company more than my computation showed was necessary to be generous. I based my computation on the valuation of the company's property, for depreciation and

renewals. I didn't get the amount of the repairs at all from the valuation of the property to make the repairs and depreciation. I got the renewals and depreciation which is the same thing. To get that I took the cost of each item of the physical plant and divided by the estimated years of life to get the amount that should be allowed annually for the depreciation and renewals of that piece of plant and added all of those together to get my totals. That is where I take into account the difference in the life of the equipment that entered into that.

1595 The amount to be used for repairs I got from an observation of the amount of that cost in a great number of plants and a great number of instances,—I refer to a great many plants in Massachusetts,—and the records of those plants because that is what I depend on considerably and to some extent on the records of the company's plant as far as it has gone. I found from the records of Massachusetts and those companies that 3 cents per M only just covered the item of repairs, or thereabouts, it might raise it to 3½ cents. I have had no occasion to correct my judgment.

Asked if I should be mistaken about what the records show whether my conclusion would be wrong, should this company have things a little b-low on its records than the Massachusetts companies have charged 15 and 20 cents for repairs and renewals,—I would say for repairs and renewals there were particular things that weren't given in the showing I am talking about; I am talking about an analysis of the records and what they have done, and found out what money really went to repairs and not to extend the plant. I brought the records here of Haverhill, Lynn, Lawrence, Cambridge Taunton and Charlestown to show what they were charging for office expenses and general management and they don't show the depreciation or other charges to repairs at all.

Whether any of the companies in Massachusetts carry repairs separate and apart from renewals,—they are reporting now to the Massachusetts Commission repairs and renewals on meters separate, segg*r*egating between repairs and renewals. I claim to have based it specifically on some records of Massachusetts reports on meters that segg*r*egated that. I would have records of the Massachusetts reports to enable me to segg*r*egate on meters between repairs and renewals, and I have that on all the other equipment that goes into the gas plant and when I want to segg*r*egate between repairs and renewals I looked to see what the company did with the

1596 money and it says it spent it for those combined purposes.

In determining the amount set apart for repairs, renewals and depreciation as of the time when I valued this first property I took into account the condition of the property. It is a very violent assumption to say I could tell from the records the condition of the property considered. As to efficiency I assumed this property in fair operating condition. I should have to figure out the percent of efficiency. The property is as efficient as a manufacturing machine or tools as it ever was, I don't know as the efficiency has declined.

If the property had been allowed to run down and I were to

value it now whether I would make a larger allowance for repairs and renewals than if it had been kept up,—I should not make an allowance for renewals in the future to compensate for laxity in the past. I think Justice Moody's talk against that in the Knoxville case is right.

As soon as there is time I will prepare for the company's use in cross-examination a detailed statement of all the items covered in the cost of construction by my item of 7% for engineering, interest and so forth, giving the amount apportioned approximately as near as I can to each item entering into that total of 7%.

Just as quick as there is time I will also prepare a detailed statement showing the items entering into my $1.40 cost for freight, connections, testing, etc., on the meters. I think I have it all tabulated, I did have it. I have a big bunch of computations.

I will not prepare a tabulation for the company's use on cross-examination of the division of the amount I apportion for repairs, renewals and depreciation, giving to each of those items the amount I apportioned for the total, because it is impossible and impracticable to prepare such a statement; I will explain how those ac-
1597 counts are made, but will not prepare a detail unless ordered by the court. Whether I will venture to give a statement as to what amount should be provided for depreciation as apart from repairs and renewals,—I will say it can't be for renewals, because renewals is simply another name for the item that takes care of depreciation,—when you renew the plant you take care of that,—repairs can be separated with a fair approximation, that I am willing to testify about, but I can't give the renewals; it can't be separated from renewals in any exact way. They can be separated from repairs in an exact way,—renewals and depreciation together,—remembering that those two words mean substantially the same thing, can be separated with a fair degree of approximation from repairs, simply repairs. By repairs, as I now use it,—having in mind that the word is used with great latitude,—I mean in the narrow sense of just fixing up your equipment without replacing and renewing it which is necessary to keep that equipment going. I can segregate renewals and depreciation together from repairs with fair approximation, but that is the kind of repairs I defined, namely, just keeping the very things that set there in a fair condition of operation until they have to be renewed. If a length of gas main had to be taken up I would call that a renewal of a particular section taken out. I would call a repair of a gas main in a block a renewal, for one length I should not quarrel with anyone who classified it as a repair. I defined repairs as fixing up a specific item of plant and keeping it in condition and doing whatever you need to do with it, but when you take a large and wholly complete item of plant and renew it that isn't repairs, strictly speaking, although the word "repairs" is used with great confusion and without meaning the same thing in different cases.

Whether I find any confusion in the records of this company in their account of repairs and renewals as distinguished from
1598 new construction,—I would say that renewals isn't construction and I found in the company's repair and renewal account

what appeared to be new construction. I don't consider the company has thrown any light on it,—it is just as dark as the dark ages,—as far as its account is concerned, and as far as its explanation of its account is concerned in any that I have heard.

I base my judgment very largely on the amount of repairs, renewals and depreciation that should be set apart on what I learned in Massachusetts, studying those plants, and I got some idea by looking over this company's repair and renewals account here, and seeing,—as I think I see,—very substantial elements in it which are actual renewals, that is, putting in an absolutely new piece of machinery or equipment there by way of a renewal or extension of the plant, but I haven't had time to analize all of the company's repair and renewal account to find absolutely any equipment that has gone in just how it was expended in keeping the existing plant in condition to operate.

I have a very definite opinion about the amount that ought to be set apart to take care of the items of repairs, renewals and depreciation, I find in connection with that kind of a plant there is no fixed amount in respect to the plant counsel is talking about.

For the mains of the plant that are not open to view I have not fixed any amount that I should apply anywhere for repairs, renewals and depreciation; I shall apply what I do apply to any situation according to the facts of that case; because the company's mains for over half their length have wrought mains, that means a different depreciation proposition from the others where they have bigger mains and cast iron mains, so you have to consider the local facts of the plant you are dealing with. The wrought iron
1599 in proportion to the cast iron in the distribution system here does not compare in proportion to that of the companies in Massachusetts; the company here has decide-ly a larger proportion. I brought that out in one table here.

The 9 cents per M I set apart covering the three items of repairs, renewals and depreciation is not an uncommon amount right along; that is what I have allowed in other cases. The Massachusetts Commission has nothing to do with setting apart any amount for depreciation in reference to the companies in Massachusetts, in such a general way as that, the- have set something as to specific cases.

I think I said something about this in the Racine case. Whether I advised the Wisconsin Commission that 12 cents per M was a proper amount for repairs, renewals and depreciation,—I say I didn't advice any Commission that there was any flat or fixed rate that applied indiscriminately to different plants. I don't remember the amount I gave for the Racine plant; I may have said that 12 cents was right for that plant, which was a bigger and much better plant than this. I went into the works and looked at that plant and had a list of the equipment. I could just as well see the distribution system in 2 hours as in 2 years. If I said 12 cents was sufficient there I justify my saying that 9 cents here is a sufficient amount because they have a more extensive plant than this one here. I know that for I had a list of the equipment for both plants. I don't remember how much the Racine plant was valued at, I have the Commission's valuation in

detail and you can have it. I haven't my testimony in town that I gave there; counsel has it and has copied a figure here and there from it.

I don't recall any amount having been set apart for repairs, renewals and depreciation in the Consolidated Gas Case, and I don't know who is referred to as setting it apart.

1600 Asked whether the amount is not specifically mentioned in the opinion of the court on the report of the Special Master, and whether I claim I am ignorant of the fact that a specific amount for repairs, renewals and depreciation was set apart in that case,—I would say, that I claim that I don't know of any amount being approved by the Supreme Court of the United States in that case as the proper amount for repairs and renewals in that case. I don't recall that the Company set apart 10 cents for depreciation alone in that case; and I don't recall any such thing as the court commenting on the fact that the company had set part in the neighborhood of 15 to 20 cents yearly for a great many years, running back 20 years, for repairs, renewals and depreciation and in view of that fact 11 cents per M was sufficient for the purpose of determin-g that case. I should have to know more about it than the question states before I can tell what influenced me; as applying to the mains it was because the Racine plant was so much better than this one that makes it so much longer lived than this plant; they had a great many more expensive and longer lasting mains than this company has. They had cast iron mains I think. I think I gave the lives of the cast iron and wrought iron mains up there, whether I gave the wrought iron mains as longer lived than here I would have to say that lacking information from counsel that when I give information I give it fairly, all I have before me is the fair purport of the figures I am quoting.

I think I have here my exhibit "341" that shows the gas making labor and materials plus taxes for 1907 to 1912 as shown by the records of the company; it shows what the records of the company said for the materials, labor and taxes as I understand those records, there is a little question about the materials and labor, but the taxes I think there can't be much question about.

1601 I don't think there is any question about the materials even in the years 1911 and 1912, I think that comes from when the company was dealing in residuals; that is the only item of material involved in the question. I haven't estimated; I haven't estimated the expenses for that, I have taken the company's statement. The first item for 1907 is materials, labor and taxes per gas reports $87314.05; that does not include anything in that total for depreciation. It is possible and probable that a small part of that labor might have gone in the way of repairs, or possibly some small renewal at the gas works; I haven't made any allowance for that, if that is true it is a possibility, I haven't an-alized or done anything with it. I claim the books of the company the gas reports show that $87314.05 was the expense for gas making labor and materials plus taxes for 1907; they are the only books I have extracted this from.

The same item for 1908 shows 86707.70; and for 1909 $77378.98;

in those three years I have made corrections in those figures to take into account the item of residuals, I tried to keep out what I thought was the meaning of the gas reports, and have put those down to what I thought was the fair meaning of the reports. Assuming the books of the company, which I haven't before me, show as the amount spent for gas making labor for 1907 to be $92332.14; for 1908 $88286.29; and 1909 $78679.87, the correction I have made would be in the residuals resulting in the difference, that is all I attempted to correct was the residual item, but I don't agree with that figure.

I do not now know why I eliminate from the items of expense for gas making labor and materials plus taxes in 1907 the amount of $5809.19; all I know my analysis resulted from a later exhibit in
$87314.05 for 1907, and the later exhibit shows the items I
1602 included. I don't know whether for 1908 I found the company had expended $1578.59 in excess of the amount that should have been expended for gas making labor and materials plus taxes, I haven't a copy of the company's books before me, I only have my analysis of what I think the books show. I don't know whether for 1909 I found the company expended for those items $1319.89 in excess of the amount that should have been expended for those items, for the reason just stated. Whether my record shows that the company lacked 1 cent of spending as much money as it should for these same items; I make the same answer. I can tell for 1909, it is $77378.98. I think for that one year I show a larger expenditure than the company's books do; I attempt to show every year what the company's books show. Whether in 1911 the company should have spent $71.59 more than it did for these items, all I can tell is what my figures show. I don't agree that my estimate of expenses for 1911 for these items show $71.59 more than the books of the company show was expended for those items; I have shown what the books show, if there is a mistake in addition I don't consider that a fair showing of the company's books, nor any other mistake in going through the figures but taking the fair import of the books as they show there.

I think I have here the item of salaries, office, distribution and general expenses, shown by the records what the company expended for those particular items for 1907; I have grouped the items in my exhibit "285" called all expenses, except materials and labor making gas, repairs, renewals and taxes, in the form of language I have used. I show there an expenditure as taken from the company's books for 1907 of $36,912.89; and on page F of the first part of the folder in
exhibit "344" in 1907 I have estimated as a sufficient ex-
1603 penditure for that item by which I mean, all expenses, except materials and labor making gas, repairs, renewals and taxes at 13½ cents; In dollars according to my exhibit "342" that amounts to $24,214.41; whether I have eliminated from the items shown on the books of the company the amount of $12,698.48, of the expenses incurred for those particular items for that year,—will say that I have not made the subtraction, I can make it, for that item I make it $12,698.48 less than the reported expenses in the gas reports of the company.

Now in the distribution and general expenses of the company, I haven't included in my estimate of 13½ cents any repairs and renewals, or any labor upon repairs and renewals.

In the figures on gas making labor and materials plus taxes, there are included in those figures some minor repairs; I haven't done anything there except to simply copy the company's figures for what they are worth.

In this tabulation including salaries, office, distribution and general expenses, I include all the labor the company employed in the distribution of gas, office help, clerical help, and work in collecting the gas bills and taking care of the distribution system; all necessary and suitable expense in getting new business; but not a cent of expense suitable to handling appliances,—I don't allow any expense against the cost of making gas for selling appliances; that business should take care of itself. Whether it is the practice or not in Massachusetts, I know many of the companies do handle appliances,—gas stoves and lights of all kinds,—treated by the companys themselves as a part of the operating expense and reported to the Commission as such. I haven't said that you ought not to be allowed that as a part of the operating expense, even though I eliminate all of this expense from the distribution and general expense in
1604 my exhibit I still think your company would still have enough money to do some of it; I quoted a number of large companies doing that business and they get along with less than those figures. There is enough in the amount I allowed even if the company loses something on appliances. Whether I included in the $24,214.41 anything for handling those appliances,—I say I think an indefinite amount could be found in there that might be spent for that; it is more than the company needs strictly for the gas; it is more than these 6 or 7 other companies doing business successfully spend. I regard a comparison of the experience of the Massachusetts companies of great value to the court in this case, because the business is much the same in Massachusetts as anywhere else.

I haven't testified and don't so regard a general statement of what was set apart for repairs, renewals, depreciation, operating expenses incident to the manufacture of gas in Massachusetts a fair criterion for the court to apply here. I would not necessarily regard the necessary expenses in the manufacture of gas, the labor and material expenses, in Massachusetts a fair criterion for the court to consider in determining the cost of labor and materials for the manufacture of gas here; it throws light, but has to be taken in view of the local prices and conditions; the prices of labor and material might not be the same here, you have to go into the market and buy those and you have to take it into account. Just speaking of the manufacture of gas where you have to go into the market and buy material and labor, there are points between Massachusetts and here which would be much closer. I do not assume that a comparison between Massachusetts companies and Nebraska Companies on items of labor and material would not be a fair comparison, I think it is an ex-
1605 cellent comparison, but not absolutely controlling as against local conditions. I assume that the item of coal in Massa-

chusetts can be compared with coal here but in making that comparison you would want to find out the price per ton in the two places. Until I had that information I couldn't compare it, but you can get that from Brown's Directory that, as a source, of information I know is accurate. I tried to introduce that here the other day but counsel objected to it; it is one of the sources.

In the item of labor whether there is any difference in the amount paid between Massachusetts and here,—I think the differences are minor, I should be inclined to look for the labor prices in Massachusetts as higher than here, I am speaking of the labor at the gas-works; that is a little higher in Massachusetts than here if there is any difference, I don't think they are a great ways apart.

Concerning the price of labor in the office as between Massachusetts and here, I would say that in Massachusetts it is fully as high, the tendency is up, labor on the whole in Massachusetts tends to be a little higher than here.

Concerning the management, the manager of the Massachusetts plant would get more than a manager here, he would have to act in an independent position where he would be allowed to manage it and get paid for it, and I have taken those things into account.

Whether the difference between the cost of material and labor between Massachusetts and Nebraska are shown in the records I am produce- from Massachusetts, I will say that I tried to bring in the cost of materials in Massachusetts and counsel objected to it. I mentioned what Judge Moody said as one of the things I considered, and that influenced my mind in making up my mind about the depreciation question.

Whether I also had in mind what Justice Harlan said in the Smyth-Ames case about the comparisons between freight
1606 rates in Nebraska and Iowa, more particularly the following:

"Comparisons, therefore, between the rates of two states, are of little value, unless all the elements that enter into the problem are presented. * * * Hence, a mere difference between the rates in two states is of comparatively little significance. * * *"

I didn't have in mind anything as extremely irrelevant and immaterial as that.

Whether I knew that the number of consumers per mile of mains in any town produced in Massachusetts was not the same as the number of consumers per mile of mains in Lincoln,—I would say I know that the gas sold per mile of mains compares fairly well with Massachusetts, which comes to the same thing. I should not think you would need to distinguish between the number of consumers per mile of main between Lincoln and Massachusetts, or the population per mile in Iowa as related to the population per mile in Nebraska, it distinguishes itself. If I was figuring freight rates in Massachusetts, Nebraska and Iowa, I probably should find other factors affecting freight, I should not compare freight rates like that. Whether I would compare freight rates by the number of population per mile,—and the number of consumers,—I would compare the gas sold per M feet per mile of mains; it all comes down to the gas sold; I speak more particularly of the gas sold because I have

more in mind the number of gas consumers. I haven't in mind the number of consumers per mile of main, I usually deal more particularly with the gas sold per mile.

In exhibit "342" is shown what I regard as the proper amount of expense incurred by the company in 1912 for salaries, office, distribution and general expenses; the amount is $28,126.32; whether I say that would be the proper amount notwithstanding the company that year actually expended $72,944.99,—I say they might be allowed to have that amount, but it is more than they need, but to be generous I assume that they have that.

1607 Whether the amount the company actually spent for those items in 1912 was $72,944.99 for which items I show the company parted with as per their gas reports $28,126.32 making a difference of $44,818.67,—I will say that I haven't subtracted it. Being asked for the details of my deduction wherein I have reduced the amount of those items in this one year by $44,818.67 I will say if I have time in this case I will show in any one or all of those years a complete detail of how the company could well and easily run this little gas business in Lincoln with the amounts of money I have allowed for the expenses I have estimated. There isn't much dispute about the size of this plant, except as to the size of the business. Whether I consider the company has one-half of what it has of not, we agree in the diameter of the water gas machines and mains, by way of assumption at least, and sales of gas.

Exhibit "343" shows for repairs, renewals and depreciation the amount I set apart for those items in 1907 to be $16,142.94; that covers the repairs, renewals and depreciation, all expenses necessary to keep up and maintain the then plant. I should not say the records of the company show simply the amount for repairs and renewals,—I think repairs, renewals and maintenance are the words used; I don't think the word depreciation is used. In the company's headings in its gas reports I don't think it uses the word depreciation.

Whether I find in those records a specific amount in addition to repairs and renewals for depreciation that isn't shown in my tabulation of repairs and renewals,—I will say I don't find any record of expense. I remember of seeing in one of the reports some isolated entry about a certain depreciation fund, something of that sort; I haven't a copy here and can't tell whether it occur-ed in more than one book or not. I think there was a specific amount for

1608 so-called depreciation, written in the operating expenses; it was simply an entry written in the book that so much should be or was allowed for depreciation in general without applying it to any particular thing. I think some such language was used, as that it was carried in suspense pending a determination of the proper amount to be charged to depreciation; I haven't any copy and can't testify positively. I didn't find that it was charged out through the operating expenses at all. I understood from the testimony of the company's witnesses in this proceeding that they hadn't any such fund nor made any such payment, simply something they had written up, as indicating that the company thought they should have set it apart for depreciation, I found it in the records anyway.

I can't assent to the statement that I have added the item of depreciation to the account in the books of repairs and renewals and increased the amount that is carried in that account for the year 1907 over that shown in the books,—I haven't added something to the amounts alleged to have been spent for the so-called repairs and renewals. I have used the word depreciation, I haven't stuck it over the company's figures, I put it over my own estimate. I haven't added it in the sense counsel uses the word. I think I did, in my verbal testimony, compare the amount I set apart for repairs, renewals and depreciation, or say the amount carried by the company and charged by the company for repairs and renewals wasn't in my opinion sufficient for repairs, renewals and depreciation. I haven't added anything to the amount carried by the company as repairs and renewals, each year to cover repairs, renewals and depreciation; what I did do I made an allowance for repairs, renewals and depreciation. How much that exceeds for each of the years 1907 to 1912 the company's account shown in the books carried for repairs and renewals, I don't know, I have made that compilation; I allowed the figures in the company's books, but
1609 year by year I can't give it; I haven't added it up. It is all set out here, 1907 to 1912 inclusive along with my estimate for the amount for each of those years for repairs, renewals and depreciation. In 1907 the company charged for repairs and renewals in its gas reports $12,920.67; and I have allowed for repairs, renewals and depreciation in toto $16,142.94; in 1908 the company charged to the so-called repairs and renewals $8,915.99 and I allowed in 1908 $17,585.19 for repairs, renewals and depreciation as shown in exhibit "343", from that I am quoting what I allowed for all repairs, renewals and depreciation necessary to keep up fully the value of the plant and keep it in good working condition besides.

In 1909 the company's books show a total for repairs and renewals of $9,104.01 and in 1909 I allow for repairs, renewals and depreciation in toto $18,385.56; in 1910 the company charges for repairs and renewals $10,721.04; in 1910 I allow for repairs, renewals and depreciation $18,915.21; in 1911 the company charges for repairs and renewals $14,898.14; in 1911 I allow for repairs, renewals and depreciation $20,454.12; in 1912 the company charges for repairs and renewals $11,712.60; in 1912 I allow for repairs, renewals and depreciation $21,094.74.

These figures represent what I consider was the allowance for repairs, renewals and depreciation without saying whether or not it would be expedient to absolutely expend all of that money in the several years named or not, or whether some would lay over at times from year to year; that is enough in my opinion to allow for those items of repairs, renewals and depreciation. I referred to the records of the company to ascertain the items that made up the amount that has been spent by the company for repairs and renewals for the year 1907 or any other year between 1907 and 1912; it is all set out here in full detail in exhibits "309" to "319". In those exhibits I have given the details or the things this amount was expended for so far as they appear.

1610 I didn't make an estimate as to the amount that should have been expended for materials and labor making gas in any year; I have simply taken what I understood the company's reports to show; whether I deducted from what the records show or re-adjusted and re-arranged the residuals for 1907,—I think I took what I thought the showing was from the reports as a whole. I did not rely upon the figures in one place as against other places. I don't think it was quite the same footing the company may have had.

Whether the total entered on that record for 1907 for gas-making materials and labor, plus taxes was $92,332.10, I haven't the amount before me. I don't know that I have ever referred in any proceeding that I have seen to Mr. Floyd's book on the subject of depreciation. I don't remember what he says in his book. I do not know whether there is found there a table for determining the depreciation for different companies where the matter has been up and passed upon by the courts or commissions.

Asked to examine page 199 of said book and state if I know whether any such amount would set the number for depreciation in this particular case shown in that table,—I would say I do not know anything about it.

I haven't footed up the company's manufacturing report for 1907 as to what the cost by that report was for the gas-making materials and labor omitting taxes for 1907. The items from the report that I would include under the head Gas-Making Materials and Labor. I have got that on the coal carbonized $42,844.46. It says enricher and enrovalty, a term which I do not understand. It is only $178.41; I included it. Coal for bench fuel $2495.39.

1611 Being asked to show where that item of $2,495.39 is entered in my report,—I would say that my recollection is I went by the 1907 printed record of the United States Supreme Court. These figures are in pencil and they are so nearly rubbed out I can't cite them. The case record is here and I may be able to find it in that. I can't make out the figures

Mr. Lea: Here is money in dollars plainly in red (figures; witness referring to U. S. Supreme Court record). The figures written here in pencil that are clearly in this exhibit attached to the record are 5,347.42. I went by this copy; whether that item of 5,347.42 wasn't entered by me but for which I substituted the item of $2,495.39,—I will say that this bench fuel here I haven't followed because it says "coke". The Company made more coke than it used that year. I think the figure I have used represents the coal, the Company indicates it used that year. I have used for bench fuel, coal for bench fuel 2,395.39; and base that upon what I claimed the report of the company showed, but not entirely in that place. I got it from another place in the report; I will find it if given time. I cut the coke out. My principle was to allow for the coal for bench fuel, to cut out the coke as appears from my exhibit "292" on page 20 of this folder the Company made in the year 1907 4,143 tons of coke I will tell you where I find that in the report, it made 4,143 tons of coke residual in 1907, and deducting the coke they used for

water gas generated and the coke used for bench fuel, still leaves an excess of 947 tons according to exhibit "292"; so having paid for the coke once in the sums charged for coal and labor to make it, I didn't think it proper or necessary to enter it again as a part of the cost of making gas, and so I left out the coke; and if allowed a little more time I will show where I got it. In the copy of the gas report contained in the United States record for 1907, ending De-
1612 cember 31, 1907, on a page marked 25, that is, a special page, the gas report put in in a special form. The number of the item there is 2,321, there is an entry received or made during 12 months coke 4,117.96 tons, breeze 423.31 tons. I take that to mean coke and breeze made. The entry as here is of a double kind covering by its reading either coke made or coke bought, and, taking the whole sense of it, I thought it was coke made. It says 'received or made'. The 4143 tons of coke, received or made, was treated by me in this way: the printed record of the United States Court that I used, shows bench fuel used of 498.49 tons, that is what you can see in their report, and taken in connection with another in another part of their report showing it is measured tons. The received or made tons of coke is 4143 in line 2321. It is 4117.96, but I think that is incorrectly copied. It appears to get in there in a slightly different figure 143 instead of 117, but that is the amount they received or made during the year of coke 4117.96 tons. I find in the same report that year that the company used 498.49 tons of bench fuel.; and the difference between the amount received or made as shown by the report and the amount of coke used for bench fuel is 3645 tons still left after deducting the bench fuel. I find from this record to offset line number 1041 receipts for coke per tons sold $7.13. I deducted the coke used in the water gas generator from the total amount of coke made, I took the coke used in bench fuel and water gas generator from the amount the company say they received or made. My exhibit "292" shows what I did. Asked what I did with the balance of 3635 tons, I would say there is not any such balance. Counsel only allowed me to subtract one of those and it left the company net amount of coke of 949.15 tons. The other entry of coke used besides the one we have referred to in line No. 2236 bench fuel, is in the water gas making department, in line No. 1101 generator fuel 2698.18 tons of coke that the company has charged up at
1613 $14,000.00. Deducting it you get 947.15 tons net of coke. That whole process was to get at generator fuel that had already been paid for in the form of coal before the coke was made. I have been trying to arrive here at the way I did arrive at the net amount of coke made by the company in its operation,—that is shown in my exhibit "292",—that is, it made enough as I understand the report, to provide for the bench fuel and water gas generator fuel and then for some 947.15 tons of coke left for sale in that year. The balance of the coke between the two items I say was used and which gives a balance of 947.15 tons, whether I figured that at $7.13 a ton,—it was 947.15 tons at $7.13 and amounts to $6753.18 as shown by my exhibit "280", that is what I did with the remaining tons of coke. Coming back to the original proposition this exhibit

of mine purports to show what the records of the companys show with respect to gas making materials and labor, and being asked to show what this record shows with respect to coal carbonized, enricher bench fuel and all other items of material entered,—I would say I went by the United States Supreme Court record, that is, the record I have a copy of. As entered in that record the items shown are coal carbonized 7098.57 tons for the year ending December 31, 1907; the amount in dollars is $5,966 per ton amounting to $42,844.46; and enricher $178.41; with reference to bench fuel 564.56 with no other words after it which I probably took for coal. I would have to change my mind by looking at another place where that figure occurs with the word attached to it; between lines 1001 and 1002 there are figures 5644.56 which probably means tons of coal, which I can confirm by looking at another place; then, there is entered underneath 498.49 coke all stated at 5.50 amounting to 5347.42 and there is also the word breeze there entered without any figures or
1614 quantities unless it be that a part of 498.49 was 'breeze'. The dollars as result of bench fuel was $5347.42.

The next item in the way of material shown in that report is 4143.82 coke at $5.00 under coke residual is the amount $20,537.73; also under coke residuals it shows 443.63 at $1.00 and something following that I can't make out, I suppose that runs in the $20,537.73 before mentioned. I think the $20,537.73 is opposite the item of Breeze.

The next item is Tar 574.13 and opposite that is the entry $1248.26. Those items are footed into the total residuals, I am reading all the items before me in the record. The water gas tar residual comes in as a part of the material, there is nothing here in this record, it may be somewhere else. The total residuals is $21,785.99. To get the total residuals I would not necessarily add to that the water gas residuals from the plant. I don't agree with this statement here about residuals at all. These are company figures I am asked to read, not mine. Item No. 1104 says water gas tar residual account 45,809 and then .02, which I think means at 2 cents, and opposite that is $916.14. I take it that is tar residual from water gas. Whether the total residual amounts to 22702.13, I haven't that figure before me. In my report I show Coke, Breeze Coal Gas Tar and Water Gas Tar residuals, four items shown, but not in the amounts shown here as I have read from the record.

The next item of materials after bench fuel, well residuals come after bench fuel, and I have just gone over that. Following that the next item of materials is the net cost of coal gas manufacturing materials in line #1009. Steam for coal gas is in line 1014 and comes down a ways below residuals. I see no items of material between the residuals and steam for coal gas. There is no item of
1615 material between residual and bench fuel the bench fuel comes next above the residuals; and steam for coal gas come next below residuals. The amount of steam for coal gas is stated in dollars at $1649.97. The next item of material is purifying materials $389.13; that is all the items in the coal gas account as stated in the report

Turning to item of water gas materials in the record the first item is steam for generating water gas $4183.74; the next item is generating fuel, coke 2698.18 tons entered st $14,491.19; the next item is enricher 495024,—I am not able to read the dicimal, at .042, amounting to $20,623.74. I think there is an item of steam for water. I haven't come to it yet.

The next item of materials for water gas is water gas tar residual account 45809, and following is .02, and the entry of $916.14; and steam, this is in the water gas account, the only word is 'steam' with an entry of 880.78; then purifying water gas material against which is entered $392.04.

I was looking to see whether there are any other materials there; here are items of Work's Expense, Supplies, $1662.97, that appears to be on its face a mixed item; it is in the water gas department, well enough may be labor or gas materials or both, I have forgotten which column I put it under. I might put it under either; it is too indefinite to classify.

Going back to the coal gas department for the labor items we have retort house labor $5,108.18 and I find an item of retort house expense which might be either labor or materials which was entered in the material column for 201.54; it is entered in the report $201,54, and so copied by me. I copied the total retort house expense, that is, I made a summary of materials and labor separately, and I put it in the summary of materials although it is uncertain under which one it goes.

Then the purifying coal gas labor, I find under coal gas here $386.68; then the next labor item apart from repairs is
1616 sundry of labor $1003.51; that is, coal gas.

The work's expense and supplies is 878.50 for coal gas; then here is set down an item for general supervision of coal gas, which I did not include in my total of the labor, the item is $1052.67. It is included in the company's total but not mine. It is not in my classification. Gas making labor of the manufacturing department of water gas is $3737.66; and the next item I find is purifying water gas labor $799.10, a general supervision again which I did not include in the work's expense labor; the next is labor, that is the last one I find here is $2,266.18.

Now under water gas generating house expense $24.03 I find the item and notice it in taxes, but it looks as though it might have been a repair item and I may have so used it,—no I didn't, I assumed it was not and put it in the cost for material, that is, $2403 water gas generating *water gas generating* house expense.

Now, the items are the same for the total amount of labor for purifying labor, coal gas retort house, gas making labor, water gas and labor, according to my tabulation is the same apparently as the amount shown by the records I have referred to, and the total I make to be $14,201.31. The total in the record you would have to add it up. The total amount enricher for water gas as shown by the record, of the materials there is shown to be $20623.74. The bench fuel charge which counsel has said is $5347.42, but I haven't accepted that. That is the amount set down in the record. I had

it before me and I left it there. The amount of the generator fuel, water gas is set down in the printed record at $14491.19; I suppose that is what the record of the company shows for that year,
1617 that is a part of the company's testimony in the case. For generator fuel I have entered nothing, I have dropped out that $14,491.19. The amount of coke residuals as shown by the company's record before me is $20537.73, which includes, as shown by the record, the Breeze residuals; and for those two items I have entered in an exhibit "280" for coke residuals $6753.18 and for breeze residuals $1109.08, but for the same quantities, I have taken what I believe to be the actual residual quantities of coke from the whole manufacturing operations. I have not taken what the record shows as the amount of residual coke, as to the amount of credit that was given the plant on account of coke residuals.

1618 Now as to the coal gas tar residual the record shows there was a credit for *aht* account of $1248.26, and with respect to that item I have entered a credit of $1,607.56.

Now I have the total of the labor and materials for the year 1907 as shown by the company's exhibit for materials and labor making gas per reports of the company, the total of which is $90,615.01; I have the total in my exhibit "274" for materials and labor at $90,615.01; I set the company's item right down as far as accepted them and added them up, of course you understand the credits are not in that, my total residual credits for the year 1907 is $10,386.00. I have in connection with that in my exhibit "299" the amount of labor and materials less residuals, which is $80,229.01. I don't remember what the records of the company show as to the total amount of materials and labor less residuals for 1907.

The criticism I make for the amount for labor and materials for 1907 lies wholly in the manner of handling the residuals. Whether that difference results in a difference of about $5,018.09 in the way I handled it and the way the company handled it,—I will say that I don't remember what it amounts to, it amounts to that as far as I know that is the only difference; and there may be a difference in the addition somewhere, but the only difference I have attempted to make is the difference in treating the residuals. By the same method and on account of the same items in the company records I get a difference for the years 1908 to 1912 inclusive; I have treated the residuals uniformly in the way I have indicated for 1907, but I haven't attempted to change any of the labor and material expenses, excepting that I have left out the charge for supervision all the time as a part of the labor expense at the works making gas. I haven't treated the supervision as a part of the labor and materials in making gas, I have classified it under another heading. I put it under the heading of general expense.

1619 For the items of salaries, office, distribution and general expense for the years 1907 to 1912 inclusive, and for the year 1907 I have offered a tabulation showing that those items should have been $24,214.41 as per my exhibit "341". Asked to refer to the record of the company here and show the items going to make up the amount entered in the record covering those items

of expense for 1907,—I will say I can shorten this a little if I read off on my sheet here, on which I have copied what is in the record. I will read the amount I find in the record under the headings, the amount in dollars covering these items of salaries, etc. for 1907 are as follows: reading meters $952.10; collection clerical salaries $5,355.20; collection office expense $770.14; delivering bills $176.26; outside collections $709.63; general clerical salaries $394.80; general office expense $478.25; executive salaries $3,215.52; general supervision coal gas $1052.67; general supervision water gas $2084.52; promoting new business $13,394.04; total salaries and office $28,583.13; street department expense $797.48; meter department expense $458.60; gratuitous work $1,891.53; legal expenses $2,160.31; incidental expenses $1,723.38; rent collection office $634.42; rent executive office $664.04; total above expenses $36,912.89; that is the total as shown by the record for those various item- mentioned. I have allowed $24,214.41 in 1907, for the estimate of salaries, office, distribution and general expenses. Referring to exhibit "341" I find the company's records show that the amount expended by the company for those item- in 1907, the reported expenses of the company showed $36,912.89 so that $12,698.48 is the difference between those items, I didn't subtract the difference but it is the difference between them.

Referring to exhibit "285" and being asked to state what particular items in that exhibit of the record of the company I reduced,
1620 eliminated or in any way changed,—as previously testified I am not able to make the reduction item by item. I haven't carried the study of the actual labor the company charged under those items to a sufficient extent as to be able to do that. The item of promoting new business of $13,394.04 it looks to me would suffer a large reduction but I am not going to testify what reduction I would make without further study because I don't know enough about what the company charged under that. Taking just the single item of reading meters, I don't think the item of $952.10 is excessive.

On the item of the collection clerical salaries, I don't know the number of clerks they have in the service, I don't remember if I ever knew. The number of clerks necessary to transact the business of selling gas and getting the money would have a good deal to do with the item but the number of clerks the company has to sell appliances, etc. wouldn't have anything to do with it. I haven't any precise idea whether that item of $5,355.20 is excessive, because I don't know what services were performed for that $5,355.20 what you have charged and how much should be charged under some other item. I doubt very much that it might be an entirely proper charge. It is conceivable that the company might charge enough to calling it collection clerical salaries properly to the amount of $5,355.20, there isn't anything hard and fast about the items that may be charged in those three ways. There isn't anything in that that would indicate to me what the service was, it might contain the secretary and particularly the manager, it might contain supervising or bookkeeping, you might write it in that way. In Massachusetts the secretary stays right there and tends to business and draws

a good salary for doing that. Whether that is regarded as a clerical salary,—I don't know what is in the man's mind. And not knowing that I wouldn't want to criticise the item standing entirely
1621 be itself, but taking it in connection with 19 other items I do criticise the bunch.

Collection office expense $770.14 that may be entirely unnecessary in view of the $5,000.00 item that just preceedes it, I don't know whether it is or not, I haven't any opinion on it at all.

I have not been here in the company's office since October 1912 making this examination, but I have been in the company's office a moderate number of times since then. To say that I criticise the accounts collections, clerical salaries without knowing what is included therein, or without making any effort to ascertain,—I say that is not a fair statement of my position at all: I criticised the total of this bunch of 18 or 19 entries which amount to $36,912.89, it is too much, for attending to the clerical management and office business of that company, but as to setting here and guessing at what the company has chosen to charge under those headings I am not going to do it. Asked whether I wouldn't know that was too much if I didn't know how many items went into that total, I say it don't make a particle of difference how much the company separates its items, the question is what departments of the work of the company was actually preformed for that $36,912.89, of the names the company tacks on it don't matter one way or the other. Under this heading I have the general supervision of the water gas department. I think I know what the classifications of Massachusetts would be with respect to general supervision at the plant; under the Massachusetts classification that would be included in salaries, etc.

I noticed in this Lincoln company in these items of salaries, office expense, etc. that they included the item for promoting new business, I took particular notice of that $13,000.00, that was big enough so I could see it even. I haven't eliminated the expense
1622 charged under any one of those particular items, but if I were to assume that the company actually spent $13,000.00 hustling around trying to get new business and that was what all the $13,000.00 went for I should certainly eliminate a great part of that item, most all of it. There wouldn't be a very large item expended on that account, it should be pretty small. I would allow a fraction of one cent per thousand or less than that for new business. Whether as a result of that new business expenditure any new business had been acquired, that would be an interesting fact, but I should not be able to justify the expenditure because it had resulted in some new business; then too even if the company had all of this money as it has had from the consumers here, it wouldn't necessarily follow that the company had to spend it again and keep on spending it over and over. If I knew for that $13,394.04 that the company had actually acquired a large amount of new business and being asked whether I would throw out the expense anyway, incurred in getting it,—I would say I am not affecting this expense and I haven't thrown it out. I don't care whether the company got a large or small return for that $13,000.00 or whether it has got to go on mak-

ing expense of that amount in all of these years for rate making purposes I don't think it has, but if the company wants to take that out of its own pocket I have no objection. Under the company's method of doing business the increased consumption of gas doesn't seem to result in a benefit to those who are consuming and taking the gas. Leaving this company out and as a general proposition down in Massachusetts with a reduced rate when the gas output goes up for a couple of years they run along together. Under a situation of that kind I don't think the company would be justified in spending money to get new business, I think the company would in-
1623 crease the business faster to reduce the price of gas rather than spend the money getting new business; that has been my observation as an observer and student of gas affairs, and accounts and operation of gas companies, and some as a consumer of gas, I live in a town where the gas rate is high, and I am more economical. I really have forgotten the rate in my town, but somewhere near $1.50, I think that is the rate. Asked whether I haven't had time to get that rate reduced,—I would say I am going after them later, there is a good deal of kicking about that rate and people are talking to me to have something of the kind done, but I told them I was busy at present and that is a small town with a few million feet of gas per year. The amount of gas consumed has a great deal to do with the price. Assuming that if the company should spend some money to get new business it would result to the benefit of those taking gas I would say that hasn't worked out here that way, because the company has placed the money in its clothes, and they parted with it and the gas rate is double or thereabouts, and no reduction has come from it. Asked w-ether I think the history of this company justifies that general statement and whether there isn't about as much truth in it as in some of these figures I will say I am talking about the recent history of the company, I am not criticising back in the early days; they reduced the rate and they got an enormous expansion and I have an exhibit that shows that. As to when the company put in the new business department and began spending the money to get the business, I don't know precisely I notice in these sales of 10 years I have an*a*l*i*zed the general expenses that although the out-put has greatly increased down to 1912, this expense is 50% greater than before that per M feet. I have taken the same items from 1907 to 1912 and the company's expenses under its own items is 50% more in 1912 then it was in 1907, under my summary of the company's items. I have taken them out the company's own books and added them together
1624 for 2 years and for each one of those items I have made a computation or a long series of years here.

Referring again to this item for promotion of new business amounting to $13,432.41 I did not say that the item had been increased 50% per M feet sold. I said that group of items in which that is found had been increased 50% since 1907. I mean by that the group of the items I read from exhibit "285" the items are all the same in each of the exhibits. I mean to say that the expense per M feet sold since 1907 has increased 50% for that entire

group of items, as I have denominated them in exhibit "285", all expenses except materials and labor-making gas, repairs, renewals and taxes, I put it all under the same heading each year. That is I have put into the tabulation the company's same items for each year, I have taken just the same items each year from the records and added them up just as they appear, and they are 50% greater in 1912 than in 1907.

Concerning whether I said I was not able to make any specific deduction from any particular item because the classification being too general I couldn't tell what would be included in that particular item,—I said I didn't have sufficient information as to what the several items were it included so I would be safe in criticising to the full extent the line of items as they appear. I do criticise the new business item as all together, all together if it means what it says new business.

Whether on the item of executive salaries of $3,215.52 I wouldn't be able to offer any criticism because I wouldn't know what would be included in that item. I say I wouldn't know what value the company received for that $3,000.00 if any.

Whether that same would be true of the item of general supervision of water gas, coal gas, clerical salaries, outside col-
1625 lections, collection office expense, collection clerical salaries, and whether I wouldn't be able to determine from the reports under any of those general headings whether the items were proper or not because I wouldn't know what services were render- with respect to those matters,—I would say I could make an approximate estimate about those different items, the trouble lies in the uncertainty, I know some of the items taken to cover that class of service that all must cover is altogether to- great. I could criticise those items to some extent as they stand without knowing something more than is shown in the classification itself, but for the full criticism of the bare individual items I should want to make a further study. They are not sufficient in themselves to explain to me what service has been rendered under any one of those different items.

Whether I experienced some difficulty in studying the records of Massachusetts,—I would say we avoided that difficulty by doing what I have done here, taking the information and range of service in a certain department of that business and adding the averages there together. Taking the classification of accounts of a number of gas companies in Massachusetts upon which I have based my opinion here I would not be able to accurately tell from that *that* classification what service had been rendered under any one of those accounts, as to what would be a proper amount to put into different companies for these items here in this report. I did not get from that report any substantial different information than I can get from the company's report here as to what is included in these different items. Whether I can get enough information from this report to criticise and say whether it should be more or less,—I would say to criticise a particular item covering that same class of work you have got to get the class of items covering the same

service. I think to get the class of items for companies mak-
1626 ing gas in Massachusetts that of expense, except materials and labor is shown on that expense sheet which consists of 30 lines printed. The first one is coal; 2 is enrichers; 3 purifier materials; 4 water; 5 wages at works; 6 repairs and maintainence of works; 7 renewal of plant (including retorts); 8 apparatus and machinery (station tools and appliances). To know how much expense a Massachusetts company reports under the head of station expenses we look to see what they report. This report purports to be a copy from the little town of Taunton and being asked to state from that item #8 whether supervision of the plant, water gas plant and coal gas plant, is included in the expense "station tools and appliances",—I would say there is no supervision included in that. I know that from my understanding of these accounts and study of them. I got it right from the account itself, from the tools and appliances under station expenses. Station expenses as shown in that report says for the manufacture of gas. That refers to tools and appliances at the station and no other expenses than tools and appliances.

Now for the distribution of gas in line 10 wages for clerical labor in this department and salaries or commissions of collectors,—I am asked to tell from that item the extent of services rendered for the amount I find in the item. I would say in taking that item separate they have combined them together as I have in my exhibit in this case. I don't know the extent of the clerical labor nor the salaries that are paid under that particular item; it is in just the same situation as were all of this company's items. I have not said that these reports told me of the division of labor and materials, I understand the details I got there and here.

1627 Taking the item #11 repairs, renewals and maintainence of mains and service pipe, and line 12 distribution, tools, and equipment including expenses of horses and wagons and automobiles, I don't know that they have automobiles connected with gas plants they probably do but nobody is criticising for having them if it is a necessary expense, it is a legitimate expense. Asked if I criticised line 13, repairs and renewals on meters, and line 14 gas stove fixing, repairs and renewals I don't even criticise this company for handling gas stoves, it can handle all it is a mind to, I never said they ought not to have gas stoves in stock. Any other company that I compared with this company with all expenses I have used as a basis includes all of their expenses on gas stoves. I didn't eliminate all the expenses for appliances in stock, I didn't do anything with it; I didn't include the gas stoves as a part of this company's plant. I didn't include the appliances in the gas plant or in the working capital. I don't deny that the company owns them and in owning they should if they don't charge them to the consumers.

In item #15 lighting and repair street lamps, item 16 lighting and repairing materials used for other lamps; for office expenses and management; line #17 director's allowances; 18 salaries of officers; there isn't anything under that item to tell how many

or what officers, and these items don't disclose that, but other parts of that report do, I say again that they don't disclose what the men do that get that money. Line #19 other general salaries, that discloses what the items for that expense were but not precisely and absolutely. Line #20 rent of offices not owned by the company; 21 repairs and maintainence office; 22, general office management expense; I say the general character of what is included in that is indicated. This shows an expense of $2,679.12 and I would take and add the items all together as we have done there, they
1628 have men engaged to annalize the company's accounts down there.

Now for miscellaneous expenses whether I know what would be included under that as shown in this report, I have included whatever it is, I have included any expense that I have compared with this company's expenses. There isn't anything to indicate what this $162.87 is for.

Law expense is #24, Insurance #23, fire and employers' liability; 26 is claims; 27 bad debts; 28 incidental expenses; Whether there would be anything under the head of incidental expenses that would indicate to me in that record just what this company spent for that I would say sometimes they put in a sub-heading and sometimes they don't, it doesn't matter if I don't know. That is the method I have been taking as coming from Massachusetts. As to whether I can understand that classification and criticise and act upon it when I am not able to offer a criticism of the items in the report of this company,—I would say I think I can criticise the classification of this company as a whole, and that is the way I have made my comparison.

Asked to point out in this exhibit here which I presented where it says opposite line #18 salaries of officers, where there is anything in this classification of what is included under salaries of officers than would be in subdivision 18,—I would say lists of officers other than directors President W. C. Davenport, Taunton, Massachusetts; I am reading from this report of the Taunton report of June 30, secretary W. T. Soper, treasurer Walter T. Soper, salary $3,000.00; that is the salary list of the officers. Whether that is all I know about the salaries or what would be included under item #18 salaries of officers as shown in that report,—I have my general knowledge on the way the business is done whether my general knowledge would be as good as the station where I have this report that gives
1629 me the general classification of the accounts and I have the records of the company that shows the actual money that was paid out so I could take each one of those accounts and check back to every dollar paid out,—I would say I have had no trouble in annalizing this company's accounts. Possibly in this account the books of the company show why that money was paid out and to whom, but I would like to confirm that. Down in Massachusetts with this record in the investigation of particular companies I had the accounts beside me to check it up against. I don't think my time would have been better spent to annalize these accounts and trace back what the money was paid out for rather than brin- here a re-

port from Massachusetts of general classification without any knowledge back of it,—because we know what is covered by that classification. Asked if I know what is covered by their classification why I am not able to take the item of collection clerical salaries amounting to $5,355.20 and offer criticism or approval of it,—I say because we don't know just which of the items are under item 18 or 19 headings; That covers the class of labor; labor, general office expense and management of the company; we don't know what the company has tucked in with nobody to control it and the company does as it has a mind to about it.

I can take the books of the company and check every dollar that goes into that $5,355.20, there is no reason why you couldn't but when I find the company is charging two or three times as much as other gas companies are charging for that group of items, as long as it is getting it tucked in there and is getting the money out it isn't necessary. So I prefer to criticise,—on that section of the account, general office,—the whole account rather than put my finger down on any one thing. I haven't criticised the manufacturing account;

1630 the company has to hire its men and it pays in the market for what they are worth, it pays for its labor and the price of materials, but when it comes to the officers they can take what they are a mind to out of the treasury for office expenses and clerical help. Office expenses, clerical help and officers might have advanced a little for individuals since 1907, but with the rise in the out-put of gas it ought to shrink, experience shows that it does shrink. Whether this item has advanced since 1907 I say no, per M feet sold it is less. Being specifically asked whether the amount the company has to pay for help in its office in my opinion has advanced since 1907,—I say I think the officers must have advanced for it has gotten up to 31 cents where in 1907 it was 20 cents; I think the labor and salaries for help in the office has advanced a little since 1907. It might be a moderate amount of advance; it does show up very particularly in a number of those records I brought in from Massachusetts. Whether I went a long way from hom- to get to records in this case,—I didn't to get the gas manufacturing account down at the plant, that didn't advance very high. Whether that was on account of my adjustment of the accounts I will say I have taken some items that are high.

I am acquainted with Prof. Beemis. I don't know whether my view would agree with him on this item of new business as to whether the company was justified in incurring that expense in order to get that business. Witness having read to him extract from Prof. Beemis' testimony taken from the Supreme Court Record and being asked if having in mind the idea Prof. Beemis had of the item of expense of new business of this company, and having his view before me, would I still criticise the amount of money this company spent to get more business,—I say I certainly would, and I suppose that Prof. Beemis must have been speaking without having the facts before him, it was in 1907 when this whole group of items amounted

1631 to 20 cents per M feet sold and now amounts to 31 cents per M feet sold. I was speaking about new business but as to what that did amount to in 1907 per M feet I haven't gotten that

item divided. Coming back to the new business expense for 1907 Prof. Beemis had before him the amount of sales for that year and witness is asked if they were not 179,366 M feet,—that is right. And the cost of the new business was $13,394.04; I haven't figured how much that would be per M cubic feet. Asked if that wouldn't be 7.46 cents I answer I haven't figured it. The amount of gas sales for the year 1912 was 234,386 M feet; the expense of the new business department for 1912 was $19,692.64 as to how much that is per M feet I would say I haven't figured that and don't know whether it is 8.4 cents, at this time when I am testifying I certainly would still criticise the money expended in the new business department. I haven't said that I wanted to clip that all off, I said that it would have to be greatly reduced; I also said for the companies in Massachusetts that I figured in all the new business they wanted to have and pay for, I haven't cut out a dollar. You can not take this report from the Massachusetts and precisely classify the expenses incurred by *those* company for salaries and office expense as distinguished from distribution and general expense, but you can separate the expenses, you can not do it precisely but you can approximately, I specifically testified on my direct examination that I based nothing on that division that I indicated for convenience, that the total was what I relied on. I offered an exhibit classifying the very expenses from the report I have here from Taunton for salaries and office expense distribution and general expense in two separate items, and at the same time said that there was not particular importance attached to that division, I merely set it down the*ir* for convenience. I did not present that division and so testified, to show that this company was paying more than it should pay for salaries and office ex-
1632 penses; I did not present it to show that they were paying too much for distribution and general expenses; I drew no conclusion there illustrated. I didn't exhibit it as a proper classification of those two accounts, I said I set the accounts down that way as a matter of convenience, when I began this tabulation I thought I might be able to get the information in that way that would — of some value, but later concluded that any classification attempted to be based on that division would not be satisfactory and I didn't base it on that. I did not say it would be of no value, I say it might be of such questionable value that I haven't attempted to base any value on it in this case. I simply took the total of the items, and that was made very clear on my direct examination.

I don't find any item classifying general supervision of coal gas, general supervision of water gas, in the Massachusetts classification of accounts; we don't classify them that way. I would know where to find that item in these accounts, I would know where the labor pr*e*formed, indicated by those two words would be pr*e*formed; I would know it would be pr*e*formed in several items. Here under salaries of officers or general salaries ordinarily. It might possibly be slipped in under general office and management expenses. It would be very unusual and improper to put it under miscellaneous and incidentals. I have added those all in the comparison. It would not come under station expenses, notwithstanding the expense in-

curred in the station it isn't intended for that at all. This copy of the report submitted by the Taunton company for 1913 is a copy of their report, and has the date on the cover. On page 7 of the return is a column headed depreciation, and there are the credits during the year meaning any depreciation the company charged off from any of the physical equipment shall be there written down, or any other credits for what they may sell or what not. It does
1633 not mean covering the general item of depreciation on that property. There is nothing in the repor- that indicates that it does cover the general item of depreciation on that property; it is my general knowledge of the thing and the business in Massachusetts that tells me it does not cover that. I don't mean to say that it only carry-s in the item of depreciation such materials as the company has disposed of in the year; only such changes as the company of its own volition chooses to write down without any control on the part of the Commission. It is not charged as a part of the operating expenses in the section my attention has been called to.

In addition to that item of depreciation on the general classification, consisting of 30 items containing the amount expended for repairs and renewals, as those items are taken care of by repairs and renewals,—I am asked if I find in another portion of the report an account set apart specifically for depreciation.—to which I reply if any, in many of them you won't find a dollar. I never said that the Massachusetts reports carried the item of repairs, renewals and depreciation as one item. Often times they do distinguish in Massachusetts between depreciation, repairs and renewals in the actual operation of the company's property. The report does not require them to do it. They can do just as they are a mind to. I said in basing my knowledge of the Massachusetts reports you could not segregate depreciation from renewals; for repairs and renewals together you can. I say that the repairs and renewals as separate parts of the operating expenses of the company does not appear there as a part of the operating expenses.

I wouldn't attempt to say that there is any item in this classification of street department expenses, meter department expenses, gratuitous work; that corresponds in this company with what I find in the Massachusetts classification. Being asked where I
1634 would put those items in what particular class of items,—I wouldn't attempt to say there is any item that exactly corresponds with that, I wouldn't undertake to put them anywhere. You can take two classifications that go to different bookkeepers or different men, and the classifications often have the wording exactly the same and the two different bookkeepers will enter different sums for the same work in different places; it is impossible to compare them and say that the same items were put in the same way by different bookkeepers, even if the classifications they were using were just the same; for I know from studying these reports and other documents in connection with the Massachusetts business I find there under different general purposes they get items of the same kind charged differently in different companies.

For the years 1908, 1909, 1910 and 1911 I pursued the indicated

classification as of 1907 right through the accounts of this company; and my criticism with reference to these accounts for those years would be of the same kind as in 1907. My knowledge about the particular items of each of those accounts for those years would be the same in kind about as the accounts of 1907.

Whether I have eliminated for the accounts for salaries, office, distribution and general expenses for 1912 something like $44,818.67 from those accounts,—I don't remember the amount my estimate differs from counsel's statement. I didn't assume for my purpose the amounts shown in the books of the company as the amounts that they actually expended on those items. If any such expenditure was made I criticised it as being too large; too large by over $44,000.00 if that was the difference between the amount I say was reasonable and the company's statement. With respect to that particular year where I eliminated $44,000.00 if that be the amount, from the operating expenses of this company on account of salaries, office, distribution and general expenses, and
1635 asked if I am able to get an item that constitutes a part of that $44,000.00,—I say the concrete item of salaries here, collection clerical salaries $6,975.16. The executive salaries amounting to $8,917. and general supervision of water gas amounting to $3,554. is too large a salary for the management for supervision of the company to the extent indicated as near as I can tell. Thetake the new business management that is too large. I haven't prepared to scale down the items each one separately, but I have mentioned some. Whether I criticised them but can't tell how much they should be reduced,—I can look them over and on consideration reduce them a considerable amount; I haven't done it, I can't do it on the spur of the moment, I don't want to deal with them recklessly. When eliminating the item of $44,000. out of a total of $72,000.00 and asked if I did not have time to pick out some of the items,—I looked it over and I saw those items were longing to pick; it wasn't necessary how much I should take off of any one of the 19 items that run it up to $72,000.00 for the general office expense to manage it and pay the general expenses. It includes more than the general expenses, it includes the distribution expenses, but not the repairs distribution expense that is a repair. It includes all of the expenses connected with the distribution department consisting of more than half of the property of the company, except repairs and renewals, it includes all the other expenses connected with the distribution of gas in this city. The distribution system constitutes a large percentage of the total percentage of the company's property. I don't know what the exact amount is whether 60% or not. Whether I made a horizontal cut or not, I have denied a good many allegations made here, I don't think I will deny that; I don't consider that exactly a geometric method of dealing with it. Counsel is welcome to it if he likes it that way. I think the reply
1636 on the size of the executive salaries for 1912 gives an indication to some extent of what would be included in that item. I think there was included in that item the salaries of some persons who are supposed to aid the company in managing its business.

With such a heading as that it would often include all the salaries of the general manager and president. That would be George Montgomery and the secretary, one man would very likely hold the combined offices here, he does in many of the Massachusetts companies. I think in this company the general manager and secretary are two different persons, and some more. Whether the salary of the superintendent of the distribution system would be included in the executive salaries,—I would say if the general manager did the work of the superintendent of distribution, except what was done by the foreman which is the case in many cases, they don't have a separate superintendent of distribution. Whether it would include the superintendent of the plant, again I say the general superintendent or manager of the company would often do all the necessary superintending of the plant outside of the good gas works foreman who would stay at, and have his wages charged in the wages at the works. I don't tell what is included under that heading as to how many officers and who they were. I am telling the class of service such an entry might fairly be expected to cover; but just how many persons the company has included under that entry is a matter within its knowledge and not mine. It might include the amount paid to the directors for their attention to the company's business, and often times does. It isn't a very large amount and it could be put under executive salaries very well. I don't think I would be inclined to criticise for a company of this size the $8,917.30 as an excessive amount for the general manager, secretary and superintendent of
the distribution system, superintendent of the plant and com-
1637 pensation paid to the directors. Whether I would know whether to criticise it if I didn't know what it covered,—I would say only in connection with other items, when you see $72,000.00 written down there, there is a pig somewhere. That $19,692.64 is one of the pigs. That is for getting more business, that is the way the company labels it, I don't know how the company let go of that $19,000.00, it could hire a lot of solicitors on it. Possibly I could find the pig by checking the accounts, but the company's accounts are not particularly easy to check, counsel might be able to do it.

I notice Mr. Lea's exhibit showing the number of house services and the number of meters in use and the sales of gas from 1873, following section "O" in his report; and notice the line showing the sales of gas in this exhibit beginning with 1872. I notice that line starts off in 1899, I don't know that the increase in sales of gas in this city took place after the new business department was put in. I don't have any record of the company's dealings until along in 1903, near the end of 1902. I have no information that the new business department was put in anywhere around 1899 and don't agree to that. In 1902 as shown by this exhibit the sales of gas were about 78 millions. In 1912 234 millions. The population of Lincoln in 1902 was a little over 40,000; in 1910 it was about 44,000,—44,146 in 1910,—and 49,000 and something in 1912 a gain of 3,000 in population and the sales of gas increased from about 80 millions to 234 millions. And from 1873 to 1902 the company had only pushed

up its sales to 80 millions; that is a very common record, I have got this for a great many companies. I think it is evidence that the new business department put in by this company in 1900 had something to do with getting people to take gas; I never suggested that I didn't think so. I should have to say that I think that some portion of the
250 million feet which the company is selling now is evidence
1638 that it is due to the money expended in the new business department, I never suggested that I didn't think so; I think it was a factor. I don't know what proportion of that increase I would attribute to the money spent by this company in its new business department. I could arrive at a rough estimate of the amount of that increase that I would attribute to the money spent in the new business department, but I haven't done it. I would say from the history of the company back of that that a moderate proportion of it was doe to the activity of the new business department. If you take the increased sales *the* come to this company as a result of the expenditure of the new business department I would want to give the benefit of those increased sales in the reduction of the cost of gas by eliminating the expenses from the company's record that made it possible to put those increased sales on its books. I say it is better and fairer with the consumer that they should get a lower rate and that they should get as stimulating the sales than that the company should spend $19,000.00 on new business. I didn't eliminate from the company's books the amount it cost it to put the new business there, I have allowed the company as much for the item of expense included in new business as many, as successful company's in Massachusetts as this company, have spent. As to how much of the new business expense between the 80 million and 250 million I would want to allow this company as a part of the operating expense,—I haven't segregated it; I have allowed the company from 12 cents up to 13 or 14 cents per M feet gas sold; it is ample to include for some new business in addition to the other necessary expenses. I haven't made any compilation in dollars per M to allow for the expense this company was put to to put that new business on its books, if I go back to the time the company had 80 millions of gas, it would
increase the cost of gas per M if I had to base my computation
1639 on the sale of 80 millions. Whether I want to eliminate from this case the expenses this company paid out to increase those sales and get the benefit in the reduction in the cost at the same time,—I would say not necessarily, the expense the company says it incurred I say was too big.

Again referring to exhibit "308" on repairs and renewals, and depreciation and also exhibit- "309" and "310" I would say that "308" has been withdrawn, there is no*t* particular reason why the exhibit should be withdrawn any more than it is going to take up a lot of useless time to compare that exhibit with "309". I have explained how the figures were compiled. I shall not have to ask to have it withdrawn only the figures are not set down to the company in those two places, they foot up finally to $104,000.00 and something. in each case, and it will be a lot of bother to explain the two, they being taken from different places in the gas reports; they don't check

out with my other exhibit on the same subject, but they check out absolutely with the company's gas reports, there is several hundred dollars difference in the final total.

Exhibits "309" and "310" are on the subject of repairs and renewals. Exhibit "310" shows the amount of repairs on the water gas buildings of $486.47; and on the coal gas buildings $210.46, for the year 1903. Exhibit shows the repairs and renewals for the same year. The summary of the two items of repairs and renewals for the heading buildings in exhibit "310" is $696.93, I show it as one item. I show in exhibit "310" machinery, which probably includes coal gas apparatus in the amount of $436.94 and in exhibit "309" I show the summary of that with other items. As I now remember it the machinery items in exhibit "309" are divided as between gas benches, water gas generators and other machines; and I think *it* those items go to make up and include all the items in exhibit "310" under the heading machinery. I don't find
1640 the item general apparatus repairs coal gas $436.94 as a separate item. I find general apparatus repairs water gas in the amount of $418.23 in exhibit "310", and the same item in exhibit "309". I find in exhibit "310" general apparatus repa*ris* water gas immediately following the $418.23 in the amount of $868.42 in exhibit "310". I do not find the item in exhibit "309" covering the same item in that language; I find an item for machinery $1305.36 which would correspond to $436.94 for general apparatus repairs, coal gas and $868.42 general apparatus repairs water gas in exhibit "310".

I haven't got the total for water gas apparatus repairs in exhibit "310", that starts in for another series. It is not added up in exhibit "310" as separate items, that addition wasn't made necessary, it is perfectly plain how exhibit "310" was added up for all the machinery is added together. Whether it amounts to $1286.65, —I don't know, I haven't added it that way. I only have one total in exhibit "309" for the year 1903 and that is $5912.21. I have in exhibit "309" under the heading machinery $1,305.36; and in exhibit "310" I have two items that go to make up that as I called attention to.

Whether for street main maint*ainence* I have $471.92 in exhibit "309" and in exhibit "310" service maint*ainence* $293.00 and meter maint*ainence* $794.28.; with the service and mains added together in exhibit "310" being the addition not carried back into "309",—I would say not the separate items. I don't remember of any distinct purpose in arranging exhibit "309" by bunching the items and changing the arrangement for the same items that are in exhibit "310" and taken from the same record,—except to shorten the matter a little. The objection in introducing two exhibits covering the same subject matter.—exhibit "309" is a summary for all the years from 1903 to 1912 consisting of two pages where in exhibit "310" you have the whole page devoted to the detail entries of one year, it is a process of concentration.

1641 The totals for the second year, 1904, of repairs and renewals as shown by exhibit "309" is $8,544.68; and the same

total is shown in exhibit "311" for the same items and again I have concentrated in one instance the items as they appear on the books of the company, and have combined the items to get the total. Exhibits "310" and "311" I took the items as they lay in the books of the company and abbreviated them to get exhibit "309". Whether in exhibit "309" I show the total amount expended by the company for repairs and renewals for the third year 1905, and the same thing is shown in exhibit "312",—I would say the detail for the year 1905 is shown in exhibit "312"; segregated into the divisions that appear in the books of the company. The exhibit deals only with the one year showing the entries as they appear in the books of the company. Exhibit "309" for 1906 shows the amount expended by the company for repairs and renewals as $11,555.67; and corresponding to that total exhibit "313" has the same item.

For 1907 exhibit "309" shows the amount expended for repairs and renewals to be $12,920.67; and corresponding to that total exhibit "314" has the same item.

For 1908 exhibit "309" shows the amount expended by the company for repairs and renewals to be $8,915.99; and corresponding to that total exhibit "315" has the same item.

For 1909 exhibit "309" shows the amount expended by the company for repairs and renewals to be $9,104.01; corresponding to that total exhibit "316" has the same item.

For 1910 exhibit "309" shows the amount expended by the company for repairs and renewals to be $10,721.04; and corresponding to that total exhibit "317" has the same item.

For 1911 exhibit "309" shows the amount expended by the company for repairs and renewals to be $14,898.14; and corresponding to that total exhibit "318" has the same item.

For 1912 exhibit "309" shows the amount expended by the
1642 company for repairs and renewals to be $11,712.60; and corresponding to that total exhibit "319" has the same item.

And the net result of those items combined in toto I did not think the company was charging enough, or spending enough for repairs, renewals and depreciation. Whether for repairs and renewals standing alone I think the expenditure was reasonable and justifiable,—I should not seg-regate the matter here any more than I would anywhere else. I don't think the company can set up any definite sum as the correct sum for repairs and renewals, that is, I think it is very hard to arrive at any statement of that kind. I haven't arrived at it, but if you take repairs, renewals and depreciation you can get a pretty fair figure. But for repairs and renewals only it is very hard to set a figure: I haven't found any figure for that because of the uncertainty of the term renewals, but not the uncertainty of the way the renewals go along. I had access to certain records of the company, and I found them very bare of information for any specific items that were involved in these exhibits for repairs and renewals for each of these years, and made considerable investigation to see what those items were. I went through a considerable portion of the voucher distribution records,—that is the name the company applies to one of its forms of records,—I had an assistant

going through it, I did only a fraction of the work myself, I indicated what I wanted and started the assistant and he stated the result, and when I got them I found I wasn't getting very much information or light on the subject. That investigation was never completed, and isn't now, I have other records in the company's office that I have in mind that I shall try to complete it which I shall go and see if I can't get some more light. I found not a sufficient amount of detail in 1907 or in any other year of these repairs and of what the money was expended for; I found some information; I found
1643 these entries I have allowed, and I have some addition- information, by going through the voucher distribution records but not as much as I would like, or would think sufficient for a complete an*n*alysis. It is not necessarily as much information as I would get out of the Massachusetts reports under the classifications of repairs and renewals. In the classification here or reports, that I examined in the division of the items of repairs I had a bunch of repairs and the amount for the year 1907.

The buildings repair for coal gas and the amount for 1907; and the general apparatus repairs coal gas and the amount for 1907; repairs water gas generating apparatus and the amount; building repairs water gas and the amount; general apparatus repairs water gas and the amount; street main maint*ai*n*e*nce and the amount; service maint*ai*n*e*nce and the amount; meter maint*ai*n*e*nce and the amount. I had those items and they are quite as specific as any items I have access to in the Massachusetts reports, but there is to be taken into consideration in connection with my answer to the other questions that the Massachusetts reports include a good deal of matter besides the entries about repairs and you can compile the various entries and find out where the company spends the money and where it charged it and get some idea where it was there.

In the Massachusetts report I have a classification, #6 repairs and maint*ai*n*e*nce of works.

Opposite that is set out the dollars expended for that item. There are that on that page to indicate what it is spent for beyond what would be indicated by the wor*k*s repairs and maint*ai*n*e*nce of works.

The next item is renewals of plant, including retorts. Whether I regard that as an item of repairs and renewals why renewals of the plant is a renewal of the plant. There is nothing in that item beyond the amount in dollars set opposite it to indicate what it
1644 was spent for any more than a renewal of the plant. I take it to mean the works plant.

Item 11 says repairs, renewals and maint*ai*n*e*nce of mains and service pipes. Opposite that appears the entry of the dollars; there is nothing else on that page to indicate in particular what that was spent for.

Under item 13 I have repairs and renewals of meters, there is nothing in that item beyond the amount in dollars to indicate what that particular thing was spent for.

Under item 14 I have gas stoves, fixings, repairs and renewals; I don't run that into the repairs of buildings, that is one of the miscellaneous expenses. I didn't run in the lighting and repairing

of street lamps. Standing alone there is nothing on that page of the exhibit that represents the spending of money to indicate anything more than is stated in these reports of the company. Decidedly I say there is something else in these reports that aids me in annalizing these figures. By turning that part concerning the cost of the plant where it recites the additions during the year, cost of plant, lands, buildings, machinery and appliances, mains, services and meters giving the dollars, if any, charged for additions to plant in that way during each year. That is the additions, and I was asked to explain on what annalysis I based it. Now looking at page 7 we will see what has been charged up and the cost of additions to the plant during the year, and you have the amount of money spent and charged to new construction, that is to the cost of the plant; now you will have to look at another page on page 18 under the heading coal gas plant, there is required a statement of the number of benches, and the location of those benches and type, the number of retorts, and on the same page is required a statement of water gas plant, and the location, type, number of settings, dimensions of generator, carburetters, super-heaters and the capacity for 24 hours wrok of that plant; then on page 19
1645 is a description of the purifiers required as to the number, length, width, and depth, and their location; on the same page is required a description of the gas holders giving the location of each and whether open or covered giving the type and dimensions of the gas holders, the date of construction and working capacity of the said holders; on the same page 19 is given a complete schedule of the sizes and length os the cast iron mains required to be stated in that schedule, the length and size of cast iron mains laid during the year; and on page 20, is a tabulation requiring the size of wrought iron and steel mains and the length of each size during the year; on the same page is a statement of the number and size of the meters in use and the number added during the year; on page 21 is a statement of the number of services at the date of the report and at a prior date one year earlier, and the increase in the number of services during the year.

Now take these reports year by year with the information I have indicated on the different pages and see what, if any, has been charged to the cost of the plant and if you have found it see what there is of a substantial increase in the length of mains that has been added and nothing charged to additions to cost of plant for mains that year and which is charged to the reparis and renewals here; it is obvious what has happened, the company has laid some miles of mains and charged them into that account which commonly happens with prosperous compan-s, and the same thing holds true as to the other parts of the plant. In other words we have in that Massachusetts form of report segg*r*egated out and required to be stated each year the dollars of repairs expended at the works; what amount was paid on the meters; and the dollars of new construction charged for the machinery, buildings, mains, services and meters, and then we have the quantity actually added during the year re-

quired to be set out in different parts of that report and by
1646 following those items through and seeing where the charges are made in regard to new equipment,—works equipment and any mains go it,—you can get on the whole, by devoting considerable amount of time following it through year after year, what the charges in the repair account are doing; whether they will extend the plant with the old pieces keeping the plant that was there and is there in operating condition. The operating expenses were taken from these sworn reports, that isn't true of all the data I have given about the Massachusetts companies, but the operating expenses I compared with this company were taken from the sworn reports. I don't show any repairs and renewals of plant in this exhibit of operating expenses that I brought in here that I now wrote at all; certainly not with salaries, office, distribution and general expenses. In other words, the expenses I have denominated all expenses except materials and labor making gas, repairs, renewals and taxes, I specifically cut out repairs and renewals, and excluded them, neither did I include them in making that comparison. I made no exhibit for the Massachusetts plants in which I include those particular things and nothing else, repairs, renewals and depreciation, if I have I have forgotten it. These different things I have referred to on page 7, 18, 19, etc., oor refer to new construction, new equipment, extensions of mains, equipment and buildings. None of the items on those pages refer by me to the subject of repairs and renewals. I am telling what happened. Whether the only classification that I have in the Massachusetts reports that seggregated and refers to the amount of money spent on repairs and renewals upon any particular equipment is upon meters in my sub-division #13,—I would say that repairs and renewals in the case of meters are separated in the dollar charges, so that I have a specific item for repairs and renewals. Outside of that repairs for meters, whether there isn't a classification in the Massachusetts reports that required them to enter a dollar under the head
1647 of repairs of mains,—I would say repairs and renewals of mains go together under the same heading mains and service pipes. You don't know which it is so far as that heading standing alone is concerned, and so far as that heading standing alone is concerned it might by either renewals of mains, services, or repairs on either mains or services, or maintainence of either mains or services. As to what other entries there are that direct me to dollars of money spent in repairs of mains or services I would say this indicates the dollars of money spent in renewals and in addition the new construction is charged as repairs, and anybody who knows how to annalize a report of that kind knows that if you find a company putting in five miles and nothing is charged in the cost of plant ac-ount for those mains, that it necessary went into the repair account, unless the sworn return is a lie and we assume they are true.

I say if there was a $5,000.00 entry opposite the item repairs, renewals, and maintainence of mains and services I could determine just what was done with that money. If no new construction

of mains was shown in this report that would be an abnormal report, and if there was no new construction we wouldn't know, except we would have to suppose that they had some very remarkable kind of reports going on and on those mains. Whether I would have to accept it, I don't know, very likely it would call for a letter of investigation from the clerk, a special letter would come in from the company explaining in full what they were doing with so much repairs; it is very common to find anywhere from one to half a dozen letters attached to furnish to anyone because there has to be a document explaining what was repair charged and what was construction charges and what construction was alleged to have been done. Whether the letters aren't sworn to and I am basing my testimony on the sworn reports,—I would say I might base
1648 it on the information the Commission collects and treats as public documents.

Assuming that they took up a 4 inch main of 1000 feet and put down in place of it a 6 inch main of 1,000 feet and asked what entry in this classification I would expect to find for it,—I would say it would be futile to expect any kind of an entry in that classification because the different companies follow their own sweet will in charging up those matters. You could find a place to light on in that classification in the charges to repairs. As to how the company would charge that in the report I suppose it would depend entirely on the company you happened to strike, some charge it to repairs and some to construction, we have all sorts of companies in Massachusetts the same as you have out here in Nebraska and they treat their accounts in all kinds of ways. We would know what they charged for repairs and renewals and by investigating the rest of the return we could find out what happened to the physical property. The answer is the same as to all of these entries about repairs, renewals and maint*ai*nence on page 8. Whether you pay freight on the repairs and maint*ai*nence to the works as to what was done with the money and how that would be entered, you have to construe the report as a whole. It is just as useless to take a specific entry here as it is to take a single ent*er* out of the company's books and try to build up a conclusion on it without an investigation, without all the other circumstances, you can't tell what the bookkeeper chooses to enter under that. If a coal gas equipment was taken out of repairs and a new one put in whether that would be entered as repairs and renewals or as new construction, I would say of course it should be entered as a repair. Whether I would know how it would be entered if it was one of these retorts to one of these benches of 6's,—I suppose it would be fair to say it would be entered as a repair by most any one who knew anything about mak-
1649 ing bookkeeping entries, but what we recall to in the Massachusetts situation is the charging up of a large amount of new construction in the repair account which is a perfectly notorious and obvious — to anybody that is familiar with 27 years records in that office and where these expenses are reported as illustrated. Possibly that is one reason why I only require so low an amount for depreciation, because so much construction is taken up in repairs

and renewals; you will remember my repairs, depreciation and anything all goes in in one lump; I allowed more for that than the depreciation alone as I estimated this plant figures up. Witness being asked to explain in the company's records the classification for all of this expenditure includes all expenditure for repairs and renewals,—I would say the only classification of this company's that I know of is exhibit "314"; I might add that in the back of each gas report the items are brought together with slightly different reading. I think the substance of the readings is nearly the same, without referring to that discarded exhibit "308" I haven't that exact form of wording, here is the classification actually insofar as the report shows in exhibit "314", and there it is reported for each year that goes into the company's actual expenses report; the other one don't, those entries are taken right out of the company's expense report just the way it reads year after year.

Taking this report for 1907 the classification there shows separate items for repairs, bench repairs, building repairs, coal gas general apparatus repairs, repairs water gas generators, water gas apparatus; build repairs; water gas general repairs, water gas street main maintainence, service maintainence, and meter maintainence, and all that I have taken the additional item of setting and removing meters it is at least partially a repair, it is a necessary item but not all repair.

Concerning my comparison with certain towns in Massa-
1650 chusetts and whether it is important that I should take into account the number of M feet of gas sold in the different towns in order to make a fair comparison,—I should want to know the number of M feet of gas sold in considering a comparison, I don't say you couldn't make a comparison where the amounts were this. That has a bearing upon the cost per M feet of labor and materials and all of the operating cost in connection with the plant, and office expenses and all that. Charges for operation have no fixed sum, you can't run your manager's salary down indefinitely for a small plant, you must stop somewhere, it is true with some other items, but you can't run the rent down indefinitely for you must have a suitable place. I think undoubtedly that the matter of the character of the consumer, the question of the consumption and the conditions under which the gas was taken by different consumers would properly have an effect upon the matter of the operating cost or the price at which the gas could be furnished, but you would have to know what it is in order to give a- opinion you would have to know more about it. Unless the matter of the gas company furnishing a large amount of gas to the city for lighting the streets I don't think that would have any great or marked bearing as an element that you would want to take into account in considering the operating expenses of that company. I don't think that you would have a meter reading, I don't think the gas sold for lighting the street goes to a meter. Whether you would have a very large sale of gas to one consumer where you would be relieved of the expense of meter reading and collection I don't think so you would have collections to make which perhaps at a less expense per unit out-put on the other

hand you might have the labor to lighting and extinguishing
1651 the lamps but the amount to furnish the street lighting is very moderate as compared with the general sales of gas. The city might take as much gas for street lighting as three or four thousand consumers, that accounts partly can but I don't think I care to guess about the street lighting proposition. I looked in the town of Taunton and I didn't find that they sold any great amount, if my recollection is right it is that the street lighting is a very minor matter taken generally with gas consumption but each fact should be taken into account. If the company in the particular town I am comparing with Lincoln furnished gas for street lighting to other companies though that is a fact I would want to take into account in comparing the operating cost per M in that town with Lincoln, selling gas in large amounts to other companies, should have to consider if it is a large enough item to attract attention and would be weighted. It could be produced and sold to other companies at a much large- place than it could be sold to a large number of consumers.

Whether in the first 6 towns shown in my estimate were of Cambridge, Charlestown, Lawrence, Lynn, Haverhill and Taunton and whether of those 6 towns Cambridge did not furnish gas for street lighting from 1903 to 1912 I would say I don't now recall whether it did or not; if they did it was so small in amount compared with its general business that its effect on its general expenses than expenses of materials and labor making gas is repa*ris* and renewals and taxes, etc, it would be very small. I don't recall to what extent sales were made for street lighting purposes. Possibly Cambridge also sold gas to other companies from 1904 to 1912. Cambridge sold in 1912 for public lamps 4,527,000 feet, let me compare that with the total sales and see what a trifle it was; in 1912 they sold 762 million
1652 feet of gas and 4½ million and thereabouts out of 762 went for street lighting that is something over one half of one per cent. In 1912 Cambridge sold 604 thousand feet to another company a little over one half of one million feet.

Charlestown furnished some gas for street lighting. Lynn furnished gas to other companies, they furnished the enormous volume of 132,300 feet to another company that is an item that I would not take into account if I were to compare the companies, that quantity of gas sold would disappear, I couldn't estimate that in the 100 million feet the Lincoln Company sold. I made no comparison that involved the taking into account in the distribution system of the character of the mains laid in fixing the amount necessary for repairs, renewals and depreciation. I have made no direct checked comparison between the result of this company's operation and Massachusetts companies on the item of repairs, renewals and depreication; I mentioned I got a good deal of information about gas companies all about repairs but I haven't set out any tabulation comparing them. I based my conclusion of 9 cents per M feet that was sufficient to cover these three items were largely on what I know of Massachusetts gas plants, not merely what is revealed in certain plant entries in these returns. What influences me with this com-

pany was what I saw with reference to this and many companies, we have upwards to 50 and I have investigated this matter extensively for a great many years for a great number of companies.

I did not take into account on the question of operating expenses the daily capacities of the plants in Massachusetts that I compared with this plant of about the same daily capacity of this plant.

Whether I took into account in the matter of determining whether certain equipment was excessive or should be eliminated because it was more than this company needed,—I haven't suggested that the equipment of this company was either excessive or should be
1653 eliminated. I did make a comparison in comparing the book assets with the quantity of equipment in this plant and plants whose book assets I mentioned. That is the only comparison touching on that I remember to have made between this plant and the Massachusetts plants; that didn't involve the operating expenses at all and wasn't for the same group of companies, it involved some of the companies but there was no comparison on that point in connection with operating expenses.

Taking the town of Cambridge as shown in my exhibit "350" the total expenses for various years; for the year 1908 I purport to show what is shown in the reports of that company for 1908 with respect to all expenses except material and labor making gas; repairs, renewals and taxes, the amount of which is $69,084.00 I haven't shown the cents. I have a copy of the detailed report of that company for 1908 showing the detailed expenses from which I made these deductions. The items in that report which I have assembled to make up the total of $69,084.00, salaries and office expense $50,083.00; distribution and general expenses $19,001.00 making a total of $69,-084.00. The separate items in exhibit "350" are meters reading and collecting $23,734.09; by that I mean the amount entered in line 10 under that heading in the book, meter reading, collecting, I have abbreviated the items the same as the other items, I can pick it out; wages meter takers, clerical wages and salaries in this department, that is what I have entered under meter reading collecting, $23,-734.09. The next item is salaries officers and directors in lines 17 and 18 $8,785.00 I abbreviated that heading I give it salaries, officers and directors meaning to include in that the two items under lines 17 and 18 directors' allowances and salaries of officers. Thes-
items I am now reading I believe go in the first column so
1654 far for some in here. The *The* next item is other general salaries $8,994.36, in my classification that comes in line 19 in the printed form of return under the heading other general salaries. The statement being made that that isn't the printed report used in 1908,—I say I think 1908 has other general salaries; it has something that corresponds to that, I can't change the form of the printed reports, if they — the designation of the items and instead of calling them "other general salaries" they call them "general salaries." That item was $8,994.36. The next item still in the first column is advertising that is probably one of the inserted headings for that year, the companies often insert in pen and ink headings for things that are not specifically covered by the printed heading in making up

these reports. There isn't any such heading in the printed form as advertising, but I am testifying that there is such an item set down as advertising amounting to $1,590.76 which I have here, included in the sworn return of the company for 1908; not being a printed question it doesn't carry a number unless it would be entered under incidental expenses, which like enough it was in the original report; there are several lines left blank that are to be filled in for curious persons to inform themselves, and it might be it was entered there. The next item is general office expenses, that in the 1913 report is line 22 and the amount of it is $6,979.82; now those items I have read so far make up the total of $50,084.03, and those are the ones that go into the salaries and office expense column, although I have stated that I attach no particular importance to the separation between the column salaries and office expenses and the column distribution and general expenses and have hung nothing on it in the testimony in this case. I notice the entry in my exhibit "350" is $50,083.00 instead of this footing including the cents of $50,084.03.

1655 The next item is distribution and general expenses and we are now passing to the next column, "care of street lamps" that would be lines 15 or 16 or both. Whether there is any such heading as that in the printed report,—I say substantially corresponds to that, I abbreviated them, and told you it was 15 or 16 or both, just what form it might take in 1908 I am not sure, amounting to $1,566.58.

The next item is distribution tools and appliances that is line 12, $36.14; rent of offices not owned by the company, only that is printed rent of offices there, amounting to $4,225.81; the next item is insurance $4,491.92; the next item law expense $1,910.54; claims $390.90; meter connections $2,656.28,—that would be something you wouldn't find in the printed schedule, there is no printed entry for meter connections,—that must have been a written entry. I have included that in this classification in the distribution and general expenses and added in it amounting to $2,656.28; stove connections $1,094.72, that would most probably come under gas stoves, fixings, repairs and renewals. That was 1,094.72; fixing gas stoves $2,628.22, that is line 14, I may say in explanation of some of these headings, this being a copy of the original return which is very frequently interlined by the company making out the return and put in additional headings; there are some additional headings here that don't occur in the original return; that doesn't change the matter at all because I have taken the stoves here that ought to go in. I am giving the distribution and general expenses here now, that gives a total of $19,001.00 and here in exhibit "350" it is $19,001. I have not carried the cents into the exhibit. I think that states how I got the amounts in exhibit "350."

As to the amount for incidental expenses for the year 1908 as shown by this report, I have included all the expenses, I have
1656 taken and carried them into my exhibit for 1908. The same as those entries I have given the actual entry from the original

return may have been written in in pen. As to how much I included under item 27 incidental expenses,—as indicated by the original form of return these are blank lines, it is the practice of the company to fill in those with a statement of what the incidental expense *it* and even before than you will find script entries in the returns telling just what the particular item of expense *it*; I haven't in this summary of expense I have given any item that is labeled incidental expense, having preferred to take the exact items they put on there for expenses of 1908 and I have given and classified therefore all in that year except materials and labor making gas, repairs, renewals and taxes. Getting back to the question, I have a script copy of the complete expense report. Whether I have the amount entered opposite incidental expenses on line 27 for 1908 amounting to $5,341.76,—I don't say that I haven't it, it is in the other items I have given but not that specific item under that heading that I have explained. The total of it is spread out over some of the other items. Here is my total expenses for the year, and all that is necessary is to see if it foots with mine.

The item I gave under the heading of line 14 for gas stoves, repairs, etc. of $1,094.72; and the item of $1,590.90 for advertising; and the item of $2,656.28 for meter connections may be a part of the three items which make up the total of $534.76 of incidental expenses, I don't know that I can remember what is in all of those reports; I didn't make all those copies myself but can readily check it.

I didn't consider the bad debts $900.00 in that year a part of the operating expenses at all. In my opinion they should not have treated them as operating expenses, they are not like the income.

They are shown in the Massachusetts reports as operating
1657 expenses. Notwithstanding the fact they are so shown I refuse to treat them as operating expenses, and I believe the company here refused to treat them in its report also. Notwithstanding the fact that the company manufactures and delivers gas and it isn't paid for I don't regard that as an operating expense; suppose the company inserted twice what it cost to make it, if you regard it as operating expenses the expenses are three time- what it actually cost them to manufacture, and what they paid to make the gas, that would be the result of that sort of bookkeeping. As to what I would do with the item of bad debts,—I say if it is a lack of income,—if you sell $100.00 worth of gas and don't get paid for it it makes you income $100.00 less than it would be, it don't change the expense of making it. Assuming that the company manufactured $900.00 worth of gas and it was consumed as they did, and you didn't get anything for it, and witness being asked *out* the company would get that $900.00 back unless it got it back through the sale of the gas to other customers who did pay for it,—I would say that is the only source from gas and residuals. To get it back without charging as a part of the operating expenses the company can charge enough income from the customer's figure the income minus the bad debts and it still leaves a profit that way. Asked whether you could not take care of the $900.00 by raising the rate a little,—I would say

the rate is usually so high already that they have no need of that, the loss and discount usually run far ahead of the bad debts in Massachusetts, I have made that computation repeatedly.

I have given in exhibit "350" under the heading of all expenses except materials and labor making gas, repairs, renewals and taxes on all the items that I have included in the operating expenses of the Cambridge Company for 1908. I am unable to say whether
the company charged anything to depreciation that year
1658 in its report, they charged nothing in operating expenses
to that. I have all the report here. I am unable to say whether the report shows an item for depreciation, I haven't got the complete report of the Cambridge company for those years in all departments; I have a complete report of what they said was a statement of the income and expenses and all the expense side, I haven't got the income side. I have not for 1908 a copy of the report that shows the amount *the* was charged by that company for depreciation and the item of depreciation. I don't know what it is, it isn't reported as an expense. I have a complete copy of what they reported and are required to report as expense by the printed form of report. I have nothing in my total that would indicate any other expenses reported by the company and charged up in its report as "other expenses," for the year 1908; I have the total expenses footed for a total which can readily be compared with this company's if it is wanted. I don't recall an item in the earlier reports under the heading of "other expenses," I don't find it in the 1913 report.

Referring to exhibit "350" to the items for 1909 for Cambridge entered in the column salaries and office expense and the column distribution and general expenses, I have meter reading and collecting $25,488.72; that is the item entered under line 10 in the report as "wages of meter takers clerical labor in this department, and salaries or commission of collectors." That is under salaries and office expenses, I am taking them in the order they are given in that exhibit, the first heading is salaries and office expense, salaries of officers, and directors $8,805.00; other general salaries $7,800.00; advertising $1,365.75; general office expenses $9,972.83; total salaries and office expenses $53,432.30 I have it entered in my
column in exhibit "350" as $53,432 having omitted the
1659 cents. Now passing to the column distribution and general
expenses, so headed, the entries making up the sum in that column are care of gas street lamps $873.52; rent of offices $4,352.50; insurance $4,678.80; law expenses $2,011.48; claims $1,277.91; meter connections $5,686.30; stove connections $2,308.90; whether that is in line 14,—I haven't reported the number out of the expense sheet, the expense sheet as I explained is interlined with separate lining and I have taken the actual entry from the expense sheet rather than the printed entry that had been superseded by the group entries; I do not recall whether that item appears opposite line 14.

Fixing gas stoves $3,165.82; the total of those items is $24,355.31; and the total that has been carried into my tabulation under dis-

tribution and general expenses is $23,481.00; there is evidently a mistake in the addition of some item or some item of about $1,000.00 has been omitted in the tabulation as presented in the exhibit "350" because the amount is about $1,000 less than these foot up to, this exhibit "350" wasn't taken from these sheets I am reading from at all; it was taken from the original records by going over and footing up the quantities, subsequently we went again and took off the total sheets. There is a mistake in exhibit "350" in the total I am reading from but I don't know which it is there is a mistake there, or a difference of about $1,000.00. I omitted the item of bad debts $993.85, that was what was entered in the original return, I included that item in a number of instances, and in the Lincoln plant also, according to their system of bookkeeping the bad debts is included in Lincoln also.

The items I have read and given the footings of under those headings is all the expense I have included in my tabulation of the expenses for Cambridge then for year 1909, and salaries and office expense, and for distribution and general expense. Being handed
the printed report of the Cambridge company for the year
1660 1909, published under the direction of the Commission and *stated* to state if there are any other items of expenses for the Cambridge company for that year as shown in that report that I haven't included in these two columns in my exhibit "350," that should be included there,—I would say that I see no indication that there is anything there. Now in this report the first classification is of the total income of 15 cities in Massachusetts including Cambridge, Charlestown, Lynn, Salem and Lawrence that I have referred to in my tabulation; the Cambridge company is the third city in the printed report. The first page shows the gross income for each of these cities for the year 1909 as compiled by the Commission. It has a number of columns headed "income."

Which show the amount of income from private consumers, the first column; amount of income from public lamps in the second line; amount of income from other companies in the third line; amount of income for residuals in the fourth line; amount of income from other sources in the fifth line; and the total income appears in the next column; that is reduced to Per M feet of gas sold; and that is followed by the income from sources other than the gas business, including the net income from the electrical business; that is followed by a column total income for the year for each of these companies. On the next page you find the classification of the operating expenses for each of those companies; in that you find the amount of coal in the first column in dollars for Cambridge for the year 1909 to be $147,243.21; that is reduced to the amount per M feet made; that is followed by another column showing the amount of enricher in dollars and reduced to the number of M feet made; that is followed by the amount of dollars expended for purifying materials; that is followed by expenses for water; all under the heading of operating expenses. That is continued on the next
1661 page where the amount of wages of manufacture is shown in a separate column for the year; that is followed by repairs

and maintenance of manufacture. That is followed by a column showing the amount in dollars of renewals; that is followed by a column showing apparatus and machinery. That page is followed by another extending the showing of operating expenses, but I am not saying anything what that implies, that is heading manufacturing though. Probably all going to the manufacture of gas and probably bearing that title.

Next is the gas in holder per M feet made; the next column shows the gas purchased; and the final column in that tabulation shows the total net cost of gas made and purchased in holder as prepared by the Commission.

Being asked whether the cost expenses of distribution are shown in that report,—I would say as shown in that report the word distribution don't necessarily at all correspond with the item I have put down; it doesn't mean the same as the word distribution I have used; that is the heading of the compilation showing distribution. Under that is the total wages paid in connection with distribution in dollars. That is followed by repairs of mains and services in dollars for the year. That is followed by a column showing the expenses for repairs of meters. That is followed by the final column showing the total of these three items, but those columns don't under take to follow precisely the original return as for instance, the cost of meters.

The next tabulation here containing distribution expenses is the column which shows gas stoves, expenses of distribution in dollars and public lamps. And there is a column of the expense. Then a column total cost of distribution. Corresponding to the total cost of manufacture, there is a column headed that way. And then it says in the book the office and other operating expenses. In that you get what is denominated office expenses and the amount in a separate column. And taxes and the amount.

1662 And miscellaneous expenses and the amount. And the total cost of manufacture, purchase and distribution of gas less residuals in the final column.

On the next page you have the net earnings and their application. Showing the balance from the year's operation in the first column; in the next column there is a heading depreciation and other reserves. Giving the dollars of depreciation and other reserves. And in the next column you find other expenses, giving the amount of such expenses.

Being asked whether I have taken into account as a part of the operating cost here one of the items included in this printed report for depreciation and other expenses,—I find I have not put into exhibit "350" any charges that the companies may have made for depreciation as to the item "other expenses", I should have to compare that book with this one I have used just as well with the actual entry to see if the "other expenses" are not made up of a part of the entry occur-ing in the original return for Taunton, you will notice this printed return does not include all of those 31 headings of the regular printed return.

I notice in Cambridge the "other expenses" for 1909 was

$2,670.44. I notice that the depreciation for "other expenses" for that same year was $25,000.00, but it is set down as an expense, as depreciation and other reserves, but not as an expense.

Asked to take my figures for 1909 and asked to compare them with the figures here and see if I have omitted the "other expenses" in connection with that portion of the property of $2,670.44, and also see if I have not omitted the $25,000.00 which appears in "other reserves",—I now testify that I have not written depreication and other reserves in the operating expenses, it is not so written in the original return of the company and I so stated in that book from which counsel read. Whether I consider depreciation an
1663 operating expense or cost,—I think it may be fairly so considered in many ways. It would have to be taken care of as a part of the operating expenses of that and all other companies.

Whether I would consider the items classified as other expenses involved in the manufacture and sale of gas as a proper item of expense to take into account when I am classifying depreication and expense for manufacturing gas in Massachusetts,—I say it depends on the "other items", if the other items that lay in the expenses showed on the return on page 8 they should be included, otherwise not. Whether I deliberately omitted them, I took all on page 8 in the regular sworn statement of expenses and nothing else.

Whether I find on the report the $25,000.00 entered under depreciation and other reserves the item of $2,670.44 of "other expenses",—I would say that "other expenses" is an indefinite and general heading and I don't know which, if any, of those items are in the original sworn return as to which I have testified, from which I took all of my figures here, whether it includes certain items from that sheet of how much it includes, or whether it includes any I don't know. I did not say that figure in the 1909 report it is from which I presented the tabulation, I didn't see any such figure in the original return, and I don't think it exists there; I think it is a mere summary figure the Commission has tacked in that tabulation, just as they have tacked in others which don't correspond to the originals in the sworn returns. Whether I think they have reclassified the items I say I think they have combined some of the items. I have in here the total income for 1909, I haven't testified about it and I haven't got it in my copy. I haven't the total operating expenses of manufacture in the form reported by the commission, I have rearranged the items, I have the manufacturing expenses of the items but I haven't them added up in the same way as in the original return.

Being asked to say if I can avoid that $2,670.44,—I would
1664 say I am not desiring to avoid any $2,670.44 and haven't tried to.

Being asked if I would take the time to check my figures that I presented here against the amounts here shown as the total operating expenses of manufacturing; the total operating expenses of distribution; and the expenses of office and other operating expenses, and then disclose from that tabulation a statement whether I have omitted the $2,670.44 and the $25,000.00 shown in this report,—I would say that question is perfectly useless and senseless as regards

the $25,000.00 I have testified that it didn't, and that is not included in this tabulation; as to the other amount I will compare them and see if I have the expense, in it. Whether until I know that I don't know this tabulation of mine has any value or not,—I say I do know it has a value, it was taken from the original returns. I deny that if I omitted part of the operating expense carried there as an item of depreciation and omitted other expenses in the amount of $2,670.44 the statement that my tabulation isn't of any value, or that I didn't prepare a tabulation about depreciation and the amount of it. I haven't omitted any and if they existed in the original return of the company and there is nothing counsel has to show that I have. I brought in a tabulation where I say all expenses except materials and labor making gas, repairs, renewals and taxes as indicated in the sworn return of the company on the printed form provided by the Commission, which they are required to fill out under heavy penalty as that provides; and the only evidence they had in making this report up. I never testified about the source counsel is giving, and counsel disregards the source I laid before him and swore to, I took the sources which are the final sources.

Mr. Rose: When these tabulations were made an objection was made because we didn't have the original source to look over. Mr. Adams said we would find them in all except two sets under 1665 1912.

(Witness continuing:) I deny that statement and defy counsel to show any record to that effect.

Asked if I haven't already stated here that I have omitted items of operating expenses from my tabulation called "other expenses" or called -depreciation" and would I be willing to insert them now,—I say if I find that I have omitted, any item classified in the original sworn returns to the Massachusetts Commission and filled in by the company I would gladly fill them in. This exhibit is set before the court for the items I include under those headings, just what the legitimate expense would be for salaries and other expenses and for distribution and general expenses, that was my purpose. Whether if there was other expenses the company incurred as shown by the reports that should be included, going to affect either of those items, and would I be willing to put that in there,—I say I am going to include any expenses that was not already in the original returns that the Commission exacted.

My tabulation about office and general expenses as to the comparison between the Lincoln plant and Massachusetts figures, does not involve depreciation at all; it expressly excludes it; I didn't omit it because it wasn't included in the statement of expenses I was dealing with. There was no depreciation included in the Lincoln Company's expenses that I compared with these companies. I expect it does except depreciation. In the label I have put over it, asked where it excepts depreciation it excepts repairs and renewals,—which amounts to the same thing. In my classification I have repairs and renewals as a specific item. I was dealing with the heading there and no depreciation is shown in there, it is shown that it is precisely excepted in the words of the original return. I do not find

the Massachusetts Commission dealing with depreciation as a separate item and a separate operating expense. I do not find it
1666 in the printed reports and counsel can not point out on that page where it is.

I notice the column "depreciation" and other reserves under the heading "net earnings", which means gross earnings minus expenses and their application in plain English Language. The net earnings and their application are not made in the same way in this report on the next page as depreciation has been deducted; the net earnings are the difference between gross earnings and operation expenses. Being asked if there is any net earnings as shown here whether depreciation is deducted and also the items of other expenses,—I say no, I don't so understand the printed statement, although I didn't draw my tabulation from that statement at all. I don't understand from this statement that before they reached earnings they had deducted depreciation and other expenses; I understand the net earnings and right here in this column, which says net earnings and their application, and then it says balance from year's operation. I think that is the net earnings and so treat it. The next column is depreciation and other reserves; the next column other expenses.

As to what happens with reference to these two items and the amount of the balance of the year's operation, it is very likely deducted and from that you get dividends. In net earnings, it isn't so indicated, being asked if I would say dividends was understood to imply earnings, but what counsel refers to is not net earnings. As to what I call it,—what they call it in this column suits me well enough, the only possible amount of those two pages to which you can apply the heading "net earnings", is this balance of operation, that is the only amount that counsel or anybody can point out.
1667 Being asked if I would say that depreciation is an operating expense and other expenses in connection with operation is an expense of operation and if I would not get the net earnings before I deducted these operating expenses, as far as materials and labor were concerned,—I would say that I don't see any such thing as "other expenses". Depreciation is an operating expense in this, but it is commonly dealt with there generally after you get through with the statement of money actually paid for coal first and materials and labor, etc., it is dealt with entirely separate from the statement of operating expenses in the Massachusetts system of account of gas companies as shown here on this form which I testified every time I took my tabulation from. I haven't compared this company's depreciation with the Massachusetts depreciation at all, I compared it on entirely different items. In my exhibit "350", bar-ing any unintentional mistake of leaving out something that ought to go in or a failure to make a proper addition, I have treated all of these companies in the same way I treated Cambridge for the year 1909, but the method I have described is the method I followed in all of those companies.

Attention being called to Cambridge in 1907 and asked if I have the amount for repairs and renewals and maint*ainence* of mains and

service pipes,—I have in the amount of $8,588.11 The same item in the year 1911 is $28,122.36; but I suggest this isn't cross-examination as I haven't testified about these th-t counsel has cross-examined on. In 1907 witness being asked for the amount on item #10 wages of meter takers, clerical labor in this department and salaries or commission or collectors for 1907 in the Cambridge company, I would say the item is given at $20,820.21; the same item for 1911 is $30,720.41. Being a difference of about $10,000.00 the original amount was $20,820. and that was increased about
$10,000.00, which would be an increase of 50% along with
1668 the large increase in the gas output.

Taking the repairs and renewals in 1907 the amount expended was $8,588.00 and the same item four years later was $28,122.36 and witness asked to state what the rate of increase was for the expenditure of that item,—I would say that the figures are correct, I haven't figured the rate of increase; being asked as to what I think it would be,—I would say that amount runs very different as this company's account shows and all companies show, a big thing has to be renewed in some years which runs up the renewal account; I haven't presented any comparison for that for this company as compared with the Massachusetts companies, I have said nothing at all about it in my direct examination, and that item is expressly excluded from my heading; and also from my testimony except now that counsel asks me about it.

Asked why I don't just show the whole expenses, everything the company expended in the manufacture of gas here, and the total amount of sales of the company, and show the net result instead of just picking out items here and there,—to which I answer because I want to pick out and compare the items over which this company has control, and under which it puts its hands in the treasury of its clients and gets out the money; I want to show that these items over which this company have peculiar control, not being covered in a competitive market by materials and labor to see what those items under its control necessarily cost and then under the Massachusetts companies' eye sight, that is the reason I did it. They are much larger in the gas department while the electric company has gone down, I have the statement of the electric department.

I have not been able to work out the details of the $1.40 for freight, etc. on the meters, and am afraid I shall not until we let up
on the night work. I have it at my room but it takes time
1669 to find it, I haven't it here. Neither have I worked out the details for the 7% for engineering, etc. Asked if I would be able in any way to segg*r*egate the amount of repairs, renewals and depreciation from the repairs and renewals in dealing with this property,—In answer that repairs and depreciation together can be approximately separated. I have testified on that repeatedly. As to what per cent or what amount of the total covering the three items I would set apart for renewals and depreciation I testified that 3 cents per M feet also would be sufficient for ordinary repairs, it would leave 6 cents on my allowance of 9 cents to cover depreciation and renewals both, but the figures are less even that that on the

basis of my valuation, but I made my valuation big enough so that the company could have 6 cents. It happens to divide so that out of the total item it would figure 1/3 for repairs and 2/3 for renewals and depreciation, I wouldn't say that that was the relation of the figures; it figures that way in this case that the said amount of renewals and depreciation bears on the size of the plant and its supposed costs. The way it figures out in connection with this property as I estimated it, it would apportion 1/3 to repairs and 2/3 to renewals and depreciation.

I gave an item of $104,000.00 for repairs and renewals for 1903 as shown by my exhibit "309", which shows that including the meter setting and removing, you charge for the year 1903, for repairs and renewals,—I think the company uses the word main*tainence*,—and the same gives a total of $104,246.00; now of that setting and removal item because where you are frequently changing the meters,—a considerable portion of it should be deducted, but I put it all in. I haven't reduced to cents per M feet. As to what repairs and renewals could be involved in an item of setting meters, I would answer that the cost of a meter as it sets in the service is partly represented by the cost of getting it there and setting it. That isn't a repair, but when you have to repair or renew you
1670 must go and take out an old one and put in a new one and there is an item of repair. I have the amount of repairs and renewals for every year separately. Asked for the totals for 1907 and 1912,—I answer that I haven't that total.

Mr. Whettling: The total exclusive of removing and setting meters is $55,684.04, meter setting and removing $12,588.41, total $68,272.45.

(Witness continuing:) I have the amount of 9 cents per M covering the items of repairs, renewals and depreciation and I have also the amount of the out-put for each of the years since 1907 to 1912. Being asked to tell how the 9 cents per M I have provided for repairs, renewals, and depreciation for the year 1907 based upon the amount of gas that was sold,—I would answer that I went over all of *the* yesterday, but I will get it again.

For 1907 my allowance of 9 cents per M feet for all repairs, renewals and depreciation on an output of 179,366 M feet of gas sold amounted to $16,142.94; for 1908 my allowance of 9 cents per M feet for all repairs, renewals and depreciation on an output of 195,391 M feet of gas sold amounted to $17,585.19; for 1909 on the sale of 204,288 M feet of gas was $18,385.56; for 1910 on the sale of 210,169 M feet of gas was $18,915.21; for 1911 on the sale of 227,268 M feet of gas was $20,454.12; for 1912 on the sale of 234,386 M feet of gas was $21,094.74.

1671 I have undertaken to take care of all the items of depreciation by allowing a certain amount per M feet gas sold for repairs, renewals and depreciation. Asked whether I think the item of depreciation of the distribution system bears any relation whatever to the gas sold,—I answer I think it bears to determine the relation within approximate limits, but not a hard and fast relation, as between different systems or as between the same system,

but it can be conveniently computed to an approximate measure that way.

Whether if double the volume of gas was sent out through the system it would affect the depreciation,—I say if you could send out a double volum*n* through the same mains,—of course, that fact that a double volum*n* went through wouldn't make the mains depreciate faster, except it might give rise to additional depreciation on account of inadequacy that you would have to make your mains carry, as the company did in 1908, 1909 and 1910. The gas itself doesn't affect the mains; it oils them up a little and keeps them in good shape. The depreciation comes from the contact of the mains with the soil, and it is affected by the age it is in the ground, or from the inadequacy of the mains, and the changing locations of the population; that is one factor, but I don't know as that last one would be of much application here. Whether if taking only one-half of the present sales, or one-half of the present volum*n* of gas that would affect the amount of depreciation in the distribution system,—if through some miraculous and extraordinary situation the company would sell only one-half as much gas the next year as it did last year that operating change wouldn't work any material change perhaps in the rate of depreciation on the main system,—but taking things as they ordinarily happen, the depreciation of the mains will run along considerably close, fairly close; also,
1672 as to the volum*n* of gas sold, there is some variation between different plants,—it might be that the variation in the same plant as between years, is quite widely separated, but it is a convenient and not an inaccurate way of getting at the matter. It is not true that it is taken by me more for its convenience than its accuracy. There is a more accurate method of determining the amount of depreciation that should be provided for in each of the years going along, there is one that I have shown in my valuation, by computing the natural depreciation of the respective items of the plant, as near as we can fix on their fair life, and comparing the new cost with that fair life,—that, I have shown in detail in my valuation. I found the valuation of this property in 1907 and again in 1913.

The basis of depreciation that I applied to the property the company had in 1907 to deter*im*-e its value in 1913, I took what I estimated to be the cost of producing such similar or equally sufficient and efficient property and divided that estimated cost by the number of years I estimated the thing would fairly last in this plant so the consumer might pay back to the company during the use of the apparatus all that it would cost the company. I took the equipment in 1907 and gave a specific life to each of the items of equipment at its age.

Assuming a particular equipment in 1907 had a life of 25 years, that is, the remaining life of it, in 1913 six years of that life would have been taken up,—I haven't made any computation on the remaining life particularly, but you can suppose that. Whether I depreciated the property between 1907 and 1913 on the basis of the life of the property,—I say I depreciated the property all the

time on the basis of its elapsed age, in relation to its total estimated life, that is, if the property had been in use at the time I
1673 valued it in any year, one-half of its estimated life, I took off one-half of the estimated cost to procure such property.

Whether I find in my valuation a certain composite per cent of annual depreciation of 1.9%,—the term composite may be used, I don't use that term, I find a certain per cent of depreciation on the combined cost of the entire property. For 1913 that per cent was 1.9%. I did not apply that per cent of depreciation to the property between 1907 and 1913,—I got at the amount of the depreciation on the property that it had in 1907 and that it had in 1913 by taking the age of it in 1913 and deducted from its new cost that portion of its estimated life represented by its age; that is, for the thing that I found in 1913 if it was assumed to have a life of 40 years and in 1913 I found it was 20 years old, I took off one-half of the estimated cost of producing that thing, as its depreciation. When I got to 1913 that specific result in dollars was merely the annual depreciation for 1913, which was $10,914.26.

It is not right nor fair to say that I have added to that item, engineering, etc., 7% which gives a total of $10,914.26 with the engineering in it and have depreciated the engineering the same as the other, and have depreciated that property for 1913 $10,914.26 because of the age of the property. I did not depreciate it $10,-914.26, that is merely the allowance for annual depreciation, that isn't the total depreciation. Being asked what I deduct for the depreciation of the company's property for 1912,—I haven't deducted the depreciation pro rata year by year, but have taken the property in each of the two years I valued it and depreciated it according to its age in each one of those years on the basis I have stated
1674 by taking off that percentage of its new cost which was represented by the age of the particular piece in the plant from its estimated life; if the age in use equaled one-half of the estimated life I took off one-half of the estimated cost as depreciation. I have no figure here representing that I took off any particular amount or any estimate for the amount in 1912; I valued the property as of two dates, 1907 and 1913. In getting at the amount I take off the value of this property for the purpose of determining the value of the equipment I have considered the age of the property and its life. And for the purpose of taking care of that depreciation in the future I have resorted to 9 cents per M feet of gas sold, and also to something else; I have made my 9 cents per M ample and larger than the figured estimate per M feet sold and charged the total sum in dollars, of the total sum I have shown for total depreciation computed on the same basis I have indicated. I certainly can take my 9 cents per M and apply it as well to the years 1912, 1911, 1910, 1909, and 1908 and get back to 1907 and account for the depreciation that I take off on account of that equipment out of the 9 cents per M feet; 9 cents per M amply takes care of it and leaves an ample margin for repairs. I depreciate this property on a fixed and definite amount when I come to value the property based upon the age of the property

and its life. Between the years 1907 and 1913 I have depreciated this property upon that basis; and have provided out of the operating expenses an amount to take care of that by providing so much per M feet of gas sold.

Asked to show by the tabulation I have prepared that I have provided sufficient money out of the sales of gas at 9 cents per M feet to take care of the repairs, renewals and depreciation
1675 since 1907 where I have depreciated that property on the basis of its age and life, and asked to take the whole period and show that,—I will say that is a lot of figuring, but I will be glad to do it if the case lasts long enough, but human effort is limited by time, but take the year 1912 on my exhibit "232" and you have set down the annual depreciation in dollars $10,914.26.

To the statement that I didn't experience any difficulty in seggregating depreciation from repairs and renewals in order to get the value of the property.—I will say that renewals take care absolutely of depreciation, that is what I have tried to explain. Here are the figures that I allowed the company for repairs, renewals and depreciation in 1912 $21,094.74 as against the depreciation alone which of course, means renewals too, $10,914.26 that is, I allowed twice as much on the basis of 9 cents per M feet sold as the estimated depreciation based on my valuation of the specific items of property, and on my estimate of its new cost, amounted to for that year. My $21,094.76 included repairs, renewals and depreciation. Nobody know- how much of the $21,000. was expended by the company for repairs, I don't think counsel knows, and I don't know. I never said that of the $104,000. one third was for repairs and two thir-s was for renewals and depreciation. I said my allowance was one third of the 9 cents for repairs and my allowance of two thirds of the 9 cents was for renewals and depreciation, but that wasn't the money the company spent. To the statement that I make one tabulation showing the amount of depreciation based upon the physical valuation when depreciating the property for the purpose of getting its value; and then give another statement of the amount I provide out of the revenues that the company can take care of depreciation for the same time,—I say not using another method to take care of depreciation. I took care to allow enough by that other method to more than equal the sum which I have figured the
1676 property would depreciate. I did not use one method for the purpose of valuing the property and another to provide a fund to take care of that depreciation. I used the age and life of the property in both cases. In the one depreciated it at a certain percent each year, and in the other provide for the company taking care of that depreciation and put it in with repairs and renewals in a lump sum per M feet of gas sold, but gave the company the element of depreciation to start with greater than the depreciation. Being asked to show that,—I say I have shown that for 1913 and if given time I will show it.

Being asked to furnish such tabulation for 1907 to 1912 to justify the integrity of my computation, I say as far as the tabulation is

concerned that will depend on the time of the case, if there is any question remaining unanswered I will be glad to answer it.

Mr. Strode: We have only asked for three things, the details of that $1.40; the details of that 7%, and this last item.

1677 Mr. ALTON D. ADAMS, a witness for the defendant City, was recalled for further examination in chief, and having been sworn herein, testified as follows:

Examination in chief by Mr. Foster:

In exhibit "350" I have included in the totals under the heading "All expenses, except materials, labor making gas, repairs, renewals and taxes", per sworn return to the Massachusetts Commission, all items given in the original return of the respective companies named in the exhibits, to the Gas Commissioners of Massachusetts in the respective years on the page where the expense is stated, except those excluded. The exact list of items included in the exhibit comes under slightly different headings during the series of years to which the exhibit relates; but in each year whatever the sub-heading on the expense sheet as reported by the company is, I have taken the expenses under all of those sub-headings, except as to the expenses specifically mentioned as excluded, and as *the* the item of "bad debts", which I have previously testified to, I haven't treated as an expense at all. This can be illustrated by reference to the year 1912 for the Cambridge Gas Light Company for the year ending June 30, 1912; I have included in my total column on exhibit "350" headed "Total above expenses" the item of wages of meter-takers, clerical labor in this department, and salary or commission of collectors, amounting to $31,960.09; Salaries of officers and directors combined into one item of $8,855.; other general salaries $8,291.68; Advertising, which I think does not occur as a regular form of printed heading, but was inserted as a script interlined heading probably, under incidental expenses, at $2,121.24; General Office Expenses $15,287.24; Caring for street lamps no expense; Material, other street lamps, no expense; None given in the original
1678 return for either of those; Distribution, tools and appliances, $6,097.92; Rent of offices, $4,567.98; Insurance $5,124.59; Law expense $1,616.59; Claims $275.; Meter connections $5,844.80; Stove connections $2,398.62; Fixing gas stoves $5,342.51; those items that I have mentioned are not the ones included by me in the "total" column asked about, and are all of the expenses entered on the expense sheet of the Cambridge Company in its original return for the year ending June 30, 1912.

In exhibits "350" to "361" in that manner I have treated all of the expenses under that heading for all of the companies, taking all of the items of expense, except materials and labor making gas, repairs, renewals and taxes, per sworn reports to the Massachusetts Commissioners on the column of expenses in those sworn returns, and which has at the bottom the words, "total expense". I think the designation of the various items of expense in different years has

been varied slightly, but I have taken them all on that sheet except as noted in the heading of the exhibit mentioned.

Explaining my method of handling the other expenses, other than proper operating expenses, under the Massachusetts system of accounting as outlined by the Gas and Electric Light Commissioners of that state, such expenses are required by the system of accounting, and the printed instructions of the Commission, to be charged in the profit and loss sheet and not in the sheet that I have already mentioned which is headed "Statement of Income and Expense" and has at the bottom "Total Expense".

In making up my heading for my tabulation—exhibits "350" to "361" inclusive, and saying "total expenses", I mean the total expenses as required to be reported on the expense sheet in the regular form of returns from gas companies required by the Gas and Electric

Light Commissioners of Massachusetts, the expenses which
1679 are required to be reported on that sheet as a proper expense of the gas business, and not expenses relating to some other matter, which are not considered as proper by the Commission to be reported on the expense sheet mentioned, but are required to be reported in the profit and loss department of the return.

In the report of the Massachusetts Commission the item "other expenses" may be found for the year ending June 30, 1912,—that is public document number 35,—the 28th annual report of said Commissioners, at page 255-A, under the heading "other expenses". This "other expense" is a sub-heading, and occurs in the general heading at the top of the page which reads "Net earnings and their application". I would like to explain that in the said report of the Gas Commissioners of Massachusetts for 1912, which also bears the date January 1, 1913, being for the operations for the year 1912, that pages 249-A, to 254-A, inclusive, bear at the top the caption "Operating Expenses" are immediately followed by page 251-A in said report by a tabulation bearing the general caption "Net earnings and their application", and it is under this genera- caption of "Net earnings and their application", that we find the sub-heading "other expenses", giving the names of 20 companies and the "other expenses", if any, as against those respective companies.

The pages 249-A to 256-A inclusive were identified as exhibits in this record as exhibits "429-"1"; 429-"2"; 429-"3"; 429-"4"; 429-"5"; 429-"6"; 429-"7" and 429-"8".

Exhibit 429-"7" offered and received in evidence for the purpose of showing the classification of "other expenses", defendant stating that it does not rely on any specific amount of expense shown for any item.

(Witness continuing:) The item "other expense" in the report
of the Gas and Electric Light Commissioners for 1912, shown
1680 on exhibit 429-"7",—the "other expenses" amounting to $4091.51 for the town of Cambridge appears also in the "profit and loss" account on page 58-A of said report against the entry "other items", on the debtor side, and the said profit and loss account, comes after a statement of operating expenses on the preceding page, that is, page 57-A, showing that according to the classi-

fication used by the Commissioners the item entitled "other expense" in exhibit 429-"7" is in fact found in the detailed operation of the Cambridge Company for 1912 in its profit and loss account.

That indicates, according to the form in which the expenses are reported in Massachusetts, and the regulations of the Commission governing that form, that the item of "other expenses", $4091.51, was not considered a proper item to be included in the operating expenses of the gas business. Besides the reasons already given for thinking that item "other expenses" is not a proper charge to operating expenses, I have the additional other reason that I am very familiar with items so entered as "other expenses". various items, in a great many companies in a great many years that I have found in the profit and loss account of the company and not in the ooperating account.

Objection as incompetent and no proper foundation laid was made to witness stating his knowledge of the instructions of the Massachusetts Commission to various companies about including such expenses in the profit and loss account, was overruled, to which plaintiff excepted.

(Witness continuing:) I know that expenses not properly operating expenses in the gas business are required to be reported in the profit and loss account through having read the regulation and through being very familiar in the examination of many of these original returns and finding such expenses in the profit and loss account, so I know from both of those sources.

1681 Witness handed copy of report of the Gas and Electric Light Commissioners for 1912, and attention called to the item "other expenses" on page 255-A after the name of the town Charlestown, amount $532.39, and asked to point out if that item appears anywhere else in said report,—states, I find on page 62-A in the profit and loss account of the Charlestown Gas and Electric Light Company against the entire "other items" the figures $532.39; under the same heading in said report appears after the town of Lawrence the figures $3995.60; that item also appears in same report under the profit and loss account on the debtor side against the entry "other items" $39,995.60; I would like to extend myanswer as to the Charlestown Company, that was on the debtor side also; under the same heading in same report appears after the town Taunton appears the figures $75.00 on page 255-A; that item also appears in the same report on page 164-A on the debtor side of the profit and loss account against the entry "other items" $75.00; under the same heading in the said report on page 255-A appears after the town Haverhill the figures against the entry "other otems" $11826.91; I find at page 99-A on the debtor side of said report in the profit and loss account the entry "other expenses" the item $11826.91.

Exhibit "430" was prepared by me or under my immediate direction; as to its source, it is a computation as to the depreciation and repairs of the Lincoln Gas & Electric[f] Company, and is headed: "Lincoln Gas & Electric Light Company, annual depreciation and renewals computed on cost of plant; and repairs, renewals and

depreciation as computed at nine cents per M feet sold. Following that heading is a tabulation of four columns running from 1907 to 1912 inclusive, the years being in the left hand column. In the next column is a set of figures under the heading "Dollars depreciation and renewals computed on cost". Those have been obtained by computing on the basis of my estimated cost for the several
1682 items of equipment and plant in the Lincoln gas plant; the annual depreciation on the basis of the life that I have assumed and used in connection with my computations as to the depreciation and value of said plant in the years 1907 and 1913, January 1st of each year. The first line in the column headed "Depreciation and renewals computed on cost" contains opposite the year 1907 the entry $6962.74, being the same depreciation, annual, that appears in my valuation of the Lincoln Gas Plant as of January 1st, 1907.

Against the 1908 year there appears the entry $7839.18. As against the year 1909 there appears the entry $9234.42; against the year 1910 the entry $9858.69; against 1911 the entry $10455.93; against 1912 the entry $10914.26; which latter entry for 1912 is the same as the annual depreciation that I have computed on the Lincoln Gas Plant for the year ending January 1st, 1913, that is, the same annual depreciation that I show for that time.

In each of these years the respective amounts of depreciation I have shown has been obtained by taking the estimated cost of each piece of equipment for all of the equipment then existing, and dividing the estimated cost by the estimated life of the said piece of equipment, and then by adding the result of those divisions together to get the total annual depreciation applied to that year. To illustrate: Take a piece of equipment that I have estimated in my valuation to have a life of forty years, I have taken the estimated cost of that piece of equipment and divided it by forty and the resulting sum in dollars is entered in each and every year as the annual depreciation on that piece of equipment, because it costs a certain amount of money, it is assumed to wear out and disappear in forty years; and so it is fairly estimated that in each of those forty years one-fortieth of its new cost should be written into the depreciation and renewal sum that should be allowed out of
1683 the rates.

The next column in exhibit "430" is headed "Dollars repairs, renewals and depreciation at nine cents", meaning that the repairs, renewals and depreciation as set up therein as a total are computed at 9 cents per thousand feet of gas sold in the year. These sums so computed at 9 cents per M feet of gas sold have previously appeared in an earlier exhibit where I estimated the entire sum to be allowed out of the earnings of the company for the repairs, renewals and depreciation necessary to keep up and keep good the value of the plant.

For 1907 as against the allowance for depreciation and renewals alone, as computed upon the cost of the plant, amounting to $6962.74, the sum in the column where all repairs, renewals and depreciation is computed at 9 cents, amounts to $16142.94, leaving

an excess as shown in the next column, over the amount required for depreciation and renewals alone of $9180.20. So again in 1908, the amount of repairs, renewals and depreciation at 9 cents per M feet of gas sold amounts to $17585.19, showing an excess in the next column of $9746.01 over the amount of depreciation and renewals alone as computed by me on the cost of the plant.

Again in 1909 the total repairs, renewals and depreciation computed at 9 cents per M feet of gas sold amounts to $18385.56, showing an excess of $9142.14, over the amount computed for depreciation and renewals alone, based upon the cost of the plant.

Again in 1910 the dollars total, of repairs, renewals and depreciation computed at 9 cents per M feet of gas sold amounts to $18915.21, showing an excess of $9056.52, over the dollars depreciation and renewals computed on the basis of the cost of the plant in that year.

In 1911 the dollars total, repairs, renewals and depreciation computed at 9 cents per M feet of gas sold, amounts to $20454.12,
1684 and shows an excess of $9998.19 over the dollars depreciation and renewals alone, computed by me on the cost of the plant.

In 1912 the total repairs, renewals and depreciation computed at 9 cents per M feet of gas sold amounts to $21094.74, as previously shown by me in an earlier exhibit, and shows an excess of $10180.48 over the amount estimated by me to cover depreciation and renewals alone on the basis of the cost of the plant.

Exhibit "430½" is headed "Depreciation per M feet gas sold". It presents a tabulation of figures for each of the years 1907 to 1912 inclusive, including first the M feet of gas sold in each year, that is, the thousand feet, and then a column containing dollars depreciation and renewals computed on cost; meaning that they are computed on my cost of plant in the way that I have previously explained of computing depreciation on cost; then a column headed "Cents per M feet sold computed on cost"; and finally at the right hand a column headed "9 cents, less computed renewals and depreciation.".

When *O* speak of cost I mean the reproduction cost of the Lincoln Gas Plant as I have estimated it. The Dollars depreciation and renewals computed on cost as shown in exhibit "430½" are the same in each year as the quantities under the same headings in exhibit "430". These quantities corresponding to each year in exhibit "430½" are divided by the M feet gas sold in the respective year so as to get the "cents per M sold computed on cost", meaning thereby the cents necessary for depreciation and renewals as computed in dollars on cost when reduced to cents per M feet of gas sold during the year in question.

Thus, for the year 1907 the dollars depreciation and renewals computed on cost amount to $6962.74; In that year the sales amounted to 179,366 M cubic feet of gas sold; dividing 179,366 M feet into the $6962.74 gives 3.88 cents per M feet sold com-
1685 puted on cost. If this 3.88 cents per M feet sold computed on cost of plant by me, is deducted from 9 cents, the amount I have allowed for repairs, renewals and depreciation per M sold in each and every year, it leaves 5.12 cents for repairs or for additional

depreciation if I have failed to estimate it; 5.12 cents being more than is necessary for any ordinary repairs taken as a whole from year to year.

In 1908, following the method I have previously described as to 1907, that is, dividing the 195,391 M feet of gas sold in 1908 into $7839.18 depreciation and renewals computed on cost, gives 4.01 cents per M sold computed on cost, which deducted from 9 cents, the amount I have allowed for repairs, renewals and depreciation, leaves 4.99 cents for repairs and any additional depreciation, if any.

In 1909 a like computation as those just described for 1907 and 1908 gives the cents per M sold computed on cost at 4.52 cents, which deducted from 9 cents, the amount allowed for all repairs, renewals and depreciation, leaves 4.48 cents.

In 1910 the cents per M sold computed on cost as previously described, amounts to 4.69 cents, which deducted from 9 cents, leaves 4.31 cents, more than enough to cover any ordinary repairs as they ordinarily run from year to year.

In 1911 the cents per M sold computed on cost by me, amounts to 4.61 cents, which deducted from 9 cents, leaves 4.40 cents.

In 1912 the cents per M sold computed on cost by me, amounts to 4.65 cents, which deducted from 9 cents, leaves 4.35 cents. The 9 cents allowed by me on all sales of gas during this period of years per M feet sold, is not intended to cover precisely and exactly the amount total of repairs, renewals and depreciation as actually occurring in any one year, because it may happen in the conduct of the business that the necessary renewals are particularly
1686 large in one year or particularly small in another year, and taking the sum computed at 9 cents per M feet sold it might well happen that you would have some excess on that sum in one year and would require that excess in the following year to carry along all ordinary repairs and make the desired renewals, and compensate for the shrinkage in the value of the property not renewed.

Exhibit "431" is headed "Lincoln Gas & Electric Light Company, yearly depreciation and renewals computed on cost".

This exhibit shows the amount in dollars of depreciation each year from 1907 to 1912 inclusive; on the Lincoln Gas Plant as computed by me on the basis of my estimated cost of the said plant. Consisting of a tabulation including at the left hand a list of the respective plant items in a column; in the next column a statement of the year when the item came into existence; in the next column in dollars the estimated cost of the items in that year;—of course, as to the year one item came into existence, as in the case of the items like mains that had gradually came into existence, that cannot be precisely stated, but the estimated cost of all the mains in existence in each year is stated. The year built is inserted in this tabulation for the purpose of indicating in which year the depreciation of the item in question should begin to be added in to make up the total annual depreciation for that year. The depreciation on a particular item of plant cannot begin to be figured in until the item arises in existence.

In the next column said statement of the years of life as esti-

mated and applied by me in the valuations of the Lincoln gas plant as of January 1, 1907 to January 1 1913; in computing the depreciation and the value of said plant. The use made, without exception, of the years of life being to divide the estimated cost of the plant item by the total number of estimated years of life and add the number so obtained into the amount estimated for annual depreciation and renewals; or, as I have said in many places,
1687 simply for depreciation and because depreciation and renewals cover, to a large extent, the same thing. Depreciation necessarily covering renewals, and renewals being a part of depreciation, being the whole of depreciation on a particular item renewed.

Depreciation at the same rate,—I may say in connection with this explanation,—has uniformly been deducted from the items of plant to determine the value of the respective items of January 1, 1907 and 1913, respectively; that is to say, I have determined an annual depreciation to be charged for each year of use as to each item of the plant, and I have deducted from the estimated cost of that item of plant the annual depreciation,—and only that and just that,—for each of the years that the item of plant has been in use in order to obtain its value on the date of valuation; so that if my estimated years of life are too short, for instance, the others of the plant item given annual depreciation is a larger depreciation than the consumer ought to pay, and on the other hand depreciates the property faster than ought to be done. So that the results as between the consumer and the company of any error or misjudgment in selecting the years of assumed life are in some degree compensatory, that is, they work against each other. Of course the cost of the value of a plant at any particular time, assuming that to be the amount on which interest is paid, in applying my method of computing depreciation, if you make the plant smaller than it ought to be because of the rate at which you depreciate it, you make the consumer pay more than he ought to pay as an annual depreciation sum. So that the extra amount paid for depreciation, would to some extent, offset the lack that the consumer would be called upon to pay in interest on the then value of the property. The exhibit runs through 8 pages I will indicate
1688 that the heading found on first page should be applied to all the eight pages. They show plainly that they are all part of one document. The total depreciation for each year is obtained in exhibit "431" by footing up the depreciation estimated in the way I have explained on each of the items of plant, and then add seven per cent to that footing, because in the method I have followed of estimating cost of plant I have found it more convenient to add the 7% item for engineer and various other expenses to the footing of the various items rather than working it into the cost of each item.

Being asked whether I have added the 7% to the depreciation of each year up to the total of the six years,—I would say I haven't even made a total of the six years.

Now, the depreciation to be allowed in the year 1907, as thus com-

puted in August, is $6,962.74; in 1908, $7,839.18; in 1909, $9,243.42; in 1910, $9,858.69; in 1911, $10,455.93; in 1912, $10,914.26.

Now, these items of depreciation representing the totals for the years are the items that have been carried back into exhibits "430" and "430½", and they are set down as the depreciation and renewals computed on cost.

Exhibit "432" is entitled "Cost of coal and oil in Massachusetts Gas plant, from Brown's Directory of 1912." Said exhibit contains a list of various Massachusetts gas plants in a column against which the name of the city or town where each plant is located is situated. The price of coal per ton appearing in Brown's Directory, in so far as the price of coal was found in Brown's Directory; the cents oil per gallon is also stated, that a number of omissions, except the cents per gallon of oil was not found, and the stated candle power of the gas in Brown's Directory; and the stated heat units.

1689 so far as found in each plant, in Brown's Directory.

Exhibit "433" is headed "Lincoln Gas & Electric Light Company, Cost of Specials and Other Materials, except pipe, per mains work orders 1905, to 1912".

Said exhibit contains a statement of the feet laid in the sizes of 2, 4, and 6 inch pipe as found on work orders, and a statement in pieces of the other material; the cost of other material found stated on the work orders, reduced also to cents per foot.

Exhibit "434" is headed "City of Lincoln, Contract Prices Per Cubic Yard of Excavation for Paving". This exhibit is made by me and under my direction, being a compilation of the numbers of paving districts in the city of Lincoln, running through the years 1906 to 1914; the cents price per year in those contracts for extra excavation, socalled; the approximate years of extra excavation in connection with the said contract; the location of the district, in so far as name of street that the district lies on. These prices for extra grading or excavation, in connection with paving contracts, according to this list, run from 30 cents up to 50 cents,—50 cents is the highest one my eye lights on,—in connection with these contracts the haul limit is 1,000 feet only as I understand it, and no extra compensation is paid for disposal of any of the material until the haul exceeds 1,000 feet from where the earth is removed.

Exhibit "435" is entitled "City of Lincoln Contract Price Per Cubic Yard for Grading" and this exhibit shows the No. of grading districts in the city of Lincoln from 1906 to 1910, giving the number of all except one, which was not obtained. The cents per cubic yard for grading provided in the contracts relative to those districts, and the location of the districts; the cents per cubic yard so provided run, in connection with these grading districts, from 18

1690 cents to 33 cents, those being the highest and lowest I see; there are only a few of those that were obtained. I understand in connection with these grading districts that the haul required by the contracts, is necessary, extend to 1,000 feet without additional compensation, and that after that and over-haul allowance is made.

Exhibits "430" and "430½", "431", "432", "433", "434", and "435" were offered and received in evidence without objection.

Exhibit "436" is entitled "Price Paid Laborers for Digging Trenches Two Feet Wide for Sewers in the City of Lincoln, as Compiled by Adna Dobson, City Engineer".

The fundamental data on which this exhibit is based was obtained by me on inquiry and investigation, on which I learned there was commonly paid to laborers in Lincoln a set of prices for digging sewer pipe trenches known as the "scale", "The Lincoln scale for sewer-pipe trenching", and I obtained such a scale from the City Engineer's office which I thought and — assured was correct. The exhibit is made up of two sheets, each containing four columns, the first or left-hand column on each sheet is headed "Feet Deep", meaning depth to which the sewer is dug; the second column is headed "Cubic Feet Per 2 Feet Wide", meaning the number of cubic feet contained in a trench two feet wide and of a stated depth. I know what there is to tha- depth, as the scale as furnished me had for its first entry, as I remember it, five feet to 5.25 feet, and then 5.25 feet to 5.50 feet, and I cut out the greater depth in each case. I had to select some number on which to make the computation, and I took the smaller number, the smaller
1691 or less depth, which would result in a slightly trifling yardage for each depth, and, consequently, trifling higher price per cubic foot, which I am after. The third column in the exhibit contains the cents per linear foot which constitutes this scale in connection with the depth and dimension; that is, the cents per linear foot paid to laborers who dig the trenches as I find by inquiry and investigation.

The last or right-hand column is a column of my own derivation, in which is shown the cents per cubic foot resulting from the previously mentioned column of quantities for 5-foot sewer; this cents per cubic foot is .8, or .80; it runs along, varying slightly, still up to .10 feet and 10.50 feet it is still .8, it figures out that way, but after that it begins to rise and goes up gradually; so that, for instance at 14 feet it is one cent per cubic foot, and at 17 feet it is 1.17 cents *cents* per cubic foot. These prices, as I said, I understand are those that are paid to the man who digs the trench, by the contractor or by the city, if, in any instance, it engages in the construction of the work itself.

Exhibit "437" is entitled "Labor Cost on Water Mains and Hydrants with Trench $1.00 per Section, Eight Cents Per Foot". The exhibit is a compilation of figures made by me and under my direction and shows the length in feet of 4-inch and 6-inch pipe laid by the City Water Department as shown by their records during the years 1909 to 1913 respectively; and the total labor cost of laying said pipe in dollars, then reduced to cents per foot for all the pipe on which the labor cost was given; and the trench for it was done at $1.00 per section, that is, eight cents per foot, 12½ feet for a section. This exhibit "437" does not purport to include all the 4-inch or 6-inch pipe laid, or even all for which the labor cost

was given, but only that which contained the total labor cost
1692 of laying, and had the trench part of the labor done at $1.00 per section.

Exhibit "438" is entitled "Labor Cost of Lincoln, Nebraska, Water Mains, With Hydrants, All Mains With Labor Cost Given", and includes a statement drawn for me and under my direction from the records of the Lincoln Water Works Department, showing the size and length of all the mains in the said records for the years 1907 to 1912 inclusive, for which the labor cost was found and irrespective of whether the mains were inralled by having the trenches done by the job or having the labor done in some other way.

The total feet of 4-inch mains so found was 37,095 feet; that length of feet being computed, I believe, by multiplying the number of sections by 12, without taking into account minor variations from that which would occur on account of the specials used in connection with the regular lengths of pipes.

The cents of all labor per foot on that 4-inch size of pipe was 23.44 cents. The exhibit shows, setting out year by year, 31,066 feet of six-inch pipe, with a total labor cost of 25.60 cents per linear foot; on the 12-inch size 3,683 feet, with a labor cost of 62.27 cents per foot; and on the 16-inch size 8,344 feet, with a labor cost *of* per foot of 71.76 cents.

It should be noted in comparing these labor costs with others that they involve the trenching common for water mains, which I find is generally reported to be about 5.½ foot cover over the pipe, and involves the making of lead joints throughout the mains; involves the setting of all hydrants and warer guides or valves set with these mains, and which adds reasonably and materially to the labor of laying the mains and doing all of those things, and very frequently it would be to laying simply street mains. By
5½ foot covering I mean 5½ feet of earth over the pipe,
1693 above the top. The trench would be deeper than 5½ feet, according to size of pipe, just as it has been figured for the gas, although it would be deeper than the gas trenches, at least that is the way I have estimated it, and the way I understand it. Gas trenches are not as deep as the water pipes are.

Exhibit "439", consisting of a number of pages is entitled "Lincoln Sewer Contracts" and contains a statement in each year beginning with 1907 and running to 1913, of a large number of contracts for sewer pipes, explaining in this connection the paving contracts, the grading prices as shown in connection with paving contracts; that we didn't take all of the paving contracts by any means, but took of each only three or four in each year, and in asking for the contracts I asked to have contracts that involved the larger amounts of extra grading, some of them not having any extra grading of any amount in each year; and they were selected by one of the clerks in the city clerk's office and furnished to me on that request, and then we took them after that as we found them.

Returning to the sewer contracts, the linear feet of sewer here stated are all for the laying of 8-inch sewer pipe, except I notice one at the end of the exhibit, and only one, involving a very small length

and that is marked 10-inch, and that portion of the exhibit I would like to withdraw, I don't want to bother with it, and it is only 204 feet of a different size.

The exhibit sets up in tabulated form the linear feet of 8-inch sewer pipe covered by the respective contracts; also the cents' price provided in the contract per linear foot of completed pipe laid, less the cost of the pipe and laying per linear foot. Right there occurs something that will make it necessary to introduce another exhibit, because I intended to have in connection with this exhibit a
1694 tabulation showing, as I have in my book, the actual contract price per linear foot. It was impossible to get into these final figures the column showing that contract price, so that the price shown here per foot is not the contract price, but is the contract price minus certain deductions that I have thought it proper to make in making my estimate about this. The contract price and the nature of the deductions ought to be shown, and to make this exhibit fully informing the tabulations as to the contract price per linear foot of sewer pipe ought to appear here, and I can furnish it. This is exhibit "439".

Mr. Morning: We will reserve the right to put in the tabulation mentioned to be known as exhibit "440", which Mr. Adams will now explain to save the necessity of his coming upon the stand again.

(Witness continuing:) Exhibit "440" will contain the linear feet of sewer pipe provided for in the several contracts for the years from 1907 to 1912, and the contract price per linear foot for the complete sewer pipe; and will also show the deductions that are made and the reasons there made from that complete contract price per foot to get the quantities shown in the column entitled "Cent's Price less Pipe and laying per linear foot, exhibit "439". I can explain those reasons all except as to the amount. The price for the sewer pipe, per linear foot, that being the way the contracts appear to have uniformly been let is for the sewer complete, consisting of a vitrified clap pipe laid in the soil at a profile furnished by the city engineer, and according to specifications drawn by him. The contractor must provide the pipe, he must dig the trench and lay the pipe in the trench and connect it all ready for the sewage to flow through. The object of the tabulations in exhibit "439" is to show the price
1695 per cubic foot paid to the contractors for the trenching and replacing of the excavated material in digging these sewer pipe trenches; so it is necessary to estimate and deduct from the total contract prices per linear foot of complete sewer the fair amount for the cost of sewer pipe itself that the contractor must furnish, and the fair estimated cost to the contractor of laying that pipe in order to get the remaining amount which will show the contract price of trenching, including any profit on the whole transaction. Now, the figure for the linear feet of sewer as shown on exhibit "439" is multiplied by the cents which I have derived and placed in the column under heading "Cents Price Less Pipe and Laying Per Linear Foot".

I am now talking about exhibit "439". The multiplication of linear feet of my estimated price, laid per linear foot, not the full

contract price,—that is the total price as I estimate it of that part of the work which consists in digging the trench and re-filling it again, removing the surface dirt, if any; in other words, doing all of the work connected with the transaction excepting the laying and the hauling of the pipe. Whether that included the pipe itself,—I answer that the pipe itself we would not class that as work but as material. Of course you must furnish the pipe and cement, and jute and connect it up. I got profiles of all these sewers and had the average depth of the sewer computed on each job,—not the average depth of all of the jobs,—but just took each job of which we had a continuous profile, and computed the true average depth of that job. I got the depth of each job separately so we could get the cubic feet per linear foot for each job. I got the cubic feet per linear foot and multiplied it by the linear feet so I could get the total linear feet for each job; that total cubic feet for each job was divided by me
1696 into the total estimated price to get the cents per cubic foot.

I have summed up the cents per cubic foot which the contractor got for doing all of that excavating work for each year, for the sewer contracts in each year; another word in explanation of exhibit "440". Exhibit "440" will show what I have not been able to show in exhibit "439" for lack of room, viz., the average depth of each sewer job so that anyone wanting to check this computation will then have with the two exhibits the given material to check it. To get these cubic feet it will be absolutely necessary to know the average depth of that sewer. Explaining these cubic feet I will also say that I have assumed for the trenching for the gas pipe of the Lincoln Light Company for pipe of the same nominal diameter. The specifications call for a somewhat wider trench for this sewer work, but I have estimated it on a width that I have estimated it for gas trenches; that is, for an 8-inch gas pipe I have taken the same width for the sewer work that I have estimated and shown in my schedule of valuation for an 8-inch gas pipe because I thought perhaps the comparison would be a trifle fairer that way; at least there would be less points to contend about; I also think it is a fact that in digging these trenches while they are required to be a little wider than I have estimated, I think the tendency will be to let the contractor have a little leeway in that respect so long as he got the pipe down in good shape. I am now speaking of the sewer contractor. I am saying what I assume contractor would be permitted to dig the trenches of the same width as I have estimated for the gas, in spite of the fact that the general supposition at the City Hall for that calls for a slightly greater width,—my recollection is that the specification calls for two feet,—I have estimated for
1697 1.9 feet wi-th of this sewer pipe work. Of course many of the trenches are quite deep and it gets down very frequently to the point where you have shoulder room to work in, which is a very different problem for a trench, if you have a man working in there whether working hip deep or shoulder deep; when he gets shoulder deep he has little better room to work in but I have taken it at the same width as I have for the gas pipe of the same nominal diameter.

For 1907 I found that the average cents per foot which the con-

tractor got for handling material out of the ground and for his profit at 1.73 cents per cubic foot as estimated by me, that includes the labor and profit apart from the other items that I have previously included.

For 1908 the price per cubic foot was 1.33 cents, and it is to be borne in mind that these sewers, many of them, are running 5, 6, 7, 8, 9, 10, or 11 feet deep, all given there. I am not saying they stuck at one point or another, but they run along through those depths.

In 1907 the linear feet of sewer corresponding to the 1.73 cents per cubic foot of earth in the trenches was 4,775 linear feet; in 1908, 8,764 linear feet of sewer were contracted, and the resulting figure for the trench is 1.33 cents; in 1909 the linear feet of sewer was about six miles, 30,015 feet, and the average price per cubic foot of earth in trenches, including the profit, if any, as I estimated it, was 1.04 per cubic foot which corresponds pretty close to the previous year which was 1.33 cents.

In 1910 the amount was very small, only 769 feet; that was 1.37 cents per cubic foot; in 1911 the linear feet of sewer was 3,494 feet at an average price per cubic feet of 1.34 cents. I call attention to the fact that this average is a true weighted average for the
1698 price per foot. While we didn't average the depth of the respective jobs we did get the cubic yards of all the jobs, and added up the total amount for this class of the work as I estimated it, and divided that total in money by the total feet so we got the weighted average price.

In 1912 the linear feet of sewer is 5,133, and the resulting price as I computed it was 1.66 cents.

In 1913 I have a record here of 15,572 linear feet of sewer, and the resulting average price per cubic foot was 1.44 cents.

1699 That completes the respective years, and bringing all of those year- together I have a total linear feet of sewer construction under these contracts of 71,522.2 costing at that portion of the contract price which I apportioned myself to the digging and refilling of the trenches, $15,638.18, those trenches containing as I estimate it 1,082,016 cubic feet, leaving off the fraction, and that amounts to this whole amount of sewer trenching, on the basis that I have computed it, to 1.44 cents per cubic foot calling attention to the rate which I have allowed for trenching for gas mains in the unpaved streets at a much less depth than this, namely, 1.51 cents as compared to this one 1.44 cents on 71,000 linear feet of sewer. As to where I got my price as to the cost of pipe, I got it from the quotations on the cost of sewer pipe from the city engineer's office. The city has in a number of cases at different times taken prices of vitrified sewer pipe, and I got copies of quite a large number of those quotations, and then for the laying and joining of the pipe which I had to allow for, I allowed the same amount that I have allowed for the labor of laying and joining the materials of gas pipe; I have run right along to a gas pipe proposition. To make the point clear I allowed the same amount for laying and joining 8 inch sewer pipe that I allowed for laying and joining an 8 inch gas pipe. I think it is fair and none too much. The sewer pipe

of this size comes in standard lengths of 2 feet and the gas pipe in lengths of 12 feet, so you have just 6 times as many joints to take care of or make for the sewer pipe. I have assumed that they are not so expensive per joint, you have to account for the laying of the pipe, and I think to take the whole thing together that my allowance for the pipe for laying gas pipe is a fair allowance to make for the laying and joining of the sewer pipe and that same figure is what I have used, as shown in my exhibit that I will furnish on this point. Exhibit "441" is a letter from the city engineer
1700 of the City of Lincoln, Mr. Adna Dobson, the letter contains information that was compiled in Mr. Dobson's office at my request and solicitation and reads as follows:

"March 4, 1914.

Mr. Alton D. Adams, City.

DEAR SIR: I find there are 27.06 miles of allies running parallel with the paved streets in the City of Lincoln. There are 4.81 miles of allies paved in the entire city.

Yours truly,

ADNA DOBSON,
(B.) *City Engineer.*

(Witness continuing:) It appears from this letter that while there are 27.06 miles of allies running parallel with the paved streets in the City of Lincoln, there are only 4.81 miles of allies paved in the entire city. It would appear probably to me that the greater part of the paved allies would be parallel with the paved streets, but it does not follow at all that all of the paved allies are parallel with paved streets; so that if unpaved allies were considered as possible or probably available for gas pipe laying, it would not follow that all of the 4.81 miles of allies paved was to be deducted from the 27.6 miles of allies running parallel with paved streets. But even if the entire 4.81 miles of allies paved in the entire city are so deducted it leaves 22.25 miles of unpaved allies running parallel with paved streets in the City of Lincoln. I have investigated these facts for the purpose of determining the practicability as far as paving is concerned of laying a set of gas pipes in the city in the allies or any part of a set of gas pipes in the allies.

1701 Exhibit "441" offered and received in evidence without objection.

(Witness continuing:) I am very familiar with the practice of the Massachusetts Commission in the matter of what they charge into the account of the item of repairs and renewals appearing in the reports made by those companies to the Massachusetts Commission, through long study of the returns sworn to by the companies and filed in the office of the Commission where those charges are made, and through my study of the documents, drawings, etc. that appeared in the numerous years before the Massachusetts Commission. Relative to the issue of securities which involved a study of the property involved and through a particular investigation of a number of the gas plants involved. I have a very con-

siderable knowledge of the situation as to the things and costs that are charged under the heading of "repairs and renewals" in the cost sheets of the returns of the gas companies to the Massachusetts Commission.

Plaintiff asked to state what the nature of the item charged in these returns under those headings is. To which the plaintiff objects as not proper rebuttal, and no proper or sufficient foundation laid. Which objection was overruled and to which the plaintiff excepts.

It has been the custom in the making up of the returns in many of the Massachusetts gas companies for a good many years, as I know from the source I have indicated, to include not only ordinary repairs in the repair and renewal charges, but also very widely differing amounts of the cost of actual extensions to the property; that is while some companies have charged in to the repair and renewal account only small amounts of extensions to their plant over and above the ordinary repairs to keep the existing plant in good condition others have charged in very large amounts, representing extensions of large cost. Companies doing that are in particular those that have
1702 been making more money than they thought it expedient to pay out as dividends, at least that is the information I got from a study of the thing and long familiarity with it, because of the possible result on the public mind and public knowledge of their true earnings and so they have chosen rather than pay it out as dividends to invest it in the additions of the plant that *they* were required and charging it in the repair and renewal account. Asked what effect that has on the operating accounts of the company.

To which the plaintiff objects as not proper rebuttal and incompetent, which objecetion was overruled, to which the plaintiff excepts.

(Witness continuing:) The effect on the operating expenses of the companies in question is, where abnormally large amounts are charged under the heading of repairs and renewals for large extensions to property to swell or extend beyond any proper amount the report- operating expenses of those companies; and it is common to find in annalizing the operating expenses of the Massachusetts Gas Companies, especially in the more prosperous companies to find very great variations in different years and between different companies in the amount charged to repairs and renewals. And I know from repeated investigations of those differences it can be traced back many a time to large extensions pure and simple that have been made to the property. I have known it to be testified to by the manufacturers in at least one large plant back there in a hearing involving his property, that that was his actual practice to charge a large amount of what he was putting in to repairs and renewals for actual extensions, not renewing any or repairing any but building a larger plant or additions to his plant. I explained the reason for that, that the companies were making more money than they thought expedient to pay out as dividends, and they can

not increase their stock to meet the extra earnings that they
1703 are enjoying and being afraid to pay it out as dividends
the most convenient place to put it is in extensions to the plant that their business makes desirable for them to have. They have it there, and that is the best reason I am able to figure out from a pretty long study of the situation, and I think that is the one that is pretty generally accepted as the main moving reason for that sort of conditions. For that very reason any comparison set up as to the operating expenses of Massachusetts gas companies and other companies, would have a very minor value until and unless it included an investigation as to what had become of the sum charged for repairs and renewals, particularly if those sums happen to be of the larger sorts that we found in Massachusetts plants, reduced to thousands of feet of gas sold, because that is much the more convenient way to get a comparison between different companies. The minute you reduce their expenses to the thousand of feet of gas sold you get a basis of comparison that shows you somewhere near where you are at, and what the companies are doing.

On cross examination I was asked if I excluded meters in stock from my valuation; the reason for the omission of meters in stock, which if included would be likely to come under the heading of "working capital", is doe to the same reason that gas pipe for construction, for instance, in stock is excluded, namely, that to include it would be calling upon the consumer to pay interest or return on the cost of an article during a certain period while it was carried as so called "working capital", and then when you begin to put it into the plant it would be expected to be capitalized; that is, to put in as a part of its cost of the plant and interest charged on the cost of the materials or article either pipe or meters during the same period of time that it also had been carried as "working capital"; so that for the same period of time the consumer would
1704 be asked to pay a return on "working capital" for the value
of the thing in question; and then for the same period of time when the thing was put into the plant and became part of the structure he would be asked to pay a return on the capitalization of that interest for which he had previously paid. It must be remembered that every item of property in this or any other plant is at one stage of the plant progress out of use and waiting to be put into the plant so that this condition I mentioned of having a return first on the thing, say during 3 or 6 months during the year 1907 as the case may be, if it should be thought to be out of use that long as "working capital" and then a capitalization on the interest during that same 6 months, which would apply to every item of property in a plant, that is, getting a return on it once for the time it was out of use as "working capital" and then getting a sum equal to that return put into your capitalization, or under capitalized plant value; that is what it would result in and that is why I do not include the meters.

Asked if I noticed anything in the corporate records of this company as to the statements concerning payment for services by consumers,—the corporate records to which I refer are those marked

as exhibit "K" in the printed report in the case of the Lincoln Gas & Electric Light Company against the City of Lincoln as reported in volume "223" of the United States Supreme Court Report. This book as it came into my possession is a book entitled "Corporate Minutes" was lacking in its pages from 55 to 66 inclusive, and also from 71 to 74 inclusive, I find in this book of Corporate Minutes, the following entry at page 24 at a meeting of the directors June 18, 1872; "On motion of J. N. Cassell it was ordered that the consumer should be charged with the service pipe," I take it, I am pretty sure that was the reading in the original record, I have it here "surface pipe", "from the curb stone or outside of the side walk, provided the- make application before or whilst the
1705 mains are being laid, after that they must pay for pipe from the main."

By Mr. Strode:

It is admitted that the gas company only pays for that portion of the paving that is opened for the purpose of putting its mains down, or services or for the purpose of repairs its mains or services, and such cases it is required to pay the amount that the city determines the company shall pay, which is usually controlled by the contracts between the city and the contractor who lays the paving.

Being asked if in my valuation I deducted anything from the total by reason of the use of the Lincoln plant for the benefit of the consumers located in Havelock, University Place and the State Farm,—

And the objection of the plaintiff as not proper rebuttal being overruled to which the plaintiff excepts.

(Witness continuing:) I would say nothing whatever, except that I have omitted the items of property consisting of the East Lincoln holder and the buildings and such machinery as is on that plot of land. I have deducted nothing, in other words, from the mains or from the works, although the works and mains to some extent are used for the supplying of persons in Havelock, University Place and elsewhere, perhaps. I have just omitted the East Lincoln holder and the other items of property on that plot of land and the land.

Redirect examination by Mr. Morning:

Being asked if in my investigation of the general expenses of the gas company here if I have seen any figures derived from the company's reports in the Electric Department, to ascertain whether there has been a corresponding increase in the expenses there, or whether there has been a decrease in the same item,—I would say we
1706 have some figures prepared by one of the assistant accountants on that point, which shows that instead of being an increase per foot of out-put in the Electric Department there has been a decrease running down through the series of years that we are interested in here from 1907 all along down. Under ordinary circumstances and the same general conditions prevailing I should expect the cost of the general expenses indicated would decrease somewhat

per unit of out-put as the out-put substantially increased in the electric supply.

To this line of testimony the plaintiff objected as not proper rebuttal, not the best evidence and incompetent, to which there was no ruling.

(Witness continuing:) Asked as to what that fact indicates to me as to the division of the common expense of the two departments,—I would say I could answer the question more precisely if I had before me the dollars expense rather than expense per unit of out-put in considering any division of the expenses between the two departments, but roughly I should say, without such figures before me, that the increase per unit of expenses or the general items in the gas department, and their decrease in the electric department, would at least put me on inquiry as to whether the devision of the total general expenses of the company was fair between those two departments; I should be led to suspect that it was not.

Exhibit "442" is a copy of a photograph of meters that I had taken in one of the buildings served by the Lincoln Gas Company. It was Melick's Court which shows a bunch of meter connections.

Exhibit "442" offered and received in evidence without objection.

1707 Recross-examination by Mr. Strode:

Being asked whether I identify this photograph just referred to as a fair representation of the meter connections of this company in the City of Lincoln, or as an exaggerated condition and the worst one I could find,—I would say considering the number of meters and what I should consider the attendant fire risk, it is the worst situation I have seen. The property is in no worse condition, it is the worst I saw, but so far as the fire situation is concerned and all of that sort of thing it is the worst I have seen in a good while. I haven't changed the value of the property on that account. I offered this exhibit as bearing on the cost of installation of those meters and the connections and the expense of making the connections of those meters. I do not think those meters would represent the fair average case of installation of meters here in the city. I think that represents the older and poorer class of the company's work. However, that would not affect the cost so much as it does the general quality of the work; you could do a great deal better work than is done in that bunch without increasing the cost any.

I did not succeed in finding the details of the 1.40 on meters, covering items of fittings, connections and setting, freight, etc.; I could give the figures for that, but I was anxious to find the original data that I made up on that if I could. I think I wasted half or three quarters of an hour that way tonight but didn't find it.

In my estimate of the different items entering into the installation of a meter I would start in my tabulation by assuming the cost per meter in Chicago. Being asked as to what items I would add and the amount of the items that I would add to the cost of that meter

from Chicago to the place I see it installed as shown in ex-
1708 hibit "442",—I would say I have not had time to study out an absolutely precise separation of that $1.40 I have allowed the company, but it would be something like this, remember that the $1.40 is an average or uniform figure applied to all the meters and that the cost of the smaller size would run under that, and that in a few meters of large size it runs over that, speaking with those limits I should say that the approximate cost would be for the meter cost for the meter connections themselves, that is the actual pieces with which to connect the meter to the basement pipe, not over 70 cents; the actual labor of setting the meter,—of course I am speaking of setting them wholesale,—and carting them from the depot and getting them to the places of installation and installing them, apart from the cost of making up these pieces that I will call meter connections although that is a more or less used term would be in the neighborhood of not over 40 cents per meter setting that large a number of meters in, that would raise you to not over $1.10 for an average figure, and the remaining 30 cents would be more than sufficient to cover testing and freight from Chicago, there would be a little left over for any possible small items that might not be included in the matter in the way I have separated it. As to the weights of the average sized meter, how it is shipped and in what form shipped,—meters are commonly boxed up when they are shipped. I don't remember the weight of the average tin meter, they differ, whether they are of tin or cast iron, but the company are using nearly all tin meters as I understand. I do not know the freight rate. I feel that without knowing the weight or without knowing the freight I would be justified in fixing a figure covering the item of freight as long as I have fixed it as large as I have in this instance. I do not know
what the rate between Chicago and Lincoln per hundred is.
1709 That would make a difference in the item of freight but I have allowed enough to amply cover anything I think it could possibly be, in my opinion.

As to what is involved in testing a meter, you have to see that it measures correctly the gas passed through it. I have forgotten where the company's meter tester is I think it is down to the meter shop but I am not sure about that. That would involve the take of the meter from the car to the plant for the purpose of testing it, if you did the testing down there as you might well enough do. It wouldn't be practicable to test it at the place where it is to be installed, of course it could be done, you could take a test meter there and test an individual meter but it would be a very expensive and inconvenient way to do it. I don't know how much time would be consumed in testing a meter. It is a very short process; you might allow 10 cents or something like that for the testing. If it is found to be inaccurate whether it would take any amount of time to correct it,—I would say a meter that is badly out it would, of course in buying meters you would make a proper investigation to get meters within useful limits, and if they did not the manufacturer would have to stand it; You don't buy bad meters, you buy good ones. Assuming that you buy good ones and that they do need correction and that is the pur-

pose of testing them to be certain that they measure correctly, I would say that I included that for any ordinary adjustments in the 10 cents; take 10 cents a meter on this large number of meters we are dealing with here. Remember it is not like testing a few meters when you do that. I am looking at the whole thing from a wholesale proposition when dealing with a reproduction proposition. I would figure the meters coming in in car load lots switched right up to the company's side tracks, and unloaded on the ground and there tested in wholesale lots. That is what I am talking about. And in a situation like I would contemplate all the meters you see in
1710 this picture would be installed as one job, all taken there at one time and put in, I would consider that the meters would be put in by a team of several men keeping right at it for the working hourse of the day, keeping right at it going right ahead. Whether at that particular place I would expect continuous work there from the time they started until they completed installing the meters that are in sight on this picture, that would reduce the expense of setting each meter,—I would say no it wouldn't they wouldn't necessarily do that kind of a job nowadays, and in the second place they wouldn't necessarily stick all of those 13 meters in there at once, I don't say that they would set the whole 13 of those at once, perhaps they wouldn't get in the inception of the business 13 meters in one bunch. It is more common than otherwise to place meters in the basements. Perhaps the location of a meter on the side of a wall is not a practice to be condemned or is not an unusual practice; it makes a good deal of difference how you locate a meter. You can hang meters up in a bunch like that, with lead connections, their entire weight hanging with lead connections and no side support to prevent the bending of the lead connections you are making, what would be considered a pretty bad job. It doesn't detract very much from the value of the thing, but as a job existing there I do not think any man who knew anything about the business would say that was a good kind of a job of that kind. It could have been done a good deal better at a very little if any more expense. The engineering charge ought not to be any more on that, that ought to be right; but then I have allowed the full 7%. In the 70 cents for connections I involve the pieces, either lead or iron pipe, partly of each as you use it here in Lincoln, length ordinarily from 15 to 18 inches would suffice for the average purpose, on each side of the meter connected to the basement pipes. As to how long I
1711 would think it would take ordinarily to set a meter not in wholesale lots, but to go down and get a meter at the plant or wherever it is and take it out and put it in,—I couldn't give any answer to that at all; that has nothing to do with the reproduction of this plant in my mind. It would have nothing to do with the present value of the meter; one wouldn't have very much of any bearing on the cost between retail and wholesale construction of that particular line of work, it is so large that I would not think of the cost of going to the plant and getting one meter and taking it out somewhere would throw much of any light on the cost of setting 8,000 meters more or less as they have here as a wholesale proposi-

tion. It is not my basis of calculation for the reproduction of the property to assume that I would get my mains laid and my services constructed and the place to put 8,000 meters in the basement in one job; I do not assume that. I assume the placing of those meters on a wholesale basis, and by that I mean that you would be able to start a meter team and keep it going day after day, not running down to the plant after one meter but hauling out just as many meter- that could be conveniently handled by that team and making a day's work of it, after you kept that up for a while you might have to put the team and the men on to some other work for a few days and then start metter setting again. Meter setting is more or less skilled work. You can not take men out of the trench and make meter setters out of them, not trench diggers you couldn't. You might have men who could connect some of your large amount of screw pipe in the trenches that would know enough about meter setting to make a good job of it, that would be perfectly possible and practicable to employ men connecting screw pipe in the trenches, for instance part of the time and part of the time on meter setting work the other part of the time. That is an important branch of the service requiring careful and intelligent work, I am considering the work all
1712 properly done by skilled persons, and I would suggest that it ought not to be, if it were not it might result in serious injury to the property. In the matter of having a meter tested I would assume that the company would employ skilled men to test those meters to see that they were correct; that would be quite as important as to get the meters out in wholesale lots.

I couldn't give the difference in the weight between the larger and smaller meters that are in the service here. I could not give any idea as to whether the larger sized meter would weigh twice as much in my opinion as the small ones. I do not think that just making a flat price of $1.40 applying to all classes of meters is rather a rough way of getting at the details of that item involving the installation of 8,000 meters; I think it is reasonably accurate, not an unheard of or an unusual way of getting at it, remembering that while there is quite a range in the size of meters running from 3 light up to several hundred light capacity, that the percentage of larger meters is very slight indeed compared to the whole number. Whether the percentage of the small meters is equally small compared to the whole number, I should say the meters of 5 light and under would make up the great bulk of the whole proposition; above the 5 light meters there is a very small percentage. The 3 light and 5 ligh' make up a great bulk of the meter purposes or meter number.

Referring to exhibit "429-7", I was asked to find the figures elsewhere under the heading "Other Expenses", against other parts of other tables shown in this printed report from Massachusetts, if I could in connection with those companies and I found them. I think that the fact that the quantities in dollars is just the same amount here in the profit and loss column, together with my knowledge of the way those records are kept, and together with the heading

of the tables to which attention was called, indicated strongly
1713 that the items corresponding exactly in amount that I found in the profit and loss column were the same items that were read to me in the question. Of course if I had resorted to the original returns as to those item- it could be determined precisely where they came from if I had chose to take the trouble to look, without any doubt whatever.

Asked if for the town of Boston there is shown in exhibit "429" under the expense of manufacture, coal, enricher, purifier, water, wages, repairs, maint*ai*n*e*nce, renewals, apparatus and machinery, that will be the total cost given; then for the distribution expenses, wages, repairs of mains and services, repairs and renewals of meters, gas stoves, public lamps, and other expenses, whether I find in the report for Boston in that portion of this printed volume referred to, the amounts that cover these items of expense referred to,—I would say I would think they are all in here in total, but not set out under those headings counsel has mentioned, but they are in total for the expenses of manufacture and expenses of distribution, it is there in total seg*g*regated, one separate from the other under the heading "operating expenses". The operating expenses as set out on page 52 A of this printed report to which I have been referred for the operating expenses for the Boston Consolidated Gas Company are set out against the following headings: The Works, For Gas Bought, Distribution, Management, Taxes, Incidentals, and the Total, indicating the total operating expenses as set up and corrected by the Board of Gas & Electric Light Commissioners. The office and other operating expense is in there, but it is not seg*g*regated into the items that this company has in them. The items "Office Expenses, Taxes, Miscellaneous Expense", are all in here under one of the headings. Being asked as to what is understood to be included under the item of "Management" as reported to the Massa-
1714 chusetts Commission, and what would be included under the heading of "Operating Expenses", to-wit, "Management"—I would say according to the form in use for June 30, 1913, which is very nearly if not exactly the same as the one for 1912, according to my best recollection, on page 8 of the sheet form of return being headed "Statement of Income and Expenses" and there occurs the heading "For Office Expenses and Management", and that is the sub-heading, and under that still further are set out headings of director's allowance, with the sum of money of course following; salaries of officers, general salaries, rent of offices not owned by the company, and repairs and maint*ai*n*e*nce of office, buildings owned by the company, general office and management expense, and then there is a footing indicating that the heading of office expense and management includes in the classification adopted in this form the report of items which I have mentioned. Asked to identify in this printed form where I looked for profit and loss, and took certain items for an*n*alysis from those reports as shown in exhibit "429" and point out in the report here with respect to the particular item in the profit and loss account certain items that occur in exhibit "429". And asked to show where in this report that con-

tains the profit and loss account where I will find the "office expenses", under what heading, of any one of these companies,—I will say they do not enter the office expenses under profit and loss, that is not good bookkeeping. Asked where it is included in this report, I would say by taking still the Boston company on page 52A we have management in here amounting to $282,580.04. I consider they do include the items that I have read here, office expense and management. I have correctly stated to counsel that the items in the exhibit he speaks of are not set out in greater detail than the items are set out in operating expenses as appearing in these balances and which I am giving him the heading of "management" here, which includes certain of the main subheadings. Office
1715 expense and management are run together as a single heading in the return to the commissioners. Asked if there are any other sub-divisions of this balance sheet referred to that would give me part of the office expense,—I would say the office expense as classified by the Commission, would come under this heading, "Management" on page 52A, that would come in as a part of the sum and set against, "Management". That is the only place that I know of to look for the office expenses, right in there under "Management".

Asked to take the second town Brockton on the list and identify the item of "other expense" as shown in exhibit "429" in the profit and loss account,—I will say that I do not find in the item "other expense" as to Brockton the item "631" appearing in other expense in the sheet of Brockton in that amount; I find another item there, but it is not for the same amount. I find one item in the profit and loss account of $461.14.

Turning to the item of "management" under "Operating Expenses" for Boston, and asked to show what the amount is there to have been expended for office expenses,—I say it is not shown here, it is in with other items. The amount here set against, "management", which I think probably includes all the office expense chargeable to the gas business, was $282,580.04.

Turning to exhibit "429" under the title "Office Expenses" I find this shows an office expense for Boston for $32,247.80. It is in the same volume whether it is in the same year as referred to in the balance sheet where I gave the "management". I don't suppose the same items are referred to; they evidently do not correspond.

1716 Asked if that "management" in this balance sheet takes care of the item "Office Expense" in the exhibit "429", then either they have made a mistake in reporting the amount in exhibit "429", or there has been an expense made in entering the amount under "Management" and I am mistaken about the account,—to which I would say I have made no particular study of this tabulation, it is not a part of the Massachusetts system at all, but is simply a tabulation made up out of these balance sheets which do represent the Massachusetts system of bookkeeping, I don't purport to know precisely. I found them in the profit a- loss account, the items corresponding in amount, and so stated the same number of

dollars. Excepting in Brockton, the second town, and if you had the original return you could see where it all came from and it is all seggregated out there, in the original report, such as I have here in Taunton, that is a sample of it, that is what these printed "reports are made up from in balance sheets as corrected by the commission.

Asked if I refer-ed to the matters of repairs and renewals in Massachusetts and said that some of the companies in Massachusetts were in the habit of covering up their earnings by entering as renewals or repairs what were, in fact, extensions,—I will say that may be a fair sample of what I said, that is the substance of it. Asked whether I think the Commission knows that that is what is being done,—I would say it is notorious. I don't say the commission is a party to it, the commission is not a party to it, and does not attempt to dictate to the companies at all, it does not go into their accounts to find that out; they have told them what to charge before, and it is notorious that the companies charged a lot of extensions in there. I don't think at all that the commission allows the company to charge whatever it pleases and keep whatever account it
1717 pleases, but it is a matter of judgment what you shall charge into the repair and renewal account; and as a matter of fact, I have told you the fact that that is the way the thing works. I have copies of testimony given before the commission. The statement asking whether I think I am doing justice by the commission of Massachusetts in saying that they would permit extensions to be carried on those accounts under the name of Repairs simply for the purpose of allowing an increase of capitalization and increased earnings in the community where the company was located,—I say counsel is putting on a lot of stuff I have not said and I will just stop right there by telling you I have not said it. I know the commission knows that this practice exists in Massachusetts; it is brought up repeatedly in the hearings there; there is no "think" about it; it is just as well known as any practice could be, and the commission can't help it. The commission cannot indicate when a thing is reported as a renewal or repair and should have been an extension, they cannot help themselves so far as that company is concerned. whether they can change or direct that that item be entered as it should be entered in the returns to the commission,—I say the trouble would be it would require an army of accountants and engineers to chase up the fifty companies to see what they entered as a "repair" or as a "renewal" and whether it was, in fact, an extension; it is the practical enforcement of a regulation of that kind on a matter involving as much judgment, engineering and skilled judgment as that does, that makes it impossible and impracticable for a commission to enforce a rule on that matter. Asked if they have not got the time in Massachusetts to see that those companies
1718 make a proper report as to whether the money expended is for repairs and renewals, or for extensions, and whether I think they have sufficient time to check over and determine whether the items expended for the operation of the plant and are properly entered and applied to the things that under the classification they

assume to apply it,—I say not generally by any means, unless the item shows on its face where it should be classified, then they have time right in their office to so classify it, particularly in making up their own reports based on that report, for the item shows what it is on its face. It is different from going out and investigating the construction work of a company. There is nothing about the form of entry required that would put the commission on notice, for instance, if a company would report as repairs the extension of mains for a couple of miles and enter that on the report, that the commission would take notice of it and direct a correction. Asked to assume under the item of repairs of mains and services if the company should report that it had extended its mains for distance of two miles, if that was written into the report by the company the commission would take notice of it and require a correction.—I don't think I am called upon to guess as to what jurisdiction the Massachusetts officials would use it I have told how the charges are made,—I am not called upon to guess as to what powers they would exercise under a given contingency. The company does, as a matter of practice, exercise a good deal of discretion in making out its report, and that is particularly an extension, so in the indirect matter of repairs, renewals and extensions, where the form of the report does not reveal on its face very well what has happened to the physical product. Possibly it reveals quite as clearly where it says on their report "Salaries of Officers, and Other General Salaries, 1719 General Office and Management Expenses", it is quite as definite as those headings for the expenditure of money; I don't understand that there is any particular trouble of dispute about that. Counsel does not claim but what I have shown on that report for salaries of officers, you can tell from the report if you go back to the original report if you make a correct copy of it. I offer those reports here, for a certain group of items simply to prove that the company has extended a certain amount of money for a certain item. It was not solely to prove that I could make a correct copy of the reports that I submitted those, that was involved, of course, to have a correct copy in order to show anything that the copy proves.

There is a general specification in this general form that requires the company in its return shall specify particularly what additions, alterations or improvements have been made in the property of the company since the last return; I will not say it is precisely in the words counsel has read, but it sounds much like it. Assuming what counsel has read is found in the report, I would say that the company then would report, if these reports are of any value at all, they would be obliged to report what additions, alterations, or improvements, had been made in the property of the company since the last report; those are valuable facts. I had a large collection of those from a great many years, I have devoted a great deal of time to that. It is a gross mistake to say that the real fact is until some rate came or hearing comes up where the commission is called upon to determine the value of the company's property that those reports are not considered of any value whatever by that commission for any

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purpose. Asked whether I think that that commission upon
1720 a rate hearing before it receives those returns and considers them as the evidence of the amount of property that the company has,—I say I think they are received as evidence of the amount of property; receiving the reports as evidence of the amount of property the company has is a very different thing from receiving as true the statement of expenditures of a definite number of dollars for operating expenses. Those reports are undoubtedly received as evidence, to say that they are received as conclusive evidence is quite another thing. The commission relies on the records of a company in its office and on the statement that the company brings in itself almost entirely, and that has been especially true in the last 25 or 26 years.

As to what this hearing in the Haverhill case was about and why engineers were called in there for those reports speak fully as to what the company had and what its hearings were,—I would say that I know of the Haverhill case before the commission, and I know of no engineers being called in on behalf of the commission. One of the engineeers is himself an engineer and is by training and by profession an engineer and I didn't know until just now that the commission called in any engineers in the Haverhill case before it, which hearing I attended to the extent of 27 hearings during the year 1911. The company itself presented a number of learned engineers, the commission could not help that, they like to hear them. They were not responsible for what the company brought in. Sounsel started in with the allegation that the commission brought in its engineers, I tell you it is not true. Whether the company itself and the petitioner present engineers that their report and criticism of operating expenses and value of the property,—I say more commonly than otherwise that has not been true. That was true in the Haverhill case; that was a
1721 large and very important case. The petitioners in that case depended upon the reports not entirely to present their case to the commission but very largely. I was myself engineer for the petitioner. Whether I went back and valued the property and examined the accounts and criticised them and did not depend upon a report,—I say I did depend on a thing like that, and I relied on the statement of the company as to its operating expenses. I did not go to the company and check up its expenses to determine whether they were correctly or properly reported to this commission; I took their sworn reports to the commission. I never examined the company's books as to their operating expenses. I examined some of the records for property or plants, but as to the operating expenses I took it as they reported to the commission. Of course, I don't agree that all the items they said they had spent their money for were proper items. I thought they had spent too much for management but I accepted the terms just for a truthful statement of the — spent and for the things they said it was spent for. They did not have simply that kind of a report that I found in the Massachusetts report; they had a- original report and not a mere compilation showing a part of the facts they could get in the original

return; that was what I went to when I wanted to find the facts, and all of them. I could find them in a report like that about the operating expenses. I most certainly did not go back to the report like that, on that same form (indicating) in the Haverhill cases to get the operating expense and the particular income of that company; I mean by that to say I did not go to their books to see if that was correct transcript; I don't mean to say that I didn't criticise the amount of some of the items reported.

1722 Being asked to read the heading under which I have classified these different items that I have put into this tabulation of Massachusetts I read as follows: I will take Cambridge for 1912; "Meter Reading and Collecting" is one of the headings, "Salaries of Officers and Directors", "Other General Salaries", "Advertising", "General Office Expense", "Care of Street Lamps", "Material and Other Street Lamps", "Distribution, Tools and Appliances", "Rent of Offices", "Insurance", "Law Expense", "Claims", "Meter Connections", "Stove Connections", "Fixing Gas Stoves", those are the items that I have abbreviated from the original sworn returns for Cambridge for the year ending June 30, 1912. The expense items I have included in my exhibits, are all found within the first 28 subdivisions of this report, according to the form of return for the year ending June 30, 1908 under the heading "Expenses for Manufacturing of Gas" on the one page, but as I have before explained, there are frequently, sometimes, interlined, sub-headings of expense which the company does not know just how, or where, to enter under this printed heading and they interlined it in there so the exact nature of the expense may be described. I would not dare to speak from memory and state that the form I am referring to is a form that was also used up to and including 1912; the form has changed but little in these recent years, but I would not dare to testify it is precisely the same. I am not questioning that it is. Asked if the only change in the form I know anything about was in 1913,—I say No, meaning from 1908 to 1912,—I say I cannot testify that there has been any other change, I don't remember it if there has been in those later years.

1723 Asked concerning explanation in my testimony covering item "Other Expenses" and the explanation that I made with reference to that item "Other Expenses" not being contained in the report,—I think that is true not only of that but of any item of expense you find in there, there is no long explanation of it, they were written down, you can look in different places and find them. In the return the expense is set down and is required to be set down as to the thing it was incurred for, but when it comes to making up this printed document of their own they cannot repeat all of those descriptions in those itemized expenses, and they don't attempt to, and the place to find out what money was spent for is in the return of and company that spent the money. Whether you can find out what they spent it for for sure,—I would say circumstances alter cases; it is a valuable place to go if anybody

really wants to find out they are pretty apt to find out; that might concern even *item* items they cannot find out about. Asked if in the incidental expenses you could not find out from that what it was spent for,—I say, did you notice those nice little lines set in there for people to write down what the incidental expense really was; and I have quoted some of those pages, a number of them right in my copy. I quoted what I found there. Various things. For instance this "Advertising" was probably there. I can't tell you what I found there. I told them I took all the entries I found in there. Now, as to what entry I found in the original return for a particular year on a particular line I can't tell you, I took the entry whatever it was. Here is a copy of the report, I can tell you just what is written there, on the incidental expense it didn't have anything so we did not write any for that company; whether the other one had any incidental expense or not I don't know; the line I am talking about may be estimated to be about 2½ inches long,

1724 I would not say that it was not. The line suggested was not made for figures as I know now by looking at the return, and as I have known for many years by seeing what is written in it; it shows on its face that it is a line made for a description of the entry. Whether that is more than three inches long,—I don't dispute the length and I don't want to be captious about it; it is no place to put figures evidently. Fortunately I can furnish one that has some writing in there, to see how definite the information would be I have here the form of the Haverhill case company for the year ending June 30, 1913 and under the heading "28", "Incidental Expense Namely", that is, namely "A. Advertising", "And so much money, just similar to the advertising I have here for the Cambridge company in 1912 which I did not doubt was taken from a similar entry, that being where those descriptions of entries not falling within these printed descriptions are very often and particularly if they are in the nature of a general expense. That means an Extra Incidental Expense, it says so. That might be most anything, only the idea is you will commonly find a descriptive word or words in there telling you what it is, and if a large incidental expense was written in there without description it would be pretty sure to call for inquiry from the clerk of the commission and it would be found out what the item was, and the description would be written in there, in the ordinary practice of that office.

1725 Returning to the item of "Renewals, repairs and depreciation"; I made a computation of the depreciation of this property from 1907 to 1912 year by year as counsel asked me to. The description is inaccurate when it says I did that by simply taking the property that I found in 1907, the particular items of property, and extending their life until 1912.

Exhibit- "431-5" shows the buildings in 1908, 1909, 1910, 1911 and 1912; it doesn't show the same buildings in all those years, the number of the buildings increases as the years go by. Here is the district holder, booster house that my assistant has in there with a depreciation, that should not be there at all, because I don't think

that that item should be included, but it is in there and I will leave it there.

I valued the property in 1907; I applied the 9 cents per M feet of gas sold as an ample amount to provide for all repairs, renewals and depreciation year by year beginning with 1907, and continuing on; it applies at this time and it would apply for future time, the immediate future anyway. I found the 9 cents amply sufficient to take care of repairs, renewals and depreciation in my opinion. I base the 9 cents on what I found by computation from my estimated cost of the property, and allowing what I am sure is more than enough to take care of ordinary repairs on top of that estimated depreciation and renewals arrived at in an entirely dif-erent way. Asked if the property was valued at double the amount I valued it at, whether then I would have to increase my 9 cents,—If I was convinced that the true value was double that I would say yes. There is a value here by Mr. Lea far in excess of mine. If I valued the physical properties themselves, at double the valuation I found, I certainly would have to increase my 9 cents. Whether the 9 cents is
1726 only a correct figure, in my opinion, provided the valuation of the property remains at the point where I fixed it, or approximately that,—I would say it is not down quite so low as that, because I have put in and allowed 9 cents I did not allow it until after I had made my depreciation and renewals along an entirely different way; I allowed the 9 cents with the idea of allowing more than I thought was necessary to cover any claim or dispute that there should be more allowed for depreciation on account of higher valuation; but still you keep raising the valuation and you would soon get past the point where 9 cents would be enough. Whether if you disturb the valuation you would disturb the correctness of the depreciation fund as provided by the 9 cents,—I would say you disturb the basis of your depreciation and renewal fund just as soon as you begin to change the valuation. If you disturb the life of the property that I have fixed you will disturb the basis for the depreciation fund, you will move it either one way or the other. I haven't shown 57 years as the life of the distribution system.

Assuming that is the figure; and that I fixed the composite life of the Works Equipment at 45.55 years as against Mr. Lea's 32.32 years; and that I fixed the life of the buildings at 62½ years, as against Mr. Lea's 46.25 years; now if the life of those buildings and that equipment and the distribution system was found to be as Mr. Lea reports it and determines it to be then my 9 cents would have to be re-adjusted. And if the court finds the valuation placed upon this property by Mr. Lea is the correct valuation then my 9 cents would have to be re-adjusted.

Now counsel has got the formula precisely when he says that that 9 cents as a matter of fact applies to the valuation of the property at the point that I fix it, with the life of the property as I fix it, only with the exception that I think I have explained, and that
1727 explanation should be given its weight, that I have put somewhat more into the 9 cents than my computation based on my

life and cost of the property requires,—or more than I think it reuqires; I have left a leeway there.

I did not intend to leave any portion there for contingency in the way counsel figures it, but I put in more than I really believe is necessary to keep up the value of this property and perform all necessary repairs. I did not put in more there than I feel I can justify, because I justified on the ground that we are dealing with a very important matter, and to my mind one that it is important that we do not do the company an injustice in, and these matters we are dealing in are not only important but are matters of estimate; I do not claim,—as I have been studying the matter for more than fifteen years,—to know exactly how long this stuff will last, and I justify putting in more than my computation shows because my computations are based on assumptions, the best I can make, but still they are assumptions, just as any man's computations in this matter must be. I certainly feel that the City is my client in this matter; that I am in the service and represent the City in this controversy and that I am giving the City the best services I have and in its interests, but that does not involve doing anything that I believe is unfair to the other side; I do not think that is the measure of proper services at all. I do not think I am called upon to volunteer information or opinions or judgments to this company for its benefit in this controversy.

Asked especially in view of the fact that I have participated in pursuing a vigorous cross examination of witness, that I would hardly be expected to turn around the next day and render assistance, even though I felt the facts if fully disclosed would be of benefit to the company,—To that I reply that I haven't considered any facts that I thought were necessary to the company, if
1728 that is what counsel is driving at. If you are trying to get my attitude, I am doing what I think is fair and right in the interests of the City, there is no question about that, to develope the truth as I see it for the purpose and in connection with winning of that law suit.

Concerning the sewer exhibit and data I brought in, and being asked if I don't think if, I had gotten and produced here the data that covers all the sewer contracts so that the whole matter might have been laid before the court, that that would have been a fair proposition,—I say no, I have taken all the pipe sewer contracts that have been executed and carried on here for a number of years, there is a limit to human effort, but I have shown dozens of contracts in the tabulation, I have not segg*r*egated them at all. What more could I do, I have taken them as I came to them.

Mr. Strode: The plaintiff reserves the right to furnish a tabulation from Brown's Directory corresponding to the subject matters covered by the tabulations presented by Mr. Adams from Brown's Directory; also to present tabulations from the company's record with respect to the cost of specials, and all other materials except pipe, per main work orders 1905 to 1912. The company also reserves the right to

present an exhibit containing four contracts, paving contracts, from each year covering data shown in exhibit "434".

1729 Whether in any of the contracts referred to in exhibit "434" the contractor got the dirt, or whether the dirt was retained as the property of the City,—I found no record of any contractor getting any earth in any of these contracts. I have no information to the effect that where the contract does not reserve the dirt the contractor gets it, I didn't read all the contracts, I read some of them, and had extracts made from them right along down through and I didn't find anything of the kind. There was a provision in the specifications about the earth being place- where the City requires, that is all I remember about the dirt, and a provision about the length of haul and over-haul. There is nothing in the contract that I saw or read that provided that the contractor had any right to the dirt whatever, he is required to place it where the City requires, within certain limits. Whether the City or the contractor got the dirt would make a difference in the cost of grading, and in the cost of the whole job perhaps, if the contractor could get a market for the earth, he might or might not have a market for it if he was entitled to.

Mr. Strode: The plaintiff reserves the right to present a tabulation on the subject within grading districts, covering the subject matter shown in exhibit "435".

My exhibit "436" refers to the labor cost in sewer construction in Lincoln, that is the scale, it is not a contract at all; it is simply an analysis of the City scale that was furnished me by the City Engineer's Office and I simply reduced it to price per cubic foot. I think that tabulation was prepared within a week or so, very recently. I have some data here on Sewer districts, as to how long I have had it, I have had that data in process of work,—it has required a great deal of work to work that up,—that has been in process of work since I was here the time before this; I think I got the final completion of the data when I was here the time before this, several months ago.

1730 That does not cover both sanitary and storm water sewers, only the sanitary eight inch pipe sewers is all that is included, This is all contract work that is covered by my exhibits, and I have dealt with the contract price, where the contract is let for the completed sewer, and is let as a whole then, at so much for the completed sewer. The depth to which the sewer is to be placed varies in different districts under different contracts, it is fixed by a drawing called a "profile" prepared by the City Engineer in connection with the specifications. You can get the average depth in any contract by referring to this "profile", and determine from that what the depth of that sewer was in that particular district. The City Engineers Office as far as I know, made no attempt to determine the labor items entering into the construction of that sewer for trenching. The only way I can determine that separate from the other parts is by estimate, I can make a fair estimate. I could

not have made just as good an estimate if I hadn't seen that. As to how the completed sanitary sewer aids me in estimating the cost of the labor for trenching,—I say it gives me the depth of the trench and the size of the pipe, and the price of doing the whole job is the only purpose I had in using the contract. The price of the whole job wouldn't tell me how much the trenching would cost,—that was the only purpose of the computation, to estimate from the contract price in each instance how much was paid for the trenching and back-filling alone. If there isn't anything in the contract to indicate how much was paid for that item you could not determine it from the records of the City Engineer's office or from the contracts except as a matter of estimate; it is purely a matter of estimate. Even if I knew what the price of labor was and knew the width and depth of the ditch I could not estimate it just as well from that as I could from the "profile"; I can take the Lincoln scale and tell what will have to be paid for labor
1731 on that date, but what I am estimating is what the contractor gets out of the proposition for digging that ditch, including his profit, if he made any profit. I did not talk to the contractor or any of them that did this work to ascertain their experience in the work, or what it cost them, I was around one or two streets and saw the work going on, aside from that and the information I got from the City Engineer's Office general information about the matter, I confined my investigations to what is shown on the face of the contracts.

Mr. Strode: The plaintiff reserves the right to offer an exhibit on the cost of the sewer construction corresponding to the subject-matter of exhibit "436", and also including storm water and sanitary sewers.

(Witness continuing:) I don't remember that I noticed in that record that the water mains for fire service were carried separate.

Asked to refer to my data and if I find that they were separate, then asked if the item of hydrants would be of any importance in my testimony in respect to that,—that the fire service would take care of that,—I would say that there were hydrants in this stuff that we took, I am very sure of that; but as to the fire service taking care of the hydrants I say not at all; fire service is not a hydrant proposition, it is separate; hydrants are connected with the regular mains, you run the fire service to the buildings to take care of the buildings. I did not understand that the joining materials for the distribution system of this plant *was* principally lead, I understood that it was mixed lead and cement on the company's cast-iron mains. I didn't have the information that up until 1900 and 1902 it was all lead; I simply assumed that it was mixed lead and cement in an undetermined proportion.

I referred to the miles of alleys in this town as 27.06 miles
1732 of alleys and 4.81 miles of alleys are paved; the 27.06 miles of alleys run parallel with paved streets, and adjacent to paved streets, that is, within half a block at least of a paved street. If the pavement wasn't on a street on both sides of the alley you

still might get a benefit from the fact that there was a paved street on one side under my scheme of putting the mains in the alley; if you decided or would like to run mains in alleys you would have an opportunity to get out of your paved street into an alley that was half a block away, if you thought an alley was a good place to run a main in. I haven't investigated to learn that upon paved streets here where the alley is not paved that the alley is not brought to grade, and I haven't based my computation on that.

Asked whether if the street was graded in front that it would be brought down to a lower level than it was before, that the natural surface grade wouldn't be the street grade when the alley was paved,—to that I would say it might likely not be, it might be a little lower. I would think on an average you would have to sink your mains a little deeper in the alley than you would in the street. Whether you would have to cross a paved street in order to get on the alley in the next block; you would have to cross a street every time that there is paving in the street, you have to cross underneath the paving.

There are more than two pages in the book of minutes of the company I referred to that are missing, there was a large number. I attach some importance to the fact that those pages are missing. The period covered or involved in those missing minutes, as I remember, was prior to the time the company removed its plant to the new location. The pages lacking in the corporate minutes are 55 to 66 inclusive, and 71 to 74 inclusive. Being asked what years are covered by that,—the first entry is the meeting of the Board of
1733 Directors June 12, 1876, page 54 of the original book of Minutes. My next entry in my copy is July 22, 1878 page 68 of the original minutes. That book was in a mutilated form when it was submitted to me. It was a rather small book I couldn't tell just how large it was; it was not a minute book, it might have been six inches by eight inches, or seven inches by eight. The binding of the book was considerably broken. I have forgotten whether any part of the binding was missing or not. Whether there wasn't any binding on it at all,—I would say I guess that is right, I guess the binding was gone. Whether the leaves were loose and it was wrapped or tied together,—I would say the leaves were not, as I remember, loose generally, there might have been a loose leaf some where in it.

Witness excused.

1734 Mr. W. J. ASSENMACHER, being first duly sworn, testified on behalf of the defendant as follows: Pages 2120 to 2239 original record.

Direct examination by Mr. Foster:

I live in Lincoln and am engaged in the general contracting and building business, and have been for the last seven years.. Prior to that time I was foreman for contractors for six or eight years. Before that I learned the carpenter trade for six or eight years. All of my work for the past seven or eight years has been contract work

on larger buildings, such as school houses, churches and public buildings. My principal contracts during the past seven or eight years have been:

| | |
|---|---|
| The Kearney County Court House at Minden | $80,000. |
| Lincoln Hotel Annex | 85,000. |
| 3 Buildings at the State Fair Grounds | 140,000. |
| 2 Buildings at the Peru Normal School | 80,000. |
| 1 Building for Charron Normal School | 40,000. |
| 1 Building for Judge Munger at 12th & P St | 18,000. |
| Church at Havelock | 20,000. |
| School at Fullerton, Nebraska | 30,000. |
| Church at Fullerton, Nebraska | 18,000. |
| 3 Schools in Lincoln | 45,000. |
| Church at Aurora, Nebraska | 18,000. |
| Law Building University Campus | 65,000. |

One of the buildings at the State Fair Grounds and three of the School Houses were built this year. The building at the University was built last year. The Kearney County Court House and the law building were of steel and concrete construction. I have made an examination of the buildings built by the Lincoln Gas & Electric Light Company located on block 79 and those at 33rd and X street in Northeast Lincoln. I measured them up quite thoroughly, and figured up what they would cost if built new to-day. Exhibit 169 is a summary and the figures opposite each building is the repro-
1735 duction cost of the Stable, Blacksmith Shop, $907.50, Generator House, $3,308.50, Booster House, 33rd Street, $471.25, Purifying House, $12,482.95, Meter Shop and Booster House, $2,589.63, Retort House, $6,080.00, Coal shed, $1,892.00, Oil Tank House, $1,276.66, Total $29,008.49. That is what I would replace the buildings new. Exhibit "170" is my estimate of the stable and blacksmith shop, as follows:

| | |
|---|---|
| Stable 18′ x 24′—11 high, shed on side 6′ to 10′ high 24′ long 14′ wide, shed on other side 6′ to 10′ high, 49′ long all paper roof, 10,000 feet lumber $28.00 | $280.00 |
| There is a few stone in the foundation estimated | 10.00 |
| Hardware and nails | 50.00 |
| Carpenter work | 125.00 |
| Rubber roofing, 17 squares at $3 | 51.00 |
| Painting | 30.00 |
| And wagon shop 18′ x 18′—10 to 9′ flat roof Blacksmith shop 18′ x 18′—10 gable 6′ high | ..... |
| 1 brick flue | 10.00 |
| 5,000 sq. ft. lumber at $28.00 | 140.00 |
| Carpenter work | 80.00 |
| Shingles 5,000 at $3.50 | 17.50 |
| Rubber roofing 4 square at $3.50 | 14.00 |
| Hardware and nails | 25.00 |
| Incidentals and per cent | 75.00 |
| Total | $907.50 |

It includes the wagon shop. The $28.00 opposite 10,000 feet of lumber represents the cost per thousand of the lumber on the ground. This will produce a brand new building. The wagon shop and blacksmith shop are fairly good buildings, but the stable is a sort of patch work proposition, a very poor building. This would include a profit, and I would take a contract at this price, and would expect to make a profit on it at this time. Exhibit "171" is a detail of the construction of the generator house, as follows:

| | |
|---|---|
| Excav-ing 200 yards at 40¢ | $80.00 |
| Concrete footings 12 yards at $7.50 | 90.00 |
| Brick and hollow title 80M at $15.00 | 1,200.00 |
| 1736 | |
| Cement floor 1,500 sq. ft. at 12¢ | $180.00 |
| Steel trusses | 250.00 |
| Galvanized iron roof 20 Squ'r's at $10.00 | 200.00 |
| 28 openings at $10.00 an opening | 280.00 |
| Roof on annex 5 squares | 22.50 |
| That means roofing, that means covering it over. | |
| 1,000 feet lumber at $28.00 | 28.00 |
| Carpenter work and openings | 200.00 |
| That is the carpenter work on the lumber. | |
| 7 foot porch on side elevator | ..... |
| Enclosure and run to coal shed, 5,000 feet | 168.00 |
| Carpenter work | 60.00 |
| Incidentals and per cent | 400.00 |
| Painting | 100.00 |
| Hardware and nails | 50.00 |
| Total | $3,308.50 |

In the matter of excavating I have included the grading. There would be no dirt to haul away. Exhibit "172" is the detail of my figures on the cost of replacement of the Booster House, located on 33rd Street, as follows:

| | |
|---|---|
| Brick work 14 M at $15.00 | $210.00 |
| Foundation 7 yds. concrete at $7.50 | 52.50 |
| 5 openings | 50.00 |
| Gravel roof 3½ squares at $4.50 | 15.75 |
| Lumber 1,500 ft. at $28.00 | 42.00 |
| Excavating 40 Yds. at 40¢ | 16.00 |
| Carpenter work | 35.00 |
| Incidentals and per cent | 50.00 |
| Total | $471.25 |

The "percent" is a contractors' profit and incidentals.

Exhibit "173" is a statement of the detail of my estimate for reproducing the purifying house, as follows:

1737

| | |
|---|---|
| 9,660 cu. ft. stone foundation 16⅔ cu. ft. to perch at $3.00. | $1,774.50 |
| Footings under columns 26 yds. at $7.50 | 195.00 |
| 6,000 sq. ft. cement floor at 12¢ | 720.00 |
| 222 M common brick at $15.00 | 3,330.00 |
| 2 brick piers 10 ft. x 2 ft. by 11 ft. high, 9,240 brick at $15.00 | 138.60 |
| 1 brick pier 7 ft. x 3½ ft. x 11 ft. 5,670 brick at $15.00. | 85.05 |
| 1 brick pier 10 ft. x 4 ft. high, 9,240 brick at $15.00 | 138.60 |
| 50 openings at $10.00 per opening | 500.00 |
| 12,500 sq. ft. lumber first floor at $30.00 | 375.00 |
| 24,000 sq. ft. lumber roof trusses, at $30.00 | 720.00 |
| Carpenter work at $12.50 per M lumber | 456.20 |
| Carpenter work setting 50 openings | 256.00 |
| Galvanized iron roof, 80 squares at $10.00 | 800.00 |
| Excavating and grading 1,000 yds. at 40¢ | 400.00 |
| Painting interior wall and exterior wood | 500.00 |
| Hardware and nails | 200.00 |
| Bond and insruance | 200.00 |
| Incidentals and contractors per cent | 1,700.00 |
| Total | $12,482.95 |

The building is 176 feet x 36 ft. 6 in. and 18 ft. high with 13 inch brick and stone walls; one cross partition basement to roof, and two cross partitions first floor to roof, with gables 12 feet high. I would take a contract to reproduce this building for the figure shown in the exhibit. Exhibit "174" is a statement of the detail in making up my statement of the reproduction cost of the meter shop and booster house:

The booster house is 15 ft. 8 in. by 22 ft. 6 in. by 14 ft. high.

| | |
|---|---|
| Excavating 85 yards at 40¢ | $34.00 |
| Concrete footings 5 yds. at $7.50 | 37.50 |
| Brick 20,000 at $15.00 | 300.00 |

1738

| | |
|---|---|
| Lumber for floor and roof 2,500 ft. at $28.00 | $70.00 |
| Gravel roof 3½ squares at $4.50 | 15.75 |
| Painting | 50.00 |
| 5 openings | 50.00 |
| Carpenter work $10.00 per M | 25.00 |
| Carpenter work placing windows and doors | 50.00 |
| Old booster house 14 ft. 3 in. by 11 ft. 4 in. shingle roof | ..... |
| Excavating 50 yards at 40¢ | 20.00 |
| Brick work 11,000 at $15.00 | 165 00 |
| Lumber for roof and stairs and shingles | 50.00 |
| Carpenter work and painting | 50.00 |
| Motor shed 9 ft. by 14 ft. 3 sides 8 ft. high | ..... |
| Lumber for roof and sides 1,000 ft | 28.00 |

| | |
|---|---|
| Paper roof and carpenter work | 50.00 |
| Meter shop 42 ft. by 22 ft. 9 in. by 14 ft. high | ..... |
| Excavating 100 yds. at 40@ | 40.00 |
| Concrete footings 15 cu. yds. at $7.50 | 112.50 |
| Brick 36,000 at $15.00 | 540.00 |
| Cement floor 924 ft. at 12¢ | 110.88 |
| Lumber roof and joists 3,000 | 84.00 |
| Carpenter work 3,000 feet at $10 | 30.00 |
| Carpenter work windows and doors | 40.00 |
| Gravel roof 10 squares at $4.50 | 45.00 |
| 14 openings at $8.00 | 112.00 |
| Hardware and nails | 100.00 |
| Painting | 50.00 |
| Incidentals and per cent | 300.00 |
| Total | $2,589.63 |

Exhibit "175" is my estimate of the detail and reproduction cost of the retort house, as follows:

1739 The retort house is 70 ft. 6 in. by 34 ft. with brick on 3 sides:

| | |
|---|---|
| Excavating 500 yards at 40¢ | $200.00 |
| Stone wall 1,645 cu. ft | 302.10 |
| Brick 70 M at $15.00 | 1,050.00 |
| 9 steel trusses at $40.00 | 360.00 |
| Galvanized iron roof 30 squares at $4.50 | 300.00 |
| Other building 33 ft. by 48 ft. by 26 ft. high, Excavating 500 yards at 40¢ | 200.00 |
| Stone walls 3,500 cu. ft | 642.90 |
| Brick 95,000 at $15 | 1,425.00 |
| 3 steel trusses and hips | 300.00 |
| Galvanized iron roof 25 squares at $10.00 | 250.00 |
| Painting and hardware | 250.00 |
| Bond and insurance | 100.00 |
| Incidentals and per cent | 700.00 |
| Total | $6,080.00 |

Exhibit "176" is my estimate of the reproduction cost of the coal shed details:

The coal shed is 110 ft. by 23 ft. by 11 ft. high.

| | |
|---|---|
| Stone piers 1,200 cu. ft | $212.00 |
| 20,000 ft. lumber at $28.00 | 840.00 |
| Carpenter work 30 M. at $10.00 | 300.00 |
| 30 squares rubberoid at $3.00 | 90.00 |
| Nails and hardware | 100.00 |
| Painting | 50.00 |
| Incidentals and per cent | 300.00 |
| Total | $1,892.00 |

Exhibit "177" is my estimate of the reproduction cost of oil tank house, as follows:

The oil tank house is 35 ft. by 24 ft. by 12 ft. high with side of 17 inch wall.

| | |
|---|---|
| Excavating 45 yards at 50¢ | $22.50 |
| 1740 | |
| Brick 4600- at $15.00 | $690.00 |
| Cement floor in bottom 118 ft | 14.16 |
| Steel trusses under roof | 150.00 |
| Lumber and shingles | 100.00 |
| Carpenter work and paint | 150.00 |
| Incidentals and per cent | 150.00 |
| Total | $1,276.66 |

My estimates at 50¢ per yard for excavating includes back filling.

Exhibit 178 is my estimate of the cost of brick work for 1000 laid up, as follows:

| | |
|---|---|
| Common brick laid down there at $7.00 per M | $7.00 |
| Brick mason at 70¢ per hour | 3.50 |
| Mortar mixer at 35¢ per hour | .70 |
| Labor, 25¢ per hour | 1.25 |
| Expense of what there would be wear and tear | .50 |
| And lime for mortar | 1.25 |
| Sand | .65 |
| Total | $14.85 |

In making my estimate on all of these buildings I used $15.00 as a unit on the brick work. That includes anything on these buildings. In figuring the carpenter work I used $10.00 a thousand and on the stone work $3.00 a perch, which is for the material and labor all in place.

(P. 2135.)

Exhibits 169-170-171-172-173-174-175-176-177, and 178, offered and received in evidence.

Cross-examination by Mr. Strode:

I figured all of the lumber at $28 a thousand except in one place where I have it at $30 per thousand. There is a difference in the character of the structure which enters into the cost of the lumber. The difference is in the use of heavy lumber and also materials. I figured on putting in good building lumber such as we use right along. I figured that it would cost $12.50 per thousand feet to put the lumber in place. I figured that the brick would be $7 per thousand and $7.85 to put it in place. This is on kiln count. The de-

tails for my materials I took right off the buildings. For the
1741 excavations I figured up the buildings. My younger brother assisted me. He held the tape line and I made the measurements and made a record of them and I have the original here. I, have no drawings of these buildings. My record does not agree with the gas company's on the size of these buildings. I went at the measurement of this carefully. I was down there three different times and put in about eight hours altogether. I have not included in my estimates any wiring. I was asked to include the buildings proper and I wasn't to take any measurements of machinery or anything in the line of machinery, and my estimate doesn't show any wiring. I have never seen the gas company's inventory. On the mortar my prices will stand for both natural cement and lime. It won't stand for Portland cement. The stable is not a very large building. I have it at $907.50 as a new building. It is the cheapest building down there. I don't vouch for Mr. Lea's figures. I have it more than his. I have the stable 18x24x11 ft. and then a shed on one side, 18 feet at the gable and 24 feet long. There is more than 3 inches difference on the stable any place you want to take it. The size would have something to do with the cost. On Exhibit 7, Mr. Brodnax shows the stable 18 ft. 3 inches wide by 36 feet, 3 inches long, and 10 ft. high. The building, 6x11 ft., must be the blacksmith shop or a shed. It is built in different sections. I do not get as many parts to the stable and blacksmith shop as Mr. Brodnax does. I get the part 24 ft.x18 ft., and the shed 6x24x14 ft. Then I took another part, 49x6x10 ft. I made it into three sections. I did not count the stone. I made the estimate I knew I could put the building in place for. I did not take the quantities because there are but a few stone in the foundation. I allowed for building a building. I could duplicate the stone easily for $10. The rubber roofing I have in square feet which I computed by the size of the roof. I figured whatever the covering of the building was. The
gas company has tar felt. I figured on better roofing. Rub-
1742 ber roofing is the same thing as tar felt, I guess. It is supposed to be for the roof of the building. I figured on 17 squares and the gas company, on 22.64 squares. I have two items of roofing but we don't divide our building in the same way and you can hardly figure that up that way. I am satisfied that I have plenty of roofing. I returned the generator house at $3,308.50. I don't know whether I was here when the generator house was built or not. I figured all of the brick as brick walls. I took into account the tile and figured them as brick measurement. You can buy them a little cheaper than brick. You take tile which is 4x5x9 and it will measure a little over two brick. I figured brick 2¼ to 2⅜x8x4. That is the average brick. In building buildings I don't have any contingencies. I didn't figure anything in on that. I figured up what the materials in the wall and the building would amount to before it was built, and I do not add any per cent on this amount to cover the items of contingencies. I add my incidental expenses as I have shown you and the per cent on the contract. That is all I figured. I don't figure on anything not coming out just as planned because

if you do you lose the job. My estimate, $14.85 per thousand brick in place, would cover the brick broken by the mason. There is a little waste, some broken materials, mis-fits, and poor workmanship. I don't add any per cent for these conditions. If there is any loss I take it out of my profit. I generally add 10% to the cost price for my profit which covers everything over-head. I would expect the plans and specifications for those buildings to be furnished before I entered on the work. I have known architects to add as low as 1% and as high as 5 or 6% for their work. State work here is generally taken at 2½% for superintendence, and planning. That seems to be the amount and they seem to be awful anxious to get the work for that, and I think it a fair price. I would have to add that item of expense to these prices if I wanted an architect. In
1743 addition there is liability insurance. I don't carry any liability insurance. I don't consider that a part of the profit. If a fellow wanted to add it to his own expense he could do so. You can seldom insure against wind storms until you are pretty well enclosed and then you insure your building any way. To meet this insurance during construction they give you a slip with your policy that holds it good until the building is finished. I would not take any contract for the next five years at these prices because I wouldn't know what the material and stuff would be worth, but I could have built those buildings at any time during the last five years for these prices. I know Perry Hahn, the man who built these buildings, and he is a substantial man. If he gave me his price it would not influence my estimate. If he bought brick at $7.50 it would not influence my estimate within the last five years. I don't know whether I could buy brick cheaper than he did during the last five years or not. He didn't pay that much for the tile. I figured the tile and brick the same price. There are a few more tile than brick in the generator house. I never paid that much for the last five years on brick. It costs about 25c. a thousand to get them off the cars to the place, which would make the brick, $7.25 when they reached the side of the building. I figure handling them right off the car. That short distance you can handle brick without two or three different handlings. I think a person could handle them as fast as he wanted them. He would simply have to unload them from the car as he needed the brick and hold the car there. I have handled a pile of material in the last five or six years and I have never paid any tract service. I didn't figure that the company would have to use the track every day. I figured each building separately and would take any separate one and put it up for the price I have fixed. In the purifying house I figure 13-inch walls and 17-inch piling. I measured the walls at several different places, at the doors, on the south side as I went in. The stone wall is a little heavier
1744 underneath. I notice in the plat, Exhibit 7, that there are three 13-inch cross walls there. I notice the plat shows some 17-inch walls but that is not correct. The two end walls are not 17-inch walls but the pilasters are 17-inch. The blue print shows the pilaster thickness but does not show the thickness of the walls all through. The stone wall down below may be 17 or 18 inches

thick. I put in 9960 cubic feet of stone wall. I had 1000 yards of excavation in the purifying house. The outside wall of the purifying house is 176 ft.x36 ft., 6 inchesx18 ft. high, which would be 6432 square feet. I did remember what depth of foundation I figured; I had them in mind at the time and whether or not I marked it down I can't tell. The depth is the whole thing. It seems to me that the cellar is about 4 feet deep, but I don't know just what I figured it at at that time. I must have figured about 4 ft., 3 inches to get my thousand yards. The diagram in Exhibit 7 shows 14 ft. from the bottom floor to the bottom of the basement but I don't agree with that 14 ft. I have 6 ft. on my list. I have 10 ft., 6 inches high on that 14 ft. that you have. The diagram of the building shows the excavation to be 9 ft. from the top of the ground to the bottom, but that isn't according to my figures. Assuming that this cellar is 9 ft. deep there would be 2000 yards of excavation. I can dig straight down on a cellar 9 ft. deep on the average ground. On the University Law building I dug 10 ft., 6 inches deep and allowed 6 inches on the outside walls for lining the walls up. I never excavate down in Salt Creek valley. Malone does a good deal of excavation here, also R. L. Young, and a man by the name of Mathews. I don't know who did the excavating down at the gas plant. I think I know the character of that ground down there; I see quite a little digging down there. Even if Mr. Malone did do the digging down there I don't believe he can tell you any more about it than I can. If he did the work he would learn something about the character of the excavation and I suppose he would know
1745 something about what it would be fairly and reasonably worth. Even if he said he would not take the excavating job down there for less than $1 a cubic yard I will do it for less. I know I have made a liberal allowance of dirt for excavating. By digging 4 ft. I would have the basement 4 ft. deep. I did not on these figures go outside of 6 inches for the walls. I will get the excavation just as it is. The foundation stone is the stone in that building up to a point where the brick wall begins. It is 10 ft. 6 inches high. The gas company in its inventory shows that stone wall to be 14 ft. In getting that I took into consideration that the stone is about 8 inches deeper than the floor. If it is 14 ft. deep it would make a difference in the amount of stone I had here. The heavy lumber that I have figured here on the roof is enough to take care of the steel in that roof. There is not very much there. I am willing to construct it at that price. I did not make a separate allowance for the steel. Whatever steel there is there it would cost money to buy it. I can't tell how many pounds of steel there are there. The wood frames and the wood covering is carried as one item. There is some corrugated iron on that roof and I ascertained that by measuring the roof. I have 80 squares and each square is 100 ft. On that roof the gable is 10 ft. high from the level of the eaves, and 10 ft. on the rise of 18 ft., 3 inches on the level gives you 20 ft., 6 inches high on the rafters. That would make 41 ft. and 1 foot on each side for cornices or projections would make 43 ft. and 43 ft. times 179 ft. which would be the length of that projection on

both ends, that will give you 80 squares which will cover that roof. It is 76 squares and 96 ft. or 77 squares. I observed the *luovere* on this building and the three extra squares will cover that. I have the wood in the floor in one item and wood in the roof in another item. I did not find any steel in the floor. The steel that carries the tanks is part of the equipment. I have not figured any cast iron in the floors. The lumber for the stairway is carried in
1746 the square feet of the floor. The exhibit does not show that but I figured on so many square feet of lumber. I did not figure any gutters on this building. I did not figure any spouts. I do not say that there — no spouts, there might be a little piece on one corner. I did not figure on any plastering. There is a little but it don't amount to much. It seems there was a little in one corner of the building. I did not figure on any electric wiring of the building. I think I saw a few lights hanging there but I didn't take them into consideration. The first time I was down I went over the barns and got over the generator house and I went to the purifying house and the man there told me I had better go and ask permission. I was there about eight hours. I had no plans of the buildings, nor any blue prints or specifications. I just had the buildings before me. I could take the items from the architect's plans on these buildings in about half the time I took them off the buildings. I just took the items here and then figured it out. I figured on adding $1,700 to the contract price for incidentals and profits. I tried to use about the same per cent on every building. It is a little larger on this larger building and on some of the smaller ones. You take some of these little items, rods in the trusses and a few of those things, I don't claim that I got the exact amount of that in each building but being there I thought to be safe and made my per cent a little larger my object being to tell you what I could put the building up for by looking it over. I think I charged the same per cent that I did for small ones. On this particular building it is 15% because the items of steel in the trusses and a few of those things that I couldn't itemize. I made it high because I did not want to get caught figuring it too cheap. My idea is to figure in profit and incidentals at about 12%. You could call them contingencies if you wanted to. The money would cost from six to seven per
1747 cent but a man wouldn't need all of the money. If I started that building I would have to allow for $12,000 at 6%. 85% of what I had would be paid to the contractor every three weeks. I would have invested about $4,000 at the start, later on not so much. It would only last for a week or two. After the investment it would not take more than a third all the time. If you owed for materials you would have to make the party who sold it carry you. He would have that much more while carrying them. I have had no trouble since they have always carried me. They would sell me as cheap on time as for cash. I have no trouble in that way, and get my material as cheaply as any one. I have to pay interest though. Then I would have to pay the architect 3% for construction. There might be one building down there that the architect made the plans for but I do not believe there were ever any plans

for the balance. The Law building at the University is a three-story building, and I built Judge Munger's which is two stories, and Florie Moore's building at 15th and O streets. And I built the Lincoln Hotel Annex. I had the biggest part of it. My first work here was fixing up the city hall. I bid on the First National Bank and the Bankers Life building, and the building here. I did not bid on the Winnett job. Excavating for the purifying house I think would just about hit the water line. If you would hit water it would make a difference in the cost of excavating. You would have to take care of it. On the generator house I have 200 yards of excavating. It is filled in on the back side. I had to figure that ground. On one side the hole comes out level with the ground. I suppose it is two or three feet deep round the back side. I have concrete in the footing and for the wall that comes up round the building. I have the building in two parts. One part is 40 ft.x30 ft. and I can give you the other part. I just took those items when I had them in mind in figuring them up. I did the figuring at my house. I had it marked down but I can't see it on my list. According to the gas company's measurement of that building I get
1748 32 yards of wall which is more than I got. According to those measurements it is 410 ft. round the building. I have given you 12 yards of concrete for that 410 ft. of wall. I figured the concrete 2 ft., 1 inch wide under this wall and 10 inches to 1 foot deep, and those measurements give 32 cubic yards of concrete. I can't tell you what basis I figured 12 cubic yards on. I can't find my measurements on that building here but I could tell you if I could find them. I have it some place because I knew it at the time. I didn't figure that wall at 410 feet long. I must have figured about 215 ft. of wall to get 12 cubic yards. There are no figures that would justify the 12 cubic yards in that wall unless the building is smaller than the gas company's figures. I figured it. I didn't guess at it. I did not figure any concrete under the little shed because there isn't any under it. I just took the portion of the building where the concrete was and by taking the gas company's figures of 410 ft. of wall that is what — there. I figured 6 inches of projection on the side of the wall. It is evident I will have to look up my figures before I will know anything about it. If the concrete foundation is three feet wide and three and a half feet deep, I will concede the concrete. I did not toss this concrete in at just $90. I can make mistakes. In the roof the only steel I figured was the steel trusses and the steel in the roof under that. I have got three trusses. I do not show the weight. I did not figure it in pounds. I just figured three steel trusses for the roof of the generator house, and channel irons. They went across the building. I suppose they would be 8 ft. high and cover the walls over 35 ft. wide. I have no details showing the amount and weight of the steel in those trusses. Steel is sold by the pound and the size of the truss would enter into the weight. You have to know how much they weigh in order to say how much it cost. I did not go into that detail. I figured
1749 what the trusses were worth and I took the number of trusses and steel and channels 4 inches and lumped it off. I took it

about so much a truss and so much a channel. I was able at that time to tell the size of those trusses but it isn't marked on here. I knew what the size of the building was. That might be the cause of my figures being off on the concrete because I didn't mark the size down complete. I think all the rest of the sizes are marked. I buy trusses of John Westover. I think he furnished these. What he was paid for them would be some evidence of what they were worth. The cost of this building has been furnished to me in detail as entered upon the books of the company. I put the trusses in at $250, and in doing that I used my best judgment.

Q. That building that you reported here to this court built for $3,308 is shown to you here in this exhibit "31" to have actually cost the gas company $4,551.51 with the details and every item entering into that cost set out there and you have here such a main difference and you don't make an itemized statement of them.

A. Of what?

Q. Such a man $1,100. in advance and you don't know whether he was working there? Do you think there was something crooked about that?

A. I don't know.

Q. I am asking you to assume that this is right, do you see any items that you haven't got in your report and haven't dreamed of that entered into the construction of that building?

A. Did you have a special meter for water used in that building $20? I put up the fair ground building, a $100,000 building and the water didn't cost me $20. on the building, you can't use $20 of water in that building.

Q. If the Water Department presented a bill for that amount and we paid it?

A. You undoubtedly used that water for other purposes.

1750 Q. Is there any other item in that?

A. It would take me a while to do that, I can't do it on a minute's notice; you can't make a statement that a fellow can't find items in. You mind that I can't make one that you can't find items in, you are finding them in mine and I am finding them in yours. You have here Nebraska Hardware miscellaneous $1.05, that is a small thing but it may or may not have gone into the building; I believe I could take you down to the building and show a lot of items that you can't show on the building.

On a window or door I figured $10 an opening. I did not have any down spouts or gutters or any plastering. I don't say that there is no plastering and it would cost something to put it on. I figured $400 for incidentals and profits on this building. It is about the same percentage that I figured on the other buildings and I made it come out in even dollars. If the building cost $3,000 it is worth about $400 for that per cent for anything of that kind. My figures amount to 15.7% on a contract of $12,482 for the purifying house and 13.7% on a building of about $3,300 for the generator house. If I had a set of plans that would show each building exactly as it would be built I would use exactly the same per cent where I could take a set of plans and go right at it, but here your ground

is of all shapes. One side of the building is high and another low and all these conditions are different and I have taken the conditions in that whole ant arrived at this per cent. I measured the retort house. I figured 70 ft. 6 in. x 34 ft. and I figured 500 yards for excavating. I think I figured the excavation 4 feet deep. That building was hard to figure because on one side you walk out on the level of the ground and on the other side you walk round it. It is something like the generator house. Yes, about 4 ft. 6 in. Yes, just about 5 feet deep. I haven't the depth marked here. You can't go down and tell how deep that cellar is if you are there a year.

1751 There is no building on one end and you walk out on the level of the ground and round here you go out on a slope and here it slopes. It might be 5 feet here and 2 feet there and here right on the level at the coal shed. To tell you the truth I wasn't trying to hold you down a cent on the job; I was trying to get an approximate figure. I do not show any wood in the walls and I don't think there is any there. The yardage included the amount of back filling. There are nine steel trusses in the roof of this building. I estimated their weight according to the length and figured about what they were worth. They are 34 ft. wide and I suppose 7 or 8 ft. high in the center. I think most of them are out of 1½ or 1¾ channel iron. I have not got the weight of that steel. I did not ask Mr. Westover what this steel cost. We can't assume that there are 14,523 pounds in the roof. The roof of the retort house is covered with galvanized iron. There might be half a square of tar felt there. I didn't find any concrete floor in the basement and if there is it isn't worth anything. I didn't figure anything. If there was any there I couldn't see it. I figured the doors the same as the windows, $10 an opening. I didn't figure any electric wiring and I don't believe there was any. The item of bond and insurance is to cover the bond on the building. I figured this item at $200 for the purifying house. I did not have any in the generator house as it was a small building, nor in the meter shop or booster house. That amount is about $4 a thousand on the building. It varies on different buildings. On every dollar that you pay a man you have got to pay insurance to protect yourself from liability during the employment of from two to three per cent. The per cent for incidentals on the retort house was $700. I measured the thickness of the walls of the oil tank house right by the entrance. The gas company had it at 18 inches and I have it at 17 inches. I have 45 yards of excavation. It is about 5 ft. out of the ground and about 5 ft. deep as near as I remember it. I haven't got the details of it marked here. I have the

1752 oil tank house 17-inch walls, two trusses, 10 rafters, 3x4, galvanized roof. I measured the inside for the excavation. I measured with a 6-foot rule. The thing is full of water and I stuck a 6-foot rule into it and as I got 12 feet I must have struck a hole with the rule. I would not be willing to accept the 10 feet until I looked it over again. According to the plat it is 9 feet to the top of the floor. According to the gas company's figures the building is 35 feet 3 inches by 24 feet, and 5 feet deep, according

to mine, which makes 155 cubic yards. My 45 yards of excavation with 10 to 12 feet depth is not due to an error on the part of the stenographer. I figured the excavation on the level of the ground that had been filled up. I used the original ground when they first threw the dirt out and the gas company threw it out against the side of the building and it is 4 feet higher on that side than on the other side. I don't know whether there is 5 feet of excavation or not. Dirt has been thrown up against that building for some cause or other. I think there was some excavation in putting that building down 10 feet in the ground. The roof sits right on the ground. There are steps 6 or 7 feet up to the door to get in from the outside. I believe 45 yards is all the ground taken out of that hole from the original level of the ground. I probably went down to a depth of 2 feet to get that 45 yards of excavation. It was filled round the building except about a foot and a half which might be a little low. I figured it on the level of the ground and not on the fill that you have thrown round it. I did not figure any separate amount for back filling. The 40¢ which I allowed for excavating covers that. I figured $150 for the steel in the roof. I don't know how many pounds. I have two trusses ½-inch and ½-inch angles. I do not know what they weigh, and didn't figure the weight. I figured the wood in the roof and also the corrugated iron by figuring shingles.

I do not know how I came to do it that way.

1753 I know there is corrugated iron in that roof and I don't think there are any shingles. There might be under the corrugated iron. There is sheeting on the first two inches. I figured 118 square feet of concrete floor in that building because it was holding water. I could see under the water that it was cement holders built to hold the tank on, and I took them out as near as I could check it and figured 118 square feet of floor between the cemented blocks holding those tanks up. There was a tank in there on top of concrete piers. That would take practically 840 feet. I figured only 118 square feet to cover the floor and the balance of it deducted on account of the piers. They are much larger than shown in the figure. I don't know, I thought they were larger. I figured this area round there but not in the concrete part at all. That has a piece in the bottom that comes up and I put my measure in and in one place I would hit high and in another low. I took out just the amount of concrete for the piers and I haven't taken out enough. What I figured I can't tell. I haven't got the figures by which I arrived at 118 feet. I made some once. I didn't figure anything under the tanks. I did not put any electric wiring in that building. I don't know whether there was any there or not. There was a door there but I put the carpenter work all in together. The usual $10 per will cover it. I didn't mention it in that way but put in $150 for carpenter work and cleaning. I don't remember about the window being there. I figured lumber and shingles but I hadn't ought to. This is the only building in which I carried the door or opening as a part of the carpenter work. I allowed $150 for incidentals and profit which would be about twelve or thirteen percent. On the meter shop and booster house I had one building 15 ft. 8

inches x 22 ft. 6 inches, and 14 ft. high. Another building was 14 ft. 3 inches x 11 ft. 4 inches with a shingle roof on it. Then a little shed on the side, 9 ft. x 14 ft. x 8 ft. high with three sides. Then I have another building, meter shop, 42 ft. x 22 ft. 9 inches, and 14 ft. high.

1754 The total excavation on these buildings is 235 yards. The excavation in the booster house does not cover the entire building; there is just a hole underneath the engine. I opened the trap door and looked under there. It seemed to me that that part was dug out after the building was built. I figured 85 yards of excavation on that. I do not have any figures as to the depth but I made some. I just figured it up on paper and checked it up over with my memorandum. I have the basement as 6 ft. deep according to my memoranda. Figuring 6 ft. of excavation I get 80 yards on the building which is 15 ft. 8 inches x 22 ft. 6 inches; the gas company has the depth as 9 ft. It it was 9 ft. the excavation would be 120 yards. I haven't any excavation here in the building which is 11 ft. 4 inches x 14 ft. 3 inches. I have no memoranda showing whether it was excavated, but I figured it just as I did this. I went down and figured it and I went down there and figured it again but didn't mark it on this place. I think it would be about 6 ft. deep but I don't think it is the full size of the building. I think it runs down on a slant to the top of the ground. I could tell just what the figure is for that. At that depth I get 36 yards. I must have figured a little deeper because I have 50 yards here. There is no basement under the building 22 ft. 9 inches x 42 ft. 3 inches. It has been excavated for a cement floor. I figured 100 yards. I am not able to tell whether there is a little basement under the clay building. I haven't got any data that shows how I got this yardage. On the meter shop, 42 ft. x 22 ft. 9 inches and 14 ft. high I have nothing in there about excavation. When you go around a building like that you won't make every item. You will make your mind as you see it and you will figure it but you will forget to mark those down, which you have in mind. I had to use my judgment. One place you go down like this and you come out on a level in another side, and another side you are up three or four feet high. You can't get it unless you make a plan of the building. Where there is a little dirt or a little place an engineer could go down and stake that off. I have given you all the excavation I have and the amount of it is

1755 216 cubic yards and I have reported it at 235 yards. If I were going down there I could give the exact amount of the excavation. You might find it a little deeper in one place than in another. I figured the price of 40c. for excavation would cover the back filling. I got the items on the building paper that is outside the walls and it would cost 30c. There are 10 squares of gravel roofing on the meter shop and booster house. Then there is a paper roof on the meter shop. That paper was figured and the side of that shop is covered with paper, and that was figured. That is all plain tar paper, as I have got it marked here. There are 3½ squares of gravel roofing on the 15 ft. 8 inches x 22 ft. building. I have also got a shingle roof which is in the item number 4 roofing tar and

shingles, $50. There is a concrete floor in the booster house or meter shop, 924 square feet. It is a 42 ft. x 22 ft. 9 inch building. There are no other concrete floors. There is a concrete footing in the booster house where the machine is standing but I didn't figure that. The diagram offered by the gas company here shows that there is a 10-inch concrete floor in the building that is 15 ft. 8 inches x 22 ft. 6 inches. I didn't figure it that way and I can't tell whether or not the concrete floor is there. If it is I didn't get it. I could find out by going out and looking. I think that floor is 4 inches thick. On the openings I allowed $10, for the openings, doors and windows. I don't know whether or not there were any down spouts or gutters on this building. There is a little ventilator I think, which is taken care of in this item of shingles, lumber, and carpenters. I did not find any plastering in this building or on it. I do not remember about a wood platform being used in front of the building. I did not take into account the electric wiring, and I did not pay any attention to the wrought iron pipe in the building. In my incidentals and per cent there is $300.

The coal shed I find is 110 ft. long, 23 ft. wide, and 11 ft. high. I measured that with a tape line from the outside. I do not
1756 think there is any excavation there. It seems to me there are piers built on the top of the ground. It is a frame building with stone and brick piers kind of mixed together—anything that they had that they could get a hold of. The piers look as though they sit right on top of the ground. There isn't any excavation down around the piers at all. I do not believe the excavation for those piers is 2 ft. deep. I don't know how long this building has been built but it is an old building. There was 12 cubic feet of stone in the foundation of that building. I determined that by taking the amount of piers and their size. I can't tell you what size they are. I think they are about 2 ft. square. I have 45 piers, 2 ft. x 1 ft. 6 inches. That is the stone, brick, and a little of everything. You wouldn't figure them either brick or stone walls because there is a brick and a stone here, and we would call it rubble stone work. Then there are 7 piers 6 ft. x 11 ft. 6 inches x 6 ft. high. One may be of brick, and another of brick-stone, and another of stone. I figured them as stone. I guess they ar-n't quite 6 ft. high. They are marked 6 ft. here but I can't tell you. I don't believe we dug down on everyone and measured it but I have here 6 ft. I used my judgment at the time I put it down. I can't recollect whether or not I used the 6 ft. in my figures. I haven't got my figures here that I figured on. I didn't keep the slip. We were checking right along on the other slips just as I checked on this paper this morning. I can figure it up in a short time. I figured the lumber in the walls of the building, the roof, and the floor, altogether and put them all in at 30,000 ft. The plank floor is 110 x 23, and 2 x 6 studs and 2 x 6 ceiling, which is held up by 2 x 6 rafters and 1 x 6 bridging, and one scale 4 ft. x 4 ft., and it is a platform of 2-inch plank, 7 ft. wide and one partition 2 x 6 studs, one-half built up. I figured up each of these items at the time just as I did on the piers. I also figured 30 squares

of rubberoid roofing at $3 a square, and I figured $300 inci-
1757 dentals and profit which is about 18% of the cost price. There wasn't any paint on this building and I figured paint and nails and hardware. I didn't see any paint in your estimate either, but I suppose it was painted sometime when the building was new, that is, the doors and openings. The oxide shed is 6 ft. x 14 ft. x 7 ft. with a plank and iron roof. I didn't put it in my exhibit because I saw that it was such a total wreck that I didn't figure it, and this was not included in my item of carpenter work. I figured the main part of the stable, the gable, 18 ft. wide, 24 ft. long, and 11 ft. high at the eaves, and there is a shed 6 ft. x 10 ft. x 24 ft. on the other side which filled out that side of the barn. The shed on the other side is a little uneven but I took the full length of the shed that it was from 6 ft. to 10 ft. high and 49 ft. long, all rubber roofing. I included all of the lumber in this barn in the walls of the roof and in the floor as one item and figured it as 15,000 ft. I put the doors and windows in at $10 each. There are some doors and windows there but they are made out of the same stuff as the floor. I did not allow $10 apiece for the openings but figured the carpenter labor was to do that work. I did not see any electric wires. There are a few stone in the foundation and I marked them at $10. I thought it would be equivalent to an opening. There are in the blacksmith shop some brick flue, and I have the total $907.50, and I have put in $75 for incidentals and profit, which would be about 9%. That would include looking after the construction of the building. The time put in for that would depend upon how many men you had and the number of men depends on how many men you could get. I figured on from five to eight men. I don't know as it makes much difference how many men you put on. It is hard to tell how many days it would take. I would hate to figure it approximately. I figured $10 a thousand for putting the lumber there. In that situa-
tion I can't tell how long it would take to build the barn. If
1758 I had a good foreman I might not go down to the building more than once. That is as near as I can get to it. On the booster house at the district holder there was nobody there to let me in and I had to look in through the windows. I got the measurements from the outside any way, and got the idea. On the excavation I could see the pit inside the cellar and I took into consideration the excavation around the walls. I figured 40 yards of excavation. I saw in one corner where a hole was dug and I estimated the size of that hole and the excavation for the walls. The hole was inside the building and I looked in through the window and saw the hole. I thought 40 yards would be all right for what I could see. I did not say that the gas company's figures were not absolutely correct. I did not figure any brick in the foundation. I had a footing under it and figured the brick in the walls. I estimated the concrete. I could not see it but I estimated $52.50 for the concrete. I would accept the gas company's figures if I could look them up. I did not have any back filling. I found 14,000 brick in the walls which are the ones I saw above ground, from the grade line up. The roof was tar felt and gravel. The floor was dirt, all that I could see. I

am unable to say whether that was concrete. There were five openings and windows there that I took count of. I did not take in any electric wiring. There were 1,500 ft. of lumber and I figure $42 on the ground and $35 extra for carpenter work, which included the hanging of the doors and putting in the windows. I also have $50 for incidentals and profit, which is about 12%. I think I figured five or six feet deep for the excavation. I suppose there would be some back filling. That has been filled up around there with cinders and with the digging of that other building, about 6 inches around the wall, and I figured the 40c a yard would do that.

Redirect examination by Mr. Foster:

In my opinion the $60 of water shown in Exhibit 31 for the construction of the generator house is $55 excessive. The
1759 water is used for mixing mortar, concrete, or anything that has to be mixed. They wet the brick occasionally, too. That would be something like 400,000 gallons. In figuring the quantities of dirt to be excavated I figured on the surface of the ground just as it is, so that any grades which may have arisen from making these excavations at the natural surface has not been allowed by me. My figures all contain the cost for excavating any fills that may have been made there. The excavation for the work done by Mr. Malone at the Fair Grounds was measured in the solid ground before it was taken out. He was permitted to take it out with scrapers and haul it 300 feet, which haul was included in the price of 25c per cubic yard. That was done in May of this year. I did excavating on the Salt Creek bottom for the Hayward school at 9th and Z streets about two months ago. I went down to the water line. The depth of that excavation was 8 ft. 6 in. I figured it at 40c. a yard and I sublet the work at 40c. His contract permitted him to dispose of the dirt. He had to haul it away from the premises. I let part of the back filling for 40c. and part of it for 35c. This was included in the 40c. price for excavating and I didn't lose anything on the work. I think the lay of the land and the character of the soil there and at the gas works is about the same, both being in the Salt Creek bottom. I did not encounter any difficulty in the laying of the footings there. The water was in the trenches but by putting in the concrete the water was raised out. The same conditions would be met in the construction of the gas building if they were extended down to the water line. But none of the buildings would require as deep an excavation as that at the Hayward school. Malone's work at the Fair Grounds for 25c. a yard varied in depth from about 4 ft. to 10 ft. 6 inches. It is more expensive to make a deep excavation. He dug straight down and did not make a slanting side. I didn't see the soil below the top of the ground at the booster house and I don't know whether there is any difference in the character of the soil there and the Fair Grounds or not. If the surface dirt at the booster house came out of the excava-
1760 tion it was of the same character as the excavation made by Mr. Malone at the Fair Grounds. In my estimate of the

area of the concrete floor of the tank house at the gas works I eliminated all of the floor space directly beneath the tanks. The purifying house is a pretty well built house, but I think the balance of the houses are in bad shape. The purifying house had plans drawn and was worked up as though someone had had charge of it. If there was a variation of 2½ inches in the walls of that building before I would say that the building had not been properly supervised, I would want to know what had caused the variation, whether it was done in building or by settling of some kind. I didn't figure any price for the steel in my computation. I estimated what I thought was about the weight of the trusses and figured about 3½ or 4c. I didn't weigh the steel and I didn't figure its exact weight. That is what we have to pay for steel. I buy it and use it in my construction work at 3¼ to 4c. A heavier piece will cost less to the pound than the light. I would say that 5c. a pound is too high. I can actually buy steel for 4c. His estimate is 20% too high. The two buildings at the Fair Grounds had quite a little steel of the class used here. There were lots of trusses. There I have just completed one and one I built three years ago. Most buildings I have built of a heavier steel construction like the Law building and the Minden court house. They are fire-proof and have heavier beams. I can estimate the weight of the steel exactly. If I have the time I can measure every piece of steel. It would take quite a little time to measure it, though. I have estimated the steel in this manner lots of times in my bids and have never asked for steel figures, if there is not too much steel in the job. There will be variations in my estimates. I might figure too many pounds in one place and not quite enough in another but I always figure to come out on the safe side. I figured on the gas company's buildings the same as if they had given me the plans and in doing the
1761 figuring I acted with some judgment.

Redirect examination continued by Mr. Morning:

I intend to go back to the gas works and look up the matters that Mr. Strode has asked about. While I am doing that I will look inside of the booster house on 33rd street.

Recross-examination by Mr. Strode:

The light fabricated steel costs more a pound. Some of the big 1½ angles might come up to 5c. a pound and the 4-inch channels would come down to 3c. I can't tell what it would cost everybody to put that steel in place. I think 1c. a pound would be too much. I believe ½c. a pound would do it. I don't know what the steel erectors figure. If 1c. a pound is the customary price for erecting steel of the kind that is involved here then Mr. Lea's figures are about right. I can put it up cheaper. I figured it could be set for 4c. I think it would be a good policy to slope the excavation for the district holder if it is 23 ft. deep. I think that is getting a little too deep. I excluded all of the area in the floor of the tank house with the exception of 118 ft. on account of the tanks and piers.

The tanks do not rest on the floor at all. They stand from five to seven feet above it. The foundation for the tanks are stone piers that sit under them and go to their own foundation. The floor under them is higher than the other place. The basement in the Hayward school is used for a furnace room. It does not extend throughout the building. There was water in the bottom of the excavation there, but it did not bother me in the construction work. I laid concrete right in it. There was blue clay there also. We were able to plow it and it wasn't very bad but we didn't use any scrapers. I don't doubt but what Mr. Malone lost money on the East Lincoln holder. He sublet it for less than 75c. a yard to J. D. Mathews. In Mr. Lea's report I do not think he allowed anything for water on the construction of the generator house. I don't see any water there. Mr. Lea's total is $3,739. The gas company's records show that that building cost them $4,551.51, which includes the
1762 item of water which I have criticised. My estimate of the cost of the building did not include anything for water service in the building. The meter costs ten or eleven dollars, and the water piping and faucets cost money. I think $30 would be too high unless you have a lot of pipe. I have built buildings that there was not $5 extra on. I built the Aurora Methodist Church building and it never cost a cent extra. I do not think that there is any profit in extras. I would rather build a building without any because you will have trouble with the owner quicker with extras than without them.

W. J. ASSENMACHER, recalled for further direct examination, testified on behalf of the defendant as follows, pages 2630 to 2656, original record:

Direct examination by Mr. Foster:

Exhibit 266 is an elevation of the purifying house—a four-side elevation. It was made under my direction and it is correct. Exhibit 266 offered and received in evidence.

It was prepared for the purpose of showing the amount of excavation taken from the purifying house, and also because of the fact that the last time I testified I was ordered to measure it up and see whether my guesses were right, and also in regard to the walls. We got the depths of the wall in the ground and the footings at the different points by digging down the side of the walls and had the city engineer give us the level around the entire building. This was done by Mr. Steckelberg and the figures on this exhibit were taken from Exhibit 265 prepared by Mr. Steckelberg. In my former testimony I said 1,000 yards was necessary for the excavation in the erection of this purifying house and now I find there was only 348 yards of natural soil taken from the ground in placing this building. That would reduce my figure for the excavating from $400 to $139.20. On the present surface of the ground the yardage is 1,456, excluding all of the cinders and brick. The stone wall elevation is 55.6 and the footing is 44.4, which leaves 11.2

ft. of wall in the ground. The stone wall runs from 20
1763 inches to 24 inches thick. It varies a little. The brick wall is practically all 12-inch wall, with the pilasters 17 inches thick. The north two-thirds of this wall is a little thicker because of the windows being made a little wider, but it is still a three-brick wall. They used to build the buildings with a hollow space. I don't know whether the 1½-inch difference is filled with cement or not, I can't tell. The former figures for the brick work on this building is sufficient to take care of the 17-inch pilasters and I don't care to make any change in my figures on the brick work. I measured the walls at three or four different places—four different places. I measured at those windows, two different places. It was practically 15 inches—14½ or 15 inches, this wall in here. You take the wall between—well, say the south wall north of the main building of the purifying house, and it is a 1.1-foot wall. The south end of the new building is all 13-inch except the pilasters. I know my measurements are correct. On the excavation for the actual yards of the natural soil I took the building 163 ft. x 37.3 feet. and added 1.4 ft. each way for working room for the workmen. The elevation of the natural soil as we dug down on this building we found to be 46.1 ft. and the top of the footing of the main north building was 45.1 ft. That is, the bottom of the excavation of the building proper. Now, that 45.1 taken from 46.1 leaves 1 ft. excavation under the building, which equals 6,124 cubic feet. The footing of the excavation around this building was 3.4 wide, excavated 8 inches thick, which I figured would be .7 and I figured 8 inches. That would be about 8½ inches and I took 163 times 2, which is both walls, and 37.3 times 2, which is the other walls, 3.4 ft., which is the depth of the excavation, times .7 feet., which is the thickness of the excavation, making 2,804 cubic feet, and adding that to 6,124 cubic feet equals 8,948 cubic feet, or 332 cubic yards. Now, the addition on the south of this building is 13 ft. 3 in. long x 37 ft. 3 in. wide. The elevation of the natural soil is 46.1 and the elevation of the bottom of the excavation is 46.1, which
1764 leaves no excavation under that part except the footings, which equal 13 ft. 3 in. twice, being both sides, and 37 ft. 3 in. and walls 31 ft. 4 in. times .7 equals 212 cubic feet or 8 yards. There are two different piers in the basement that I figured 8 yards, which makes 348 natural yards of soil taken from that building. The natural surface in Exhibit 266 is shown by the line of the natural soil, that long dash and dot between the lines and down under the footing. That is shown on all four elevations. The footings are shown with dotted lines. The elevation of the basement floor is shown by a dotted line and marked FL for floor elevation. That is shown on the east and west elevation. It don't show the others. The present grade is shown by the solid line with the elevation marked about every 50 feet. It shows on all four elevations. I was asked to ascertain whether or not there were any steel rods or trusses in the purifying house, but I don't believe I have got that stuff with me. The outside measurements of the stable are shown correctly on Exhibit 265, which are the company's

measurements. I was asked about the steel in the trusses in the roof of the retort house and I did not find any more steel there than I have accounted for in my figures. I do not care to make any changes. I did not find any tar felt on the retort house. There was a little box between the retort house and the purifying house which would be about $1.50. The basement of the oil tank house has a concrete floor. I did not have that in my first estimate. I had 118 ft. the other time, amounting to $14.16, and now I figure it 620 ft. at $74.40, which is to be added to my former figures. It would not make any difference in my bid if I was to enter into a contract to construct this building with the incidentals and per cent that I have at $150. I would still take the building at that price. The thickness of the wall in the oil tank house varies. It measures 17 inches in some places and 18 inches in others and the gables will measure a 13-inch wall. That does not make any difference in my former figures. There is a concrete floor in the booster house, being 304 ft. of concrete. I did not have any
1765 such item in my former figures and it makes a difference of $36.48. I have gone over my figures concerning the excavation under all of the buildings of the company and have found that some of them were a little more, others a little less, and that my former figures were more than what was actually taken in actual soil from the buildings, and I did not find as a general rule any reason for changing my former figures. Taking the buildings all through I didn't change anything. I got a little low in the oil tank house, but in the other buildings I was high enough to more than make up for it. In the purifying house there are 1¼-inch rods in the center of each truss, 10 feet long. That is from the top to the bottom of the truss and a cast cap on top, 2x6x8 inches, and there was also a plate of 6x8x¾ inches. There are nine of them. Then there were 18 rods 17 ft. long, and a cast cap, 2x6x8 inches; also a plate 6x8x¾ inches. Then there were 18 stirrips 3-inch material by 1½-inch high, and they are 18 inches long. That is all. I did not figure anything for these in my former testimony and it would make about $40 difference in my estimate.

Cross-examination by Mr. Strode:

The stone wall in the purifying house is 24 inches thick in some places and 20 inches in others. 20 inches is the thinnest place I found. It is in the north wall. The other walls will average about 23 inches. The floor sits right on the stone wall and the difference between the floor and the bottom of the basement would be about the same except as to the footings and it would be 9 ft. 4 inches from the ceiling of the floor to the floor below. The joists sit on the stone wall and it does not extend above them. The brick wall comes down and fits around the joists, and the top of the stone wall is the bottom of the joists, and the stone wall runs down to the floor below and below that floor. The entire height of the stone wall is 11.2 ft., which would be from the bottom of the foot-

ings to the top of the wall. I got that from the measurements
the city engineer gave me. It is 4.3 ft. from the top of
1766 the ground around the purifying house to the bottom of
the floor. That is the average. It does not vary over a foot.
It is 5.1 ft. between the bottom of the joists and the grade. If
the cellar was to be dug as the grade is now it would be 4.3 ft.
deep and the footings would be 6.1 ft. deep, which would be 1,456
cubic yards. I allowed an outside excavation of 8 inches for the
actual construction. They generally allow from 6 to 8 inches. I
did not check up the piping and wiring in the purifying house.
There is no basement under the generator house. The footings
are concrete. The footings in that foundation are 6 inches thick.
I measured it about the middle of the east wall. The cellar in the
south retort house is 3.9 ft. deep, and the north retort house, 6.8 ft.
deep. The south one is 76 ft. x 33 ft. 6 inches, and the north one
is 32 ft. 9 inches x 47 ft. 3 inches. There are nine steel trusses
in the retort house. I went over the whole steel and I found I was
right the other time. I don't want to change my testimony. The
steel trusses are not the same throughout the different buildings.
One building has one and the other building has another, only
to the hip. Exhibit 267 is the strut put in in the north retort house
between the hip trusses. It has a hip strut and a main strut put
in between. There are four hip trusses. A hip truss is the hip
of the roof to hold up the roof. Exhibit 268 are the trusses in the
south retort house, and Exhibit 269 are the trusses in the north
retort house. There are nine steel trusses in the south retort house,
which refers to Exhibit 268. There are four in Exhibit 267, and
two in Exhibit 269. I guess there is a cement floor, all right, in the
basement of the retort house, but I wouldn't call it that. In the
oil tank house some of the walls are 17 and some 18 and some 13
inches. The gables are 13 inches and the balance are 17 and 18
inches. They are the part above the square of the roof. It is 10.1
ft. from the top of the surface of the ground about the oil tank house
to the bottom of the basement. The dimensions are 35 ft.
1767 3 inches x 22 ft. 9 inches outside, and in addition to that
we allow 8 inches around for excavation. The yardage there
for the oil tank house would be 342 yards. There is a little steel
in the roof of that house. In my old estimate I have it as $150.
You didn't ask for the details of it. I testified before that they
were steps leading up to that building, but there are none. I will
admit I was wrong. There are 620 yards of concrete floor in this
oil tank house. I deducted the walls and footings under the ma-
chinery to get this area, and the piers that carried the tanks. There
is no basement under the meter shop. The footings are 4 ft. 10
inches. They are either concrete or cement. It shows the cement
on the outside. The booster house I got the excavation at 42 yards,
a depth of 6 ft. 6 inches from the present surface to the bottom of
the footings. I didn't dig down on the outside of the wall, but I
allowed 8 inches, I think. It is a small building, 15 ft.x12 ft.

1768 JAMES G. MATTHEWS, being first duly sworn, testified on behalf of the defendant as follows: Pages 2294 to 2309 original record.

Direct examination by Mr. Morning:

I live in Lincoln and am engaged in the excavating business. I did part of the excavating for the gas holder at 33rd and Vine streets for Mr. Malone. I dug the ten feet on the top part for 35c a yard and the dirt. I do not remember what the total amount was. I took the contract and he was to pay the expenses and if there was any left I was to get it and I received enough to pay me fair wages. After that portion of the contract was completed, I continued to work for him by the day as foreman on this job. There was something like 4,000 yards of dirt taken out altogether. When we dug the hole we dug down as straight as we could. There might have been a slant of about a foot. The dirt was taken out of the hole by scrapers. We had a slanting driveway into the hole, which was wide enough for two teams to pass and I performed my part of the contract by means of this driveway. The hole was 22½ or 23 feet deep, altogether, and what I got paid for was the dirt actually taken out of the hole and we did not count the dirt removed to construct the driveway.

Cross-examination by Mr. Strode:

I did not take the contract to do all the work because I was afraid of losing too much money. The second ten feet could not be removed at the same price as the first ten feet. I went as deep as I wanted to at 35c. The slope of the driveway for the first ten feet was not very much, but as we went down it had to be extended. When we got down pretty deep the dirt caved in on us and we had to clean that out. I did not keep any measurements of the amount of dirt removed and I have no particular way of finding out. I never figured it and I don't know that I could figure it. The other fellow suggested that 4,000 yards to me. I hauled lumber
1769 and telephone poles for about two days to brace the sides of this excabation. We had to build a wall inside to hold it from coming down on us. On the first ten feet we did not have to do that. I did not pay the bills and I do not know what the excavating cost. I would not have undertaken the excavating after the first ten feet for 40c a yard.

Redirect examination by Mr. Morning:

I was afraid to take the whole contract because I had never dug anything like that before, and I contracted to dig about the depth I usually went. I wouldn't try to dig the balance of that hole for 70c a yard. I might make money if I had real good luck and it didn't cave in. The walls caved in when we got down about 22 feet. I can't tell you how much dirt caved in or how much it cost to take it out. It came in off the East side, started about five or six feet back from the edge and sloped down about eight or nine feet.

In another place it fell in two or three feet wide clear down. That was where they were digging to put in gas pipes. We used the timbers all around the excavation. We left a cone in the center.

Recross examination by Mr. Strode:

Just as we got it finished a big rain came and filled the hole half full of water. The brick men had to pump this out, but we had to pump it out a couple of times before we had it finished. I do not know who it was that told me the yardage was about 4,000 yards.

1770 W. D. J. STECKELBERG, being first duly sworn, testified on behalf of the defendant as follows: Pages 2608 to 2630 original record.

Direct examination by Mr. Foster:

I live in Lincoln and am a civil engineer. For the past five years I have been the field engineer in the city engineer's office and I have been in the business for eleven years. On October 30, 1913 I took the elevations of the buildings and ground of the plaintiff company between Second and Third and L and M streets, Lincoln. The elevations which I took are shown on Exhibit 265 in yellow crayon. I placed them on this map. These elexations are made with reference to the city Datum Plane This Exhibit is a map of the gas plant location. Exhibit 265 is offered and received in evidence. It is a correct copy of the map that was furnished by the company. The elevations taken and shown on this Exhibit are the actual elevations of the ground about the buildings, the chart of the walls and the top of the footings of the walls, the water basin and the floor elevations and the natural elevations of the old soil out in the channel of the old creek bed. By the old soil I mean the elevation of the natural surface before it was filled in. I dug down to the old surface on the East side of the purifying house, South of the center North and South. The point is indicated by an arrow in yellow crayon pointing to the spot, and there is shown the elevation of the top of the soil as it is there now and also the old original surface. The words appearing there are, "Cut bank shows one foot natural soil above top of footing. Natural soil elevation equals 46.1." I also took the elevation of the natural soil off of the company's premises about due south of the gas holder, right adjacent to the filled ground and the elevation there is 45.3. It is marked slough elevation 45.3. The point is not over thirty feet north or south of where these words appear. I also took the elevation of the natural soil outside of the company's grounds at a point ten feet west and about 175 feet north of the purify-
1771 ing house. The elevation there was 43.9. That point is indicated on the map by an irregular line in yellow crayon marked "slough 43.9 feet." I also took the elevation of the basement floor at the north end of the purifying plant, which is 46.2, and the little room to the south and the floor elevation is 46.8. The retort house floor elevation is 46.9 and the north end of the floor

elevation of the retort house is 43.9. That is the lowest floor. The generator house floor is 45.6. The oil house floor is 40.4. The tank is 46 even. The natural surface of the ground to the point where this plant is located is very close to the grade, between the three points at which I took elevations outside of the company's premises.

Cross-examination by Mr. Strode:

The zero of the city Datum Plane is 1096 feet above sea level. The bench mark is on the city hall and we have another one at the state house and from these two bench marks we run all over the city. If we want to get the elevation above sea level we add 1096 feet plus to the elevation we get running from these bench marks. The elevation of the bench mark at the city hall is 1172 feet above sea level, which is 30.7 feet higher than the elevation of 45.3 at the plant. I can not give you exactly the elevation of the city hall bench mark, but it is 1172 and a fraction feet, and the point marked on the map as having an elevation of 45.3 is 1141.3 feet above sea level, and the point marked 43.9 on the map is 1139.3 feet above sea level. The distance between these two points is approximately 700 feet and the difference in elevation is 1.4 feet. These points are marked "slough" because water was standing there. Salt Creek runs northeast. It is a crooked stream. Its general trend is from the south to the north at this point and the valley slopes with the creek and is higher south and lower north. 43.9 1772 is north and 45.3 is south. These elevations are those at those particular points, and I do not pretend to show the elevations of the ground immediately surrounding. The other elevations around the plant are the elevations of the ground as it now is. Of course all buildings at the gas company's property were put up long before I came here as an engineer. I have been established in Lincoln for about fourteen years and I don't claim to possess any original knowledge about the conditions down at the gas property at the time the gas plant buildings were put up. The lots there have been filled in more or less, apparently as soon as the buildings were constructed. My supposition that the ground was filled in afterwards is based upon general observation. The ground is filled mostly with cinders. I can't tell whether these cinders came from the present plant or from the old plant. I would not care to state how much of the fill is of cinders and how much is of dirt. I dug down to the footings at the place where the elevations are shows as 44.4 and 45.1 and struck water in both instances. I have a seven foot fill of cinders and brick between the generator house and the 50,000 foot holder. I measured this from the outside. It is just filled in there between the walls of the two buildings. It is simply a pile of cinders. There are railroad tracks east of the plant. I am inclined to believe that the slough there is the result of the excavation by the railroad company to get dirt for their tracks. They would know. The track running into the gas company's property is on top of the present surface, and is above the old original sur-

face. The top of the grade has the appearance of cinders. I have made no profile.

Redirect examination by Mr. Foster:

The cinder fill between the generator house and the 50,000 foot holder has the appearance of being used as the surface of the ground. It is levelled off, except within about ten feet of the generator house. It appears to be part of the general plan of filling up the ground.

1773 HORACE S. WIGGINS, being first duly sworn, on oath testified on behalf of the defendant as follows: Page- 2034 to 2070, Original Record.

Direct examination by Mr. Foster:

The qualifications and competency of the witness as an accountant is admitted.

I have made an examination of the books and accounts of the Lincoln Gas and Electric Light Company so far as the construction accounts are concerned covering a period from 1873 to 1912, inclusive. Exhibit "157" is a list of the books examined by me so far as they relate to the construction account. Exhibit "158" is a summary of the totals of the gas construction account from 1873 to 1912, inclusive, showing in one column the amount charged each year and in a parallel column the total for the period ending that year. I secured the details for this Exhibit up to October 1st, 1900, from the printed records in this case in the United States Supreme Court. From that time up to the end of the account I have prepared Exhibits which will follow showing the various construction accounts each year. Exhibit "159" is a statement of corrections which I have found necessary to make in the printed record, where there were errors, omissions or duplications in the printed record. In making this Exhibit I have given the page of the printed record item that was erroneously reported omitted or duplicated, and in the one column shows the way the item reads in the printed record and in another column it is shown how it should read according to the books of the company, and I have shown in each instance whether it was an omission, addition or duplication. Exhibit "160" is a list in detail of the gas construction account for the year 1891, and comes from the printed record at page 526; it seems that there was one page of that record that was lost by the reporter. Those items amount to $18,356.65. It does not affect the total shown in the printed record, but only supplies the details omitted. Exhibit "161" is the construction account for the month of October, 1900, which was omitted from the printed record. It also shows an error of $1,089.87 in the total shown in the printed record of the
1774 construction account for the year 1900 in favor of the Gas Company. The error referred to appears on the construction account shown on page- 574 to 577 inclusive of the printed record. Exhibit 162 is a statement of the gas construction account for the

year 1901. This Exhibit shows the various pages of the ledger for these amounts, the title of the accounts with dates covered by each account to which the items are finally closed and to the ledger account at the close of the year 1901 construction; in the next column I have shown certain items that were carried forward from the year 1900, and were included in the final closing out of the accounts as 1901 construction. In the next column I have shown the correct amount for 1901. The total amount of the items that were carried forward from 1900 to 1901 and went to swell the total construction charges in 1901, which is $22,538.31, that is so far as the printed record is concerned. I do not want it understood as implying that the books of the company were erroneous to that extent. The account in the printed record is excessive to that extent as appears on page 577. I testified about this same statement in the record and made the same correction in my testimony in this case before. It never got into my totals, but it does appear in the totals of the Gas Company on page 577. Exhibit "163" shows the gas construction accounts segregated as shown by the Company's books from 1902 to 1912 inclusive. The figures for 1902 to 1906 inclusive agree with the account as shown in the printed record with the exception of 1902 I have about $450.00 more. Exhibit "164" consists of 37 sheets which is a detailed statement of items charged to gas construction, generally spoken of as "Works account" from 1901 to 1912 inclusive, as shown in detail and explained as far as I was able to find it on the books of the company. Every detail, with the exception of the portion of the year 1901 where I have been unable to find the voucher record for a portion of the year 1901 is explained. The exhibit shows whatever credits there were to the construction account, and I am preparing a list of all the credits during the entire period of 40 years complete. I have prepared Exhibits 157 to 164 inclusive and have checked them with the company's books and they are correct to the best of my knowledge. Index to the
1775 Exhibit refers to the pencil figures following each page.

Exhibit- "157" to "164" inclusive offered and received in evidence. The total amount charged to construction account up to January 1st, 1913, as shown by the Company's books is $784,307.49, which is the balance after deducting credits to that amount.

Cross-examination by Mr. Strode:

At the former trial of this case I spent six weeks on the examination of the Company's books and three or four weeks at this time. I went over the books of the Company for the purpose of determining the cost of manufacturing gas. The first examination I made my exhibits with that end in view; also to determine the services and the costs of mains, and I checked out these costs against the vouchers of the Gas Company to determine the accuracy of the records. I found an honest effort on the part of the company to keep a correct record of the cost of the expenditures of the Company, and found nothing to criticise in the showing of the incoming expenses. *We* respect to the error made in the construction account of 1901, there

was no attempt made to deceive, and I called attention to this error on page 343 in my former testimony. In checking over the construction account the second time, I have checked back my own account and have found certain minor corrections which I have noted. Subsequent to 1907, I checked the large items in the construction account against the vouchers of the Company and found it to be correct as entered in the books. The construction account kept in the early days was in very crude form. I did not find the details as I did in the latter years. There was no classification or segregation. It merely showed to whom the money was paid out, but not what it was for, and there was no way in which the early records could be checked out when you got back into the 70s and 80s, and you could not tell from the records whether it was all there or not. In 1873 the construction account was some $54,000. and the next year only $887.31, and the next year I found nothing. Before and since that year there has always been something charged to that account. My evidence goes to what has been charged
1776 for construction and not to the value or amount of the property. I did not check the maintenance and repair account, and I am unable to say whether any items have been carried into that account which should have been charged to construction. My Exhibit shows the total construction account up to 1890, the total there is $203,450.83. That is the time the census report shows Lincoln bigger than it is today, yet the amount of the company's construction account was $203,450.83. The electric light construction account was opened October 16th, 1890, and at the close of 1890, shows $14,577.63, so under any possible construction not more than $14,577.63 would be involved in the inventory of December 31st, 1890, which shows $475,862.03.

Redirect examination by Mr. Foster:

I found nothing in the early dates to indicate that a construction account was only a partial showing of what had been actually spent for construction, and I found charges practically every month during all of the years throughout the history of the Company. There always seemed to be entries for pipes used for maintenance or service during all of the years. I think Walsh & Putnam were operating the plant for some three or four years, and during that period I would say the books show charges to construction every month, and it indicates that the property was being developed slowly. I think an inventory would include franchise value, and I would rather rely upon the books of the company than upon an inventory. I have checked the figures previously given me by Mr. Strode, as to the Company's inventory of Dec. 1, 1891, with the total of $610,158.00. Cost of construction for Block 79, $20,346.24 added to gas construction of that year $28,082.62, makes together $48,000 and something. Adding the gas and electric construction of that year to the amount of property the company had at first of year, according to inventory, $610,158.62, which shows that the electric construction was included for that year.

Recross-examination by Mr. Strode:

In 1890 I *I* had to go outside and get $20,000, and put it in the construction account. I believed it belonged there. In 1875 and 1876, the record shows that it was necessary to take up 2,396 feet of 6″ pipe and lay from the works to 11th street on O and 400 feet of 3″ pipe on O Street, and relay that amount of iron pipe. The construction account of that year shows a total of $9,937.44, of which $1,001.00 is for pipe. The 1878 construction account was
1777 $1,656.06, and in the minutes of the meetings of the stockholders, held on January 15th of that year, there is shown that they built a retort house 30 x 50 and also built a brick lime house 12 x 20; a coal house 14 x 30 and a new coal gas works of the latest make made by Morris, Haskin & Company of sufficient capacity to make 40,000 feet of gas daily and I find no items in the construction account of 1878 covering that, but in 1876, I find that the Morris, Haskin Company was paid $2,417.00. The construction account for 1877 is $3,371.55, and I hardly suppose that the cost of a new coal gas works would be included in an item of that size. Under the same date in the same record they have constructed a lead of 9,800 feet of mains, and that has not been included in the construction account of 1877 of -3,371.55 and in the next year $1,656.06. I am unable to explain this. If an inventory is honestly taken, it controls over bookkeeping.

Redirect examination by Mr. Foster:

I do not think in this instance any items have been charged to construction until they have been paid for and it is quite possible I think that some of the construction items were not actually paid for until a long time after the actual construction of the apparatus or property. I would consider it quite probable on account of the known financial condition of the Company during those years.

Redirect examination continued by Mr. Morning:

In check- this construction account I assumed that was an account of what they had paid out for work on construction.

Redirect examination continued by Mr. Foster:

The item of $145.50 of J. H. McLair, appearing in the construction account for 1877 for digging about 4,000 feet of trench is no doubt for laying the mains referred to by Mr. Strode.

1778 Recross-examination by Mr. Strode:

The items for digging the trench is simply a guess on my part that it is for the laying of the mains. Two items one for $44.13 and the other being $10,429.13, appearing in the construction account were omitted by me because Mr. Honeywell also omitted them.

1779 HORACE S. WIGGINS, being recalled for further direct examination, testified on behalf of the defendant as follows, pages 3833 to 3839, original record:

Direct examination by Mr. Foster:

I made an examination of the books and records and accounts of the Lincoln Gas & Electric Light Co. for credits to gas construction accounts and Exhibit 423, consisting of 16 pages, is a tabulation of those credits prepared by me. This is taken mainly from the ledger accounts of the gas construction beginning with the year 1873 and ending with the year 1912. I have arranged the matter in chronological order just as it appears in the books, and have given all the details that is contained in the books and it shows the references to the books from which the data is taken. For the years where no credits appear on the books of the company I have shown that fact. I have carried out the totals by years. The items in this account are credits or deductions in the amounts charged to the construction account. The totals of each year's credits are shown in Exhibit 157, and this Exhibit 423 gives the details of those credits. I think these are all the deductions shown in the books of the company. They are all that I could find, and this, as I recall it, balanced up with the total shows in the previous exhibit. Exhibit 423 offered and received in evidence.

Cross-examination by Mr. Strode:

The details of all of these items are all shown in the books—not always in the ledger, however, sometimes in the voucher records. In the earlier years it was all shown in detail in the ledger account. On the item for Yankee Hill brick, $8.50, I assumed that there was a voucher and that that was the amount the company paid.

Redirect examination by Mr. Morning:

I have made more or less of an effort to substantiate the books in this construction account. The earliest vouchers I found were about 1900. I was not able to find any for the earlier years. The vouchers were probably destroyed. They wouldn't keep them
1780 longer than that. The record books for the earlier years were kept more or less like mercantile books where they didn't use the voucher system. I think the first voucher was started about 1900.

Redirect examination by Mr. Foster:

The total credits to the gas construction account from 1873 to 1912 as shown by Exhibit 423 is $59,754.15. That amount has already been deducted from the total construction account in Exhibit 158 of $784,307.49, which is the net amount charged to construction.

1781 BRUCE FULLERTON, being first duly sworn testified on behalf of the defendant as follows: Pages 2239 to 2241 original record.

Direct examination by Mr. Morning:

I live in the city of Lincoln and am an attorney at law. I have made an investigation of the numerical indexes and deed records in the office of the registrar of deeds for Lancaster County, with a view of learning what recent transfers of property have been made in the vicinity of the gas works. Exhibit 179 is the list of the transfers that I took off from the record and it gives the lots and blocks, the kind of instrument, the expressed consideration and the book and page where recorded, covering the transfers from 1906 to 1908. It shows the consideration only as expressed in the deed. I know nothing about the actual market value. Exhibit 179 is offered and received in evidence.

1782 FRED C. FOSTER, being first duly sworn testified on behalf of the defendant as follows: Pages 2092 to 2099 original record.

Direct examination by Mr. Morning:

I am city attorney for the city of Lincoln and have been for about two and one-half years and conducted for the city the trial of the suit in the District Court involving the occupation taxes against the Lincoln Gas & Electric Company. There were two cases tried and disposed of at the same time, involving the same matters and the result was that the city obtained a judgment for a definite sum in each case as an occupation tax. The company has served upon me a bill of exceptions to perfect an appeal and I understand that they intend to appeal, although the appeal has not yet been effected, but neither has the time expired. Part of the decree in these cases was drafted by me and the balance was under my supervision. Exhibit 168 is a statement of the occupation taxes levied for the years 1907 to 1912 inclusive and for the months of January and February in 1913, against the Lincoln Gas & Electric Light Company and shows the amounts which entered into this judgment. The sum total is $35,095.47 exclusive of interest and penalties. This judgment includes the taxes against both departments of the company. The Court held that we were allowed interest at 7%. The action was brought on two ordinances; the first one levied an occupation tax on the sale of gas alone; the second one repealed the first one and levied an occupation tax on the sale of gas and electric current.

Cross-examination by Mr. Strode:

The first ordinance is the one set out in the petition in this case, and shows a 2½% tax on the gross receipts resulting from the sale of gas. The city attempted to levy that sum upon all gas sold inside and outside of Lincoln. It was in effect until January 15,
1783 1910. Some time in 1907 the city council passed an ordinance levying an occupation tax on the sale of electric current.

That was also in effect until 1910 when both were repealed and a new ordinance adopted, increasing the tax to 3% of the gross sales. The city claimed the penalties allowed by the ordinance, but the Court held that it being a Court of Equity and the ordinance having been declared valid, it was within the power of the Court to relieve the company of the penalties notwithstanding the terms of the ordinance and therefore allowed instead of the penalties, interest at the rate of 7% on the sum due each six months. The interest and penalties provided in the subsequent ordinance were enforced. Exhibit 168 shows the sales of gas alone, inside the city limits. It does not include any interest or penalties, but that is not on account of our waiving anything.

1784 W. O. THOMAS, being first duly sworn testified on behalf of the defendant as follows: Pages 2656 to 2674, original record.

Direct examination by Mr. Foster:

I live in Lincoln and am an accountant and insurance man and have been for about ten years. I made an examination of the legal expense accounts of the Lincoln Gas Company and Exhibit 270 is a copy of that account, taking account No. 1505 for the years complete, 1907 to 1912 inclusive. It shows all the items in that account as they appear on their books. These items are all charged directly to gas operating expenses and there is no division as shown in this account between the gas and electric department. The items in this account were taken in the first instance from the debit expense accounts. The item of January 31, 1907, employer's liability insurance, was taken from transfer voucher 318, which means that this is a portion of some larger item apportioned over a number of months, depending upon the size of the account. The item on the same date, H. F. Rose 41.67 is the ultimate account and that is true of all of the other items. I examined all the original vouchers from which these entries were made, except some which were missing and for which I made inquiry. I have not seen the reports of the company of their operating expense account and I do not know whether the items shown in this Exhibit go to make up the totals under those reports or not. Exhibit 270 offered and received in evidence.

Exhibit 271 is the result of an examination which I made of the company's accounts and records as to rebates and allowances from January 1907 to December 31, 1912. The items represent the gas and electricity furnished free of charge to the persons named in the Exhibit. These items were taken directly from the voucher rebates and allowances, and the voucher's number is shown in each instance. The items check with the original vouchers. I made an occasional examination back of 1907 and found that practically the
1785 same people were receiving the same rebates and allowances back to 1902 and farther. The same is true of 1913. The vouchers show that the rebates and allowances were for gas and electricity used. I examined all of the vouchers with the exception of a few which were missing. They were all in the usual place of keep-

ing the vouchers, except one, Voucher 2787, under the name of H. Honeywell, where I found these slips. They evidently had been torn from some other voucher and placed in that one. In addition there are a few other items which indicate the allowance of additional rebates and allowances, for instance, I examined Voucher 3072 for March 24 1907, amount $255.00. The items are given as follows: Expense for May, $80.00; to Mr. B. M. $25.00; O. D. H. $25.00; C. C. J. $25.00; A. P. Large $100.00. In the sub-division of accounts, $127.50 was charged to account 1503 and the same account to 3229, which is the division between the gas and electric accounts. There was no other explanation of these items. I also found Voucher No. 5984 for March 13, 1909 amount $703.13 showing the following checks to Homer Honeywell, special; Oct. 17, 1908 self $40.00; November 9, 1908. self $35.00; November 7, 1908 self $25.00; September 12, 1908 Sam Pennington $25.00; same date self $63.13; July 18, 1908 Lincoln Gas & Electric Light Company, $45.00; July 31, 1908 self $90.00. August 15, 1908 self $150.00; August 10, 1908 self $150.00; November 1, 1908 self $80.00. Homer Honeywell had been manager of the gas company. I do not know when he went out.

I also found Voucher 6244 April 27, 1909 payable to the Lincoln Gas & Electric Light Company for $325.00. There is a receipt to that company from H. Honeywell, dated August 28 1907 for cash, currency and signed by H. Honeywell with the letter E underneath. Then there is Voucher 4342 dated March 30, 1908 H. Honeywell $250.00 charged to sundries with no explanation and Voucher 2846 dated November 15, 1907 H. Honeywell $200.00, charged to account 1503 $100.00; charged to account 3229 $100.00. There is no explanation.

1786 Then there is Voucher 4956, dated August 7, 1908, H. Honeywell $250.00, general manager, incidental expenses.

Cross-examination by Mr. Strode:

The account on the books of the company called rebates and allowances is a written extended account and covered all the adjustments made by the company with difference consumers and allowances given to the consumers in order to satisfy them and get the account adjusted and these items are all shown in Exhibit 271. The items are entered in this account with reference directly to the voucher, and they are afterwards sub-divided by name and in the end are entered up monthly, and the amount of the account with the voucher number, is carried on the face of the records to the general account of rebates and allowances, and where, in a particular month, for instance January 31, 1907, in this rebate and allowance account we find the voucher number in the account, gas and electricity $16.88 and we can turn to the voucher and find the name H. Honeywell and the voucher shows also that it is for gas and electricity. Voucher No. 2616, S. H. Burnham $47.15, shows that this is for gas and electricity and the amount is subdivided between the two departments 50% each way, on the books

of the company. I have shown the whole amount here. I have just endeavored here to show the rebate and allowance account. The gas account number is 1503 and the electric account number is 3229 and at the end of each month the figures opposite these account numbers show the amount charged to each department for that month. I have another rebate item in my exhibit, of $33.50, which was in some slips that I found out of place in Voucher 2787. This item was entered on the books, but I got it from the vouchers. I didn't examine the book at all and I don't say that the account didn't carry the voucher number. The slips which were in the voucher 2787 had been torn from vouchers January, February, April, May, June and August, 1907, and placed in this voucher. The voucher shows an expense account of Mr. Honeywell for $25.00 with an explanation of his account, J. C. C. with three ones after it three times.

1787 Exhibit 270 is a transcript of the account carried under the books of the company as legal expenses, Account No. 1505, and I simply compiled the account here into one exhibit. I haven't criticized the way it appears on the books of the company. I do not know what consideration the company received. The rebates and allowances account is an expense account and I assumed from that that when an item was entered into that account that the company received nothing for the items appearing there, that the items were just rebates that appear there. I did not check the account against the receipts of the company to know whether the company had received anything for payment for the services.

Redirect examination by Mr. Foster:

These items in the rebate and allowance account are charged to the company's operating expenses and they represent so much money paid out. I got this information from the vouchers themselves and this exhibit is an extract of what the vouchers show. There are no names appearing in this account regularly, month after month, that are not shown in Exhibit 271.

Recross-examination by Mr. Strode:

The vouchers would show the actual amount received. It wouldn't show what was paid out. I saw paid out items in the account, for instance, the Lincoln Gas & Electric Light Company paid to H. Honeywell the sum of $25.00. All of the items that I have testified to as rebates and allowances and set out in this exhibit are entered as an item of operating expense. The book in which it is entered does not give the name of the parties; it names the item, and in order to get the name of the party you have to go to the voucher and that is true of all of the items. Added to the voucher are little slips giving the names. They used one voucher so the bookkeeper would not have to make such an enormous number of vouchers.

1788 To show it in the books would require too much detail. The books show that the customers got this service free and

that they have charged it up as operating expense, which would be the way it should be charged, as it is part of the operating expense.

1789 W. O. THOMAS, recalled for further direct examination, testified on behalf of the defendant as follows. Pages 2964 to 2971, original record.

Direct examination by Mr. Foster:

Since I was last on the stand I have examined the gas company's books and records, especially those incidental expense accounts. Exhibit 323 is account No. 1503 incidental expenses for 1912 starting with January and goes through to December. It was taken from the company's Accounts Payable Ledger. The account for 1912 appears just as it was in the book. The items in the other years from 1907 to 1912 were extracts that Mr. Morning had singled out for investigation. Exhibit 326 is a statement from the Accounts Payable Ledger of account 1507 under the caption "Promoting New Business for Gas for the Year 1912". That is for the complete year. The next page of this exhibit is the account now under the heading "Domestic Fuel Appliances and Connections, Advertising, 1819-9", taken from the same book, and the totals for the month shown under that heading are carried into the totals on the first page of the exhibit. That is the condition of the company's books. This second page is from January to December, 1912. It is a portion of the new business account in detail. There are four sheets to that portion. The next division of Exhibit 1 in two sheets, under the designation "Domestic Fuel Appliances and Gas, Salaries, 1819-*c*", and the totals of that are carried into the summary on the first sheet. The next subdivision consists of one sheet under the head "Domestic Fuel Appliances and Gas, Special Expense Account, 1819-*d*", and the next subdivision is "Domestic Fuel Appliances and Connections, Loss Account, 1819-*f*". There are six sheets in full detail for the year 1912. The next subdivision is account 1819-*g* in four pages, for the full year. The next subdivision is account 1819-*h* in three sheets shown in the same manner. The next subdivision is account 1820-*h*, giving business expenses and consists of two sheets. These were all taken from the so-called accounts payable ledger. These accounts in detail are where
1790 these items are charged to operating expenses. Exhibit 327 consists of two sheets and is the special appraisement account and expenses of dollar case gas account 1891-*a*. The account is shown in detail. The accounts are taken from the company's books from January to December, 1913, consisting of three pages. Exhibit 328 is a continuation of the other exhibits of the rebates and allowances, gas and electric light furnished free. This is for the year 1913. Exhibit 329 consists of two sheets, rebates to T. H. Pratt prior to January 1, 1907, taken from the original voucher of the company to complete the record on the other exhibit. Exhibit 330 is the sundry expense account for 1913. That account has no number in the books. It shows the account in detail by the months

and consists of three pages. Exhibit 331 is the account of the executive salaries for 1904 to 1912, inclusive, showing growth and division between gas and electric departments and excluding items in common to both departments. Exhibit 332, consisting of 11 sheets, is a statement of the cash on hand and in bank at the end of each month, taken from the company's financial reports for the years 1903 to 1913, inclusive. I made all of these exhibits and took the figures from the books of the company and to the best of my knowledge they are correct. The computations at the bottom of Exhibit 332 were the average monthly balances in the bank in the office and on hand and the total balance. Exhibit 321 is account No. 497, travelling expenses for 1913, which I took from the company's accounts payable ledger. Exhibit 322 is the general office expenses account No. 1502-*a* from January to December, 1912, in detail, as taken from the company's ledger. Exhibit- 321, 322, 324, 325, 326, 327, 328, 329, 330, 332 offered and received in evidence.

1791 The following testimony is set out in the exact words shown in the original record, and includes the exact words of certain witnesses desired by each of the parties as indicated herein, and has been directed by the Court, in his certificate, to be allowed and made a part of the record.

1792 *On Behalf of Plaintiff.*

1793 Examination of Mr. B. C. Adams, page 9:

Mr. Foster:

Q. I will hand you exhibit "327," and will ask you to state the nature of the expenditure therein set out beginning with January, 1913, Sloan Huddle & Company, voucher No. 13720, on account, $2,650, services, amount charged in this account for this month, $500?"

A. We employed Mr. Huddle to advise us in connection with this gas case"

Mr. Morning:

Q. Who are those parties?

A. Sloan & Huddle is an engineering firm that had an office at Madison; Mr. Huddle was the gas expert for the Wisconsin Railway Commission.

Q. What was the $2,650. paid for?

A. For services rendered by Mr. Huddle and his firm.

Q. What services did that firm render in this case?

A. We advised with them in regard to certain methods of procedure; we wanted to know something about how the Wisconsin Commission handled matters of this character, and we have information or got information from them that we have taken advantage of in conducting our side of this case.

Q. It is for expenses incurred in the prosecution of this case?
A. Yes sir.

Mr. Foster:

Q. Now, in Fe*n*ruary appears the same item, Sloan, Huddle & Company, voucher No. 14018, services $1,650; is that the same firm?
A. It is the same firm and covers the expenditure for the same services.
Q. Is it a part of this $2,650. or a separate item?
A. I think that is a separate item; I can't say without looking over the account; it seems to me that $2,650. was the total amount, but I may be mistaken (pp. 3076-7).

(Later Mr. Montgomery testified as follows:)
Q. The Lincoln Gas & Electric Light Company employed the firm of Sloan, Huddle & Company to do some work in connection with this case in the way of a valuation, didn't they?
A. I understand so, but I was in Montgomery in a lawsuit a year ago today. I didn't get home here until the day of the Omaha cyclone. I think that was the 23d day of March.
Q. Do you know the nature of the work done by that firm?
A. No, excepting it was relating to the work of the Wisconsin Commission.
Q. Have you the report made by that firm to the Lincoln Gas Company?
A. No, I have not.
Q. Do you know who has it?
A. I haven't seen one.
Q. Your company paid the firm of Sloan, Huddle & Company something like $3,000. or $4,000. for that company's services
1794 in this matter in conjunction with this appraisal?
A. I don't know just what they paid them (pp. 3304-5).

Mr. Foster:

Q. Mr. Montgomery, do you know anything about the services rendered this company by Sloan, Huddle & Company?
A. I have answered that question, you have asked me all about it and I told you that I wasn't here at the time.
Q. You don't know anything about it?
A. No sir.
Q. There is no report or correspondence of any kind relating to that money in your files of the company at this time showing the nature of the work performed by Sloan, Huddle & Company?
A. Not that I have seen.
Q. Will you make a search to see whether or not there is any correspondence disclosing the nature of that report?
A. I will be glad to (pp. 4055-6).

Mr. Morning:

Q. Mr. Montgomery, do you know that there is an item of expense in the 1913 account as having been paid out by this Company

to Sloan, Huddle & Company in connection with this appraisal, don't you?

A. I know there is an item of expense paid to them.

Q. Do you know what your Company got for that item of expense?

A. No, I never saw any report, as I stated my *my* previous testimony; I wasn't here at the time.

Q. Have you got anything for it in the way of a written document or report in writing, or have you any knowledge of it whether any such report exists or where it is?

A. As I told you before, I wasn't in touch with this case at that time.

Q. You don't answer my question: Have you any knowledge of the existence of any such document?

A. No, I told you that before (pp. 4056-7).

Mr. LEA was examined as follows: (3303.)

Q. Mr. Lea, who makes up the firm of Sloan, Huddle & Company?

A. I don't know.

Q. Do you know who they are?

A. I don't know; I know one of them.

Q. What aid did they render you in making this valuation?

A. Not the slightest in the world.

Q. Did they have any connection with this valuation?

A. Not to my knowledge; I don't know of anything they have done that had the slightest—that had any effect on anything I done, if that is what you mean.

Q. That is what I mean; you haven't consulted with them in this case?

A. I have not; maybe the officers of the Company did, but it was not at my suggestion.

Q. Were they consulted before you took charge?

A. I don't know of it if it is a fact. All I know that they did take up with Sloan, Huddle & Company was something in connection with the procedure of the Wisconsin Commission; they do some outside work and somebody here took up some matters with them.

Mr. Wettling: They work under a retainer practically, namely, in consideration of which the Wisconsin Commission has the first chance, outside of that their time is their own.

1795 Q. Do you know of any work they did for the Lincoln Company in this case?

A. No, I never tried to find out; it didn't interest me.

Mr. WETTLING was examined as follows:

Q. Did your Board of Directors have up the question of employing Sloan, Huddle & Company for valuing this plant?

A. No, sir; that didn't come up before the Board.

Q. Do you know how that was authorized?

A. No, sir; I expect it was authorized by the New York office. That is where the orders usually come from with regard to any

considerable proposition or any unusual things they generally take it to the president for directions, but the ordinary running of the office is done here with only the usual supervision of the president from New York.

Q. Have you seen this Sloan, Huddle & Company's report?

A. No, sir.

Q. Never did?

A. No, sir.

Q. And you don't know what it is?

A. I know that Sloan was here, just what he was doing I don't know; there was some talk about it at the time.

Q. How long was he here?

A. That I don't remember; my impression is two or three weeks; I don't know.

Q. What did that firm do to earn the $2,650 from the Company?

A. You have got me; I don't know.

Q. That is news to you?

A. No, but I can't tell you what they did or didn't do.

Q. You don't know whether they made any report on the valuation of this plant or not?

A. No, just what the report was I don't know; I never saw it.

Q. When was Sloan here, do you know?

A. Let me see, I think it was about, I am not sure whether it was in the middle of 1912, or early in 1913, I guess, isn't it?

Q. The entry of the charge is made in January 1913—the expense charge.

A. It might have been the latter part of 1912, but I am not sure whether it was the latter part of 1912 or the early part of 1913.

Q. Anyhow, it was during the investigation of this plant for this present hearing or preparatory to it?

A. Prior to that, I know there was some talk about getting an engineer to make a valuation of the plant, but I got the impression right from the start that Mr. Lea was the man that was going to do it, although I knew Mr. Sloan was here; what particular thing Mr. Sloan was going to do I don't know.

Q. We can't get any light from you on that question?

A. I haven't any light to dispense in that respect.

1796 On Page 20 Mr. ADAMS also testified:

Q. What experience, if any, did you ever have in the manufacture of gas such as this Company furnished here?

A. Why, I have watched and analyzed (3529).

And again—

Q. Did you ever have any actual experience on a job of *of* putting up a building?

A. I say I did; yes, a great many.

Q. I don't mean putting them on paper; I mean helping put them up?

A. No, I never helped put up a building (p. 3660).

1797 Further on p. 22 Mr. ADAMS testified:

Q. If you think they haven't time down in Massachusetts to see that those companies make proper reports as to the money expended for repairs and renewals, or expended for expense, do you think they have time to check over and determine whether the items expended for the operation of the plant are properly entered and applied under the classification they assume to apply them under?

A. Not generally by any means.

Q. It is left very largely to the Company to make up its own reports about in its own way, excepting they must fill out the standard form?

A. The Company, as a matter of fact, exercises a good deal of discretion in making out its report; there is no doubt about that (pp. 4394-5).

Q. You have indicated that you thought the Commission knew of this practice that you referred to as existing in Massachusetts?

A. I know they know; it is brought up repeatedly in the hearings there, there is no "think" about it, it is just as well known as any practice could be and the Commission can't help it.

Q. They can't help it?

A. No, sir.

Q. They cannot change or direct that item to be entered as it should be entered in the returns to the Commission?

A. The trouble would be that it would require an army of accountants and engineers to chase up the fifty companies to see what they entered as a repair or as a renewal was in fact an extension; it is the practical enforcement of a regulation of that kind on a matter involving as much judgment, engineering and skilled judgment as that does, that makes it impossible and imprzcticable for the commission to enforce a rule on that matter (p. 4393).

Q. (Same.)

A. Not generally by any means. * * *

Q. Now, you referred to the matter of repairs and renewals in Massachusetts and said that some of the companies in Massachusetts were in the habit of covering up their earnings by entering as renewals or repairs what were in fact extensions, I think you said?

A. Well, that may be a fair summary of what I said.

Q. Now, do you think the Commission in Massachusetts knows that that is being done?

A. Oh, it is notorious (pp. 4391-4392).

A. D. ADAMS:

Q. Did you make any estimate before Mr. Lea testified and furnished his report?

A. Why, no, sir; no direct estimate of my own, I looked at the estimates your men made in the case in the United States Court and did a little thinking about that, but I didn't make an estimate of my own. (p. 3694.)

A. D. ADAMS:

Q. Of course, you feel that the City is your client in this matter?
A. I certainly do.
Q. That you are in the service of the City and you represent the City in this controversy and that you are giving the City the best service you have?
A. Yes, sir.
Q. And in its interest?
A. Yes, sir.
Q. But you do not feel free to volunteer information or opinions or judgments to this company for its benefit in this controversy?
A. I do not think I am called upon to do that; no, sir.
Q. Especially in view of the fact that you have participated in pursuing a vigorous cross-examination of witnesses you would hardly be expected to turn around the next day and render assistance, even though you felt that the facts, if fully disclosed, would be to the benefit of the Company?
A. Well, I haven't considered any facts that I thought were necessary to the Company, if that is what you are driving at. (p. 4409.)

1798 A. D. ADAMS:

Q. Do you recall now where you got the information upon which you based or assumed the estimated life of the equipment at Racine?
A. I got it mainly from plants in Massachusetts. (p. 3714.)

* * * * * * *

Q. In Cedar Rapids case you brought the buildings from 100 years in Racine to 80 years in Cedar Rapids and in Lincoln you brought it to 66.6 years?
A. Oh, yes; which shows that it is consistent. (pp. 3716-7.)

1799 A. D. ADAMS:

Q. Is there any standard recognized by engineers as the normal life of equipment such as is found here?
A. I haven't been able to discover any uniformity in that regard.
Q. The engineers don't agree?
A. I think that is true.
Q. Some engineers don't even agree with themselves?
A. That might be true, a conscientious engineer sometimes changes his opinion.
Q. And the oftener he changes his opinion the greater indication that he is conscientious?
A. I should want to know all the facts in regard to that.
Q. Suppose a gentleman who is an expert testified in Racine, Wisconsin, and gave the life of equipment materially different from what he has given it here, and also testified in Cedar Rapids, Iowa, and gave the life of the equipment the same as this here different from the life he gave for this equipment, would you assume that to be an indication of conscientiousness?

A. It might or might not be; I should have to know more of the facts. (p. 3712.)

H. I. LEA:

A. I have made valuations for banks, bond houses, gas companies and individuals. I have made valuations of the properties having a reproduction cost today of more than $110,000,000.
Q. Since you opened your office?
A. Since I opened my own office.
Q. And in about how many different cities throughout the country?
A. Something over 70; I don't recall exactly, supplied by these companies; I have made other examinations that were not directly bearing on values, for instance, for gas companies who are having operating difficulties or troubles in their plants that were annoying them one way or another, and I have made examinations of properties to determine whether changes in methods or equipment would be advisable.

E. W. REED, on Real Estate Value:

"I have made an exhaustive study in Lincoln and obtained my information from going very carefully over the assessed value of property in all parts of the city; by talking with the County Assessor and City Tax Commissioner and real estate men and by observing closely the property which is listed for sale and the prices which are asked and the prices which are obtained for lots and at which lots have been sold for in various parts of the city." (p. 656.)

* * * * * * *

"I have made returns to the commission upon all the land owned by the various railroads and occupied by them as their terminals in this city ." (p. 657.)

* * * * * * *

"I made an appraisal of the real estate, the land or lots owned by the Lincoln Telegraph & Telephone Company."
Q. Have you appraised any portion of block 77?
A. Yes sir; there is .11 of an acre which belongs to the Burlington railroad in block 77. (p. 657.) * * *
Q. Have you appraised any property adjacent to block 79?
A. I have appraised blocks on three sides of it, I think. (p. 658.)

1800 JOHN LEBSOCK:

"A. I never sold any lots there. (2731.)
Q. I am asking you about block 80?
A. I don't know anything about it.
Q. Do you know about block 81?
A. No.
Q. Do you know anything about block 75?
A. No, I never had anything to do with it.

Q. You don't know what those lots sell for or what their market value is in blocks 80 and 81?
A. No sir.
Q. Do you know what the value is of lots in blocks 46, 48, 71, 105, 82 or 83?
A. I never had any sales there.
Q. And you know nothing about their market value?
A. No sir.
Q. Do you know where the cold storage plant is?
A. Yes.
Q. Do you know what those lots were worth?
A. If you had a lot there and you wanted to buy it I would ask you $10,000. for it, if you wanted it for business purposes.
Q. That is in block 83?
A. Yes sir. (2732.)
Q. Do you know anything about block 48?
A. No sir.
Q. Do you know where the Lincoln Packing Company is?
A. Yes sir.
Q. Do you know what the market value of those lots is?
A. No sir.
Q. Why?
A. I don't know; I never sold any there.
Q. Do you think the market value is $1,000. a lot?
A. I don't know.
Q. Would you say it is not?
A. I can't judge that at all.
Q. Do you say that the lots in block 75 are not worth $1,000. a lot?
A. I never had any sales through this location you are asking me.
Q. That is in blocks 80, 75, 76, 48, 49, 71, 81, 82, 83, 105, 106, 104, 107, 113, 114, and 115, you know nothing about those?
A. Oh, I know nothing about them. (2733.)
Q. Are you a partner of Mr. Hagensick?
A. Yes, a little bit.
Q. But in his general business you have nothing to do with him?
A. No, I have a general business besides; I am writing insurance.
Q. What company?
A. The Dwelling House Mutual Insurance Company. (2734)".

1801 HENRY J. AMEN:

"Q. What business are you engaged in?
A. Groceries and meat. (2737.)
Q. Suppose the gas buildings were removed, what would those lots be worth at the present time?
A. They wouldn't be worth any more than the property right North of it.
Q. What would that be?
A. I wouldn't want to place a price on it; it is cut up there. (2741-42.)

Q. I want to get at blocks 106, 75, 105, 82 and 83?

A. They are not valuable for residence purposes; they were never laid out for anything except wholesale purposes and switching purposes. (2749.)

Q. What would you say is the fair market value of those lots in block 83, exclusive of any improvements?

A. Why, if there wouldn't be any improvements, I expect they would sell for $700, or $800.

Q. A lot?

A. I don't believe the people paid much more than that; they may have paid $1,000. but I don't believe they did, because it was simply wreckage; that was a tough part of the city. (2749-50.)

Q. Down here in the neighborhood of block 79 is there any block of ground at any fixed price that you could buy?

A. What is the use of wasting any time; that block 79 is the Gas Company's; if you want to buy this block 78, what would it cost to buy it? There are twelve lots in there.

Q. I don't know?

A. That block 78 is well settled (indicating); Dorner lives there; he bought that place for $1,000, or $850, or $900, and one man bought this corner for $1,000. It is all well built up there. If you want to go across and buy this block 77, there is a cheap block there.

Q. Well, take block 77; assume that we don't want any unless we have that?

A. Yes.

Q. Would you agree to secure that for us?

A. They are all anxious to sell there, but I wouldn't want to place a definite estimate on that.

Q. You gave your judgment here and you know that at some figure you can acquire that; now give me the figure that you will agree to acquire that block for us and obligate yourself to do it?

A. Oh; I wouldn't say that I would do that; I would expect to make something out of it.

Q. Well, tell us?

A. Well, for buying that block dwellings and all; this is the Gas Company's plant across here, and this block 77 is the one I have reference to; there is a house here (indicating); and a house on lot 7 right there (indicating), oh, I suppose I could buy that block, the houses and the whole business, and sell the houses and clean them off for $10,000. (2753.)

Q. We want to find out what you will agree to buy it for?

A. I wouldn't say. (2754)".

1802 GEORGE HAGENSICK:

"Q. Can you give us some of the sales made down in the Salt Creek bottom within recent years that you know about; some that you have made or that you know of being made?

A. Well, I haven't lately made any sales down there; I haven't for the last three or four years made any sales of lots down there. (2716.)

Q. You don't know who occupies block 80?
A. No, I don't.
Q. Now in block 81; I presume that is principally owned by the Burlington; that is immediately East, isn't it?
A. Yes sir. (2718-9.)
Q. If we had to move the plant, where could we go, and where could you get us a block as conveniently located for our distribution system for less than $800. or $1,000. a lot for a whole block?
A. I don't know.
Q. I want to ask you if you think we are reasonable, and if you think taking the block and taking it where it is and with reference to our plant, that $800. or $1,000. a lot is unreasonable?
A. The value of property varies according to the different purposes for which it is used.
Q. And it varies very greatly according to its location doesn't it?
A. Well, I wouldn't be in shape to say what those lots would be worth; it would be like putting the price on someone else's property. (2725.)"

1803 GEORGE P. MONAGAN:

"Q. What would you say would be the reasonable value of lots in that block if vacant at the present time; the fair market value?
A. Well, that would be a difficult question to answer for the reason that if the property was vacant they wouldn't be worth as much as if they had been occupied. (2676.)
Q. But this property where the company is located is not residence property; it is trackage property?
A. Well, it is residence property with the exception of the Gas Company's property. (2686.)
Q. But this new packing house that has gone up is within a block of it?
A. That is an objectionable business. (2687.)
Q. The fact that there is a railroad track there, and trackage facilities, makes that property valuable doesn't it?
A. Well, I would think it would help the value so far as the business proposition is concerned, but not the residence proposition. (2688.)
Q. What lots have you sold down there in the last five years near this property?
A. I don't think I have sold any in the last five years.
Q. What is the nearest lot that you sold prior to five years ago?
A. Well, I sold in block 140 for $150. (2689.)
Q. When did you sell that?
A. Those lots were all sold within probably the last fifteen years up to five years ago*l* they range along; I haven't the dates; they probably were sold ten years ago and some longer than that. Eight, ten or twelve years ago. (2690.)"

1804 On Valuation of Building.

ELLERY DAVIS:

"Q. Where did you receive your technical education?

A. At Columbia University in New York City.

Q. About what experience have you had in estimating the cost of buildings here in the city of Lincoln?

A. It is our custom to make guaranteed estimates of the cost of the work for which we prepare plans.

Q. To about what extent have you done that sort of work since you have been with this firm?

A. For the past six years I have been with Mr. Berlinghoff in his employ and later as a partner and we have estimated beforehand all the buildings we have built, and our estimates in the main have been verified by the figures for the actual cost. (675.)"

1805 On Overhead Charges and Going Value.

L. E. WETTLING:

"I have had much experience with the analysis of accounts of public utilities and an analysis of valuation figures and contentions generally that come in litigations and hearings on matters of that nature before the Nebraska State Railway Commission and before the courts in several rate cases and tax cases." (4059.) * * *

"I have had occasion to refer to tax books, law books and reports of commissions in various states in the Union generally." (4060.)

* * * * * * *

"Q. Outside of your specific duties for the Railway Commission proper, have you had occasion to examine the testimony offered in railroad rate cases and the like of that?

A. I have; and have assisted in the analysis and writing of briefs in several cases.

Q. Does that include the famous case of Shepherd v. The Great Northern in the Circuit Court of Minnesota, the so called Minnesota-Missouri rate case?

A. I wrote an Amicus Curia brief in the Missouri rate case. (4060.)

* * * * * * *

Q. How long have you followed the vocation of a public accountant?

A. For most of all the time since 1885," * * * (4061.)

Q. You are entirely familiar with the practices of the companies and different theories which obtain in matters of valuing a company?

A. Yes sir.

Q. As held by engineers, courts and commissions?

A. Yes sir.

Q. And as experienced by public utility companies in actual practice?

A. Yes sir." (4064.)

1806 Overhead Charges.

Mr. E. C. HURD:

A. "Well, I would say if you had every other item accurate and that you had the exact amount of money which you had expended that you would find a difference of at least 4 per cent probably; in other words, you would add 4 per cent to your fundamental items to cover this at least; it might be more than that, it may be less than that, but that would be a reasonable amount." (p. 4099.)

Engineering Cost.

Mr. E. C. HURD:

A. "If it is a question of reproducing this plant there is no question whether taking all thing- into consideration it is presumed that the promoters would at least seek expert engineering advice to design and make a study of the field as to the economic location of the producing plant, the trackage facilities, the location of the mains, and all those things together with the actual construction designs. And of course later supervision of the structural portion of the plant as it was placed, and I should say that a reasonable amount would run from 5 to 10 per cent, depending on how earnest the promoters were and how well placed the plant they might have designed. * * * I should say it would be money well spent." (4100-4101.)

1807 On Buildings.

Mr. PERRY HAHN:

Q. Did you build or put up the entire building; did you have the contract to build the entire buildings?

A. I had the contract for all of it above the foundation.

Q. Did you have anything to do with the painting of the building or the wiring of the building?

A. No sir.

Q. Just the walls and roof and floor?

A. That is all.

Q. Do you know the amount of money you received for building that portion of the building that you put up for the company?

A. Yes, sir.

Q. How much was it?

A. $3,650.

Q. Now, what yould you say would be the fair cost of that building to reporduce that building now or at any time within the last year?

A. Oh, 15 per cent to 18 per cent increase.

Q. That is that portion of it that you built?

A. Yes sir. (3178-9.)

Cross-examination by A. D. Adams:

Q. What did you pay for the brick that went into the building?

A. I paid $7.50 per thousand.

Q. Where?
A. F. o. b. on track at the gas works.
Q. * * * Who did you buy them of?
A. Of the Yankee Hill Brick Company.
Q. How did you come to pay $7.50?
A. Because I got an extra good brick (3193).
Q. The question was whether you were buying a better brick than the Gas Company was buying to use down there at about that time?
A. I don't know what the Gas Company was buying, but I know that when I took the job they specified it would have to be an extra hard brick for the outside, which I did, and it cost me 50 cents per thousand more than the general run of kiln run of bricks (3194).
Q. Yes, but how do you know, Mr. Hahn, that you bought and paid for 110,000 brick in the construction of that building?
A. I remember very distinctly; I know that I paid $7.50 per thousand, which I can prove by John Turner (of the Yankee Hill Brick Co.), the man I bought them of, and I know that it takes 110,000 to build it, taken from my figures down there (3197).
Q. Where do they have their headquarters—the Yankee Hill Brick Company; with what office did you deal?
A. I dealt right with John Turner right at the yards.
Q. And where is that?
A. At Burnham. Now let me add another thing: The reason probably that I haven't a bill for that is the simple reason I built their plant out there—I build their whole plant—probably put in 3,000,000 or 4,000,000 brick anyhow, 3,500,000 brick for the Company, and I haven't a scratch of a pen with them for the brick, and that is the reason why I haven't got a contract for what I paid for (3199-3200).
Q. What do you figure it cost a thousand to lay those brick in that building, Mr. Hahn: labor, brick, cement, lime, sand, and all of those things that you use?
A. I figured it at $13.75 mason measurement or $18.75 kiln count.
Q. How do you make up that figure?
A. By taking the prices that I had to pay for material (3200)."

1808 Mr. HONEYWELL:

Q. "How about connections for gas ranges and so on?
A. We pipe to the new range the first time without charge; after that we charge the consumer for it (Pr. R. 166)."

1809 Working Capital.

Mr. WHETTLING:

A. "The Exhibit '7-B' * * * amounting to $72,037.83 would constitute then the difference between the current assets and current liabilities and is commonly considered working capital, and is in conformity with the usual custom for arriving at the working capital of a concern (4087).
Q. If these balances are correctly stated, would it indicate that the

difference there was the capital actually employed at the time these balances were taken for that working capital?

A. Yes, it would indicate that as a necessary part of the capital of the Company." (4007-8.)

1810 Going Value.

Mr. WHETTLING:

A. It is a method that has been approved by an great many engineers, and I have heard it brought forth a large number of times and it is a much more specific method than the one most ordinarily used of lumping the matter either by taking the foregone dividends for the whole period and calculating them and sometimes even compounding interest up to date, or taking the cost of acquiring patronage or consumers or business with a certain limit of cost and applying that to the number of consumers or the number of years. There are a great many methods used, but I think the most approved method, the one while it is theoretical, accord- thoroughly with the practice, and that is the plan which Mr. Lea has applied, his schedule of going concern value.

Q. Would you say that it is scientific and accurate?

A. As nearly as may be projected; I assume it is not possible to get it absolutely accurate; no more possible than it is to determine in advance the exact life of any particular equipment that rests in estimate about the same way. (4176)".

1811 Mr. B. C. ADAMS:

Q. "If you didn't have the benefit of the engineering services and the advice of the New York office, would you be required, in the proper management of the company, to secure such services outside in many instances?

A. Yes, unless we are able to go to someone with broader experience than we can get here, we would have to employ outside help to do justice to the operation of the company and the stockholders interested in it (1908).

* * * * * * *

Q. Do you feel that if you were the owner of this gas plant, and in charge of it just as you are, that you would, as owner of the plant, make an arrangement with Doherty & Company and pay Mr. Doherty $3,000 a year and Mr. Frueauff $2,500 a year merely for the privilege of having the benefit you now derive from their connection with this company?

A. Yes, sir; if I was the owner and operator I would be tickled to death to get the services we have gotten from them and are getting from them.

Q. Do you feel that would be a proper expenditure of the money and a proper charge to deduct from the operating expenses here and to be paid by the gas consumers of this community?

A. Yes, sir (p. 1509).

* * * * * * *

Q. The $500,000 notes that you spoke of, the notes that were sold, I think, in the fall of 1911, for the purpose of taking up some of your bonds, I think you said Doherty & Company negotiated that transaction for you?

A. Yes, sir; they did.

Q. What other transactions have they taken part in in the last five years say by way of raising funds or financing this company?

A. They took up the one-year notes issued in 1907 when they became due and carried them themselves for some time (1514).

* * * * * * *

Q. When were these notes taken up by Doherty & Company?

A. The year after they were issued, they were one-year notes (1515).

* * * * * * *

Q. What was the form of the transaction, the taking up of the notes; what did Doherty & Company do?

A. The holders of the notes drew on Doherty & Company, with the notes attached, and Doherty & Company provided the funds to take care of them (1515).

* * * * * * *

Q. Is there any other transaction since Doherty & Company have been connected with this Lincoln Company in addition to the one you have just spoken of, and in addition to the $500,00- note transaction?

A. Yes, I think they carried the bond in this dollar gas suit put up by the National Surety Company (1516).

* * * * * * *

Q. In addition to this $100,000 note transaction and the $500,-
000 note transaction and this indemnity furnished, what
1812 other financing has Doherty & Company done for this company since they became connected with the company?

A. They have at times paid bond interest and we have reimbursed them for it later (1516).

* * * * * * *

Q. To return to the other subject for a moment, you are not able to name any other transaction since Doherty & Company became connected with the company in which they have financed the Lincoln Company?

A. Yes, sir.

Q. What other transaction?

A. When we bought the 500,000 cu. ft. holder, Doherty & Company was able to get the Western Gas Construction Company to take notes that they wouldn't have taken if we had been standing on our own ground. I think we gave them notes for one of our water gas machines and that was absolutely due to the connection Doherty & Company had with the property.

Q. Is there any other instance?

A. They have always been able to establish a credit for this

company with concerns that might be caused to bear down a little heavily to make us pay up; I remember when I was first manager we had a big account with the Maryland Meter Company that we couldn't pay and Doherty & Company were finally able to get the Maryland Company to take our notes; they were also able to get the Detroit Stove Works to take notes for amounts we owed and couldn't pay the Detroit Stove Works, and they wouldn't have taken them if we had attempted to negotiate that sort of a transaction ourselves; I think they also got the Denver Gas & Electric Company to take notes for amounts we owed for coke we got and I am sure they wouldn't have taken them if we had done it ourselves (1517-18).

* * * * * * *

A. C. H. Dickey & Company are the people that sells meters. I imagine that was an additional discount we received from them that was credited on their New York books.

Q. That is, the meter transaction was conducted through the New York office in the first instance?

A. Yes, sir.

Q. Did the New York office pay for the meters?

A. No.

Q. What did they do in connection with that transaction?

A. Well, in their purchase of meters for all of their companies they are able to get a lower price on meters (1518-19).

The $600 annual retainer paid to Mr. Chas. A. Frueauff.

Q. Do you feel that the services of Mr. Frueauff's brother, the attorney, is of sufficient value to this company here to justify the expenditure of $600 a year?

A. Yes, sir.

Q. Have you used his services or felt the need of his services in connection with the operation of this plant?

A. Yes, sir (1509).

* * * * * * *

Q. Was there anything that required legal services that Mr. Strode himself wasn't able or capable of performing without consulting a New York lawyer?

A. I don't think that Mr. Strode could not have handled all of that transaction, perhaps, but Mr. Frueauff with his New York connections was able to handle a good many details that Mr. Strode could have handled by going down there (1510).

1813 B. C. ADAMS:

So it appears in a general way that the Lincoln Company profited by its connection with Henry L. Doherty & Company in the following respects:

(1) General engineering advice and supervision on construction and operation.

(2) Financing.

(3) Extending the company's credit.

(4) Securing discounts in the purchase of supplies.

1814 Mr. BEAUMONT:

"I should think with the present condition of affairs here it would be hard to interest capital at all in this enterprise.

Q. You mean under the situation that exists now it would be practically prohibitive?

A. I think so (867).

1815 Mr. B. C. ADAMS:

Q. "But I understand from your testimony the other day that you already had considerable pressure at East Lincoln from the pressure that was furnished at the plant in the city?

A. Yes sir.

Q. That is, the main plant?

A. Yes, sir.

Q. And that this East Lincoln holder was to supplement that?

A. Yes, sir; that is true.

Q. And then that would give you the pressure you already had from your factory or plant,—it would give you the additional pressure that the holder itself would furnish?

A. We are trying to accomplish two things there, and perhaps you did not catch that the other day, and that was this, that — were attempting to not only help East Lincoln but other parts of the city, and when we put in the District holder we relieved the mains leading from our plant into the city of carrying the gas that had prior to the location of the holder been going into East Lincoln, and in that manner improved the service all over the city including South Lincoln, and all other portions that were making demand upon the plant at the time that East Lincoln was making demand.

Q. That was done by a system of valves?

A. No, sir, by simply putting the gas into that district holder after midnight and then holding it there until noon of the next day when our demand became strong, and then furnishing those people in East Lincoln from that holder, and then the amount of gas that was used from the holder of course did not have to come through the mains in the business section of the town, so the relief that was obtained was beneficial to everyone else. I might say that we were delivering, I will presume '25,000' cubic feet of gas per hour to East Lincoln over our peak load, when we put in that holder we just took that '25,000' feet out of the mains down here and improved the pressure in those mains proportionately."

1816 On Going Value—Mr. Lea's Method.

Mr. L. E. WETTLING:

"A. It is a method that has been approved by a great many engineers, and I have hear- it brought forth a large number of times and it is a much more specific method than the one most ordinarily used of lumping the matter either by taking the foregone dividends for the whole period and calculating them and sometimes even com-

pounding interest up to date, or taking the cost of acquiring patronage or consumers or business with a certain limit of cost and applying that to the number of consumers or the number of years. There are a great many methods used, but I think the most approved method, the one while it is theoretical, accords thoroughly with the practice, and that is the plan which Mr. Lea has applied, his schedule of going concern value.

Q. Would you say that it is scientific and ac-urate?

A. As nearly as may be projected; I assume it is not possible to get it absolutely accurate; no more possible than it is to determine in advance the exact life of any particular equipment that rests in estimate about the same way." (4083.)

1817 *On Behalf of Defendant.*

1818 On Going Value.

Mr. E. C. HURD (4269-71):

"From my knowledge of this property here and its being in successful operation and assuming that Mr. Lea's figures of cost are correct, this is an approved method that is used and accepted in estimating going value and what the going worth in a plant is over and above its physical factors of cost and represents what a man might pay for the property in addition to its physical known investment because of being a going concern." (4276.)

1819 On Going Value.

ALTON D. ADAMS (3438):

"Of course, to get down to the details of such a computation we have got to consider the amount of plant necessary to do the business, the fixed charges on that plant in the way of interest and depreciation, the ordinary running expense, * * * cost of material to manufacture the product, and * * * the very important element of time, estimating as best we may * * * on the best experience we can get from what has happened elsewhere as to the time in which a given amount of business may be built up." (3451.)

1820 Overhead Charges.

Mr. E. C. HURD:

"A. Well, I would say if you had every other item accurate and that you had the exact amount of money which you had expended that you would find a difference of at least 4% probably; in other words, you would add 4% to your fundamental items to cover this at least; it might be more than that, it may be less than that, but that would be a reasonable amount." (4099.)

Engineering Cost.

Mr. E. C. HURD:

"A. If it is a question of reproducing this plant there is no question whether taking all things into consideration it is presumed that the promoters would at least seek expert engineering advice to design and make a study of the filed as to the economical location of the producing plant, the trackage facilities, the location of the mains and all those things together with the actual construction design. And of course later supervision of the structural portion of the plant as it was placed, and I should say that a r-asonable amount would run from 5 to 10 %, depending on how earnest the promoters were and how well placed the plant they might have designed, * * * I should say it would be money well spent." (4100-4101.)

1821 Working Capital.

Mr. ALTON D. ADAMS:

Q. "If you were valuing Miller & Paine's store and they had outstanding in bill- receivable $100,000, would you regard that as a part of the investment in that business?
A. No, I wouldn't." (3694.)

1822 Working Capital.

Mr. WETTLING:

Q. "And it is necessary to keep stores for repairs and replacements of plant in advance?
A. Necessarily, and also if you- business is being carried on as is usual and customary for gas companies all over the country, it is also necessary to keep appliances, stoves and supplies of that nature on hand; and you are obliged to keep on hand a considerable number of meters, depending on the ratio of growth, but you must necessarily have some in stock because if a customer comes today and says he is ready to take gas tomorrow, you can't wait to send down East and bring it back or he may forget that he wanted to use gas." (4084.)

1823 ALTON D. ADAMS:

Q. "If you think they haven't time down in Massachusetts to see that those companies make proper reports as to the money expended for repairs and renewals, or expended for expenses, do you think they have time to check over and determine whether the *ti*ems expended for the operation of the plant are properly entered and applied under the classification they assumed to apply them under?
A. Not generally by any means. * * *
Q. It is left very largely to the company to make up its own report about in its own way, except that it must fill out the standard form?

A. The Company does, as a matter of fact, exercise a good deal of discretion in making out its report; there is no doubt about that." (4394-5.)

1824 ALTON D. ADAMS:

Q. What experience, if any, did you ever have in the manufacture of gas such as this company furnished here?

A. Why, I have watched and analyzed." (3529.)

1825 Mr. A. D. ADAMS:

Q. Of course, you feel that the city is your client in this matter?

A. I certainly do.

Q. That you are in the service of the city and you represent the city in this controversy, and that you are giving the city the best service you can?

A. Yes, sir.

Q. And in its interest?

A. Yes, sir.

Q. But you do not feel free to volunteer information or opinions or judgments to this company for its benefit in this controversy?

A. I do not think I am called upon to do that; no, sir.

Q. Especially in view of the fact that you have participated in pursuing a vigorous cross examination of witnesses you would hardly be expected to turn around the next day and render assistance, even though you felt that the facts if fully disclosed would be to the benefit of the company?

A. Well, I haven't considered any facts that I thought were necessary to the company, if that is what you are driving at." (4409.)

1826 Mr. A. D. ADAMS:

Q. Did you make any estimate before Mr. Lea testified and furnished his report?

A. Why, no sir; no direct estimate of my own, I looked at the estimates your men made in the case in the United States Court and did a little thinking about that, but I didn't make an estimate of my own." (3694.)

1827 Mr. A. D. ADAMS:

Q. You *cal*im you have qualified yourself and are competent to testify as to the value of real estate in this city?

A. Not generally over the city; no, sir.

Q. But of this particular real estate—the real estate of the company?

A. Yes, that is my view, sir.

Q. And in qualifying yourself for that service what sources of information did you seek?

A. The information derived from observation and of the district down there in that part of the city, and derived from a number of

sales which were collected and arranged according to my request, sales in the vicinity of the land.

Q. Did you go back of the deeds to learn what the consideration was?

A. I took the consideration as stated on the face of the deeds.

Q. Did you inquire of the people who owned the property that was conveyed; what the real consideration was?

A. No, I simply went on the face of the deeds and on my judgment.

Q. Did you think it desirable to inquire of men who are engaged in the business of buying and selling real estate in the city to inform yourself as to the value of such property?

A. I did not. (3615-3620.)

1828 Mr. PERRY HAHN:

Q. Did you ever have any actual experience on a job of putting up a building?

A. I say I did; yes, a great many.

Q. I don't mean putting them on paper; I mean helping put them up?

A. No, I never helped to put up a building.

1829 Mr. HAHN:

Q. "What buildings have you constructed in this locality?

A. Well, I had the brick work on the Orphanage Home out here for Bishop Bonacum, and the Missouri Pacific depot and the Burlington freight house—oh, I guess I could name seventy-five buildings in town if you want them.

Q. It has been your business to know something of the cost of putting up buildings?

A. Yes, sir.

Q. And the cost of brick and the labor entering into the construction of the buildings?

A. Yes, sir.

Q. What you had to pay for it?

A. Yes, sir.

Q. And your knowledge along that line is not altogether theoretical?

A. No, sir" (3182-3214).

1830 B. C. ADAMS:

Q. "What was the occasion for the erection of the district holder at 33d and X?

A. That was located in East Lincoln for the purpose of giving our customers in that territory service and to aid us in giving the customers in south Lincoln and other parts of the city better service (1468).

A. We made an effort to discover just what we could do at that time to enable us to give the consumers who were getting a low

pressure a better pressure and made a detailed study of the entire system at that time to find out the most economical thing to do as a temporary makeshift.

Q. Where the pressure falls below one inch and is as low as .8 of an inch, as id did at 30th and R streets and such instances as you have noted, what would you say then as to its efficiency?

A. That is a very low pressure for the consumers to use gas under and causes complaint and dissatisfaction and high bills (1469).

Q. When the pressure gets to .8 of an inch it is getting so low that the gas might go out entirely and when the gas pressure comes up again the gas escapes unknown to the inhabitants and death may result (1473)?

A. We adopted the notion of putting in a temporary booster at 9th and M for the purpose of taking the gas from the mains at a pressure of 14.4 inches and forcing that at 9th and M to 18th, and from 18th to R through the main feeder to that northeast district and shutting the valve going south, so it wouldn't get into the south part of the town under high pressure; we reported that to New York; that was our recommendation for a temporary makeshift for the purpose of avoiding the expenditure of $10,000 or $12,000 in improvements at that time, which would give us temporary relief, and that some other scheme would have to be provided later.

A. We were unfortunate in buying our blower and dug a pit at 9th and M and got the blower in there and found that the manufacturers had sent a sieve instead of a blower and we were unable to use it. We had a hard time that winter doing anything for those people in that part of the town. The next year we took the matter up with Doherty & Co. as to what we ought to do to take care of this district; it was then that we finally adopted the district holder system scheme. I remember that I was talking with Mr. Scott, the general manager of the Doherty Operating Company, about the situation and he suggested to me that they had used the district holder in Denver, and when Mr. Bradford and I got to working out the situation in northeast Lincoln we finally recommended a district holder to Mr. Scott and he heartily approved of it.

Q. Was there any other purpose in suggesting the district holder except to relieve the conditions out there?

A. You might get at that this way (1475), Mr. Bradford and I, before we made our recommendation, went carefully over other schemes for getting at the situation. We went at two other schemes —one was to rush a high pressure main out to the northeast district; the other to segregate and connect up a district governor and put in a gate and connect up a district governor and put in a bigger field from the plant or some other part of the system. We abandoned both of these schemes, because they were not practical under the Lincoln conditions, and the city council was constantly agitating the company in regard to high pressure and the delivery to their mains, and threatened us with lawsuits, and the water commissioners reported every month that the pressure exceeded the limit required by the ordinance; and Mr. Bradford and myself thought it absolutely

impracticable and perhaps impossible under our situation to talk about any other scheme than a district holder for meeting that situation.

Q. Now, what problem had you encountered in selecting a particular location?

1831 Mr. B. C. ADAMS:

A. That problem resolved itself into this: What pressure could we deliver from our plant and how far could we carry it into northeast Lincoln with what I would call a low pressure system (1476)? I regard a low pressure system as any that delivers gas with a centrifugal blower. We wanted to stay with a low pressure system that you could throw the gas into northeast Lincoln and give service at the farthest point. When you get into a positive blower you get into high pressure. Then we thought the safest and best thing for us to do was to get a district holder as far out as we could to bring the gas back; we figured that Lincoln would eventually grow east of 33d and south and that the district would grow up and around from 27th to 33d and Holdrege and further north and west, and if we could get our holder around 33d and the Missouri Pacific or somewhere along there we would have the holder property properly located. We figured that the ordinary pressure of the holder would bring the gas back into Lincoln and overlap with the gas that was coming from the plant holder.

Q. The pressure from the plant holder and the district holder would meet at a point where you could equalize the pressure midway between them (1477)?

A. Yes, sir, and also just put the holders far enough out so we could get into it during the hours of light load. We might put the holder out so far that the gas would not feed into it during the hours of light load on account of the drop in pressure.

Q. And in the actual experience have you found that the particular location met the problems that faced you?

A. Yes, absolutely.

Q. Do you now regard that the location of that holder was unavoidable in view of the conditions existing in Lincoln at the time?

A. Yes, sir.

Q. Was it put there to meet those conditions?

A. Yes, sir.

Q. Did you encounter any difficulty in carrying out that plan from the municipality and property owners?

A. Yes, sir (1477).

Q. Detail what they were; explain in a general way what they were and what the results of your negotiations were and how you came to buy all that property in blocks 2 and 7?

A. After our estimates were all made for the erection of that holder we discovered that the city council was going to offer objection to the erection without a permit. We appeared before the council and asked a permit, even though we were advised that it might not be necessary, and the council appointed a committee to take the

matter up with the company and we had our price on our holder with a steel tank, and the council committee insisted on our digging a pit at a very considerable more expense than the steel tank. It was also intimated to me personally by the committee that unless we were able to satisfy Mr. Hill, who owned a house and some lots adjacent to the holder that perhaps we might have some difficulty in getting a permit. Mr. Hill was the janitor at that time at the High School and rather than have any difficulty over that matter, we paid Mr. Hill his price for the property and the permit was later granted.

Q. Did you regard that expense as reasonably necessary to retain your right to locate there?

A. Yes, sir; we had to do it under the conditions (1478).

Q. Did you get the permit until after you agreed to that?

A. No.

Q. After you had purchased the property did you get the permit?

A. Yes, sir.

1832 Mr. B. C. ADAMS:

Q. In your opinion, as I understand you, you regard his position and his claim that his property would be damaged would be sufficiently influential with the council so they wouldn't grant the permit until you satisfied his damage satisfactorily to him?

A. Yes, sir. (1479)."

Mr. WETTING:

Q. Were you acquainted with the conditions which led to the construction and putting in service the district holder?

A. Yes, I was in a general way, from conference with the manager and talks generally that preceded the determination to build that holder. There had been a great deal of complaint, well founded as acknowledged by the company, of a lack of pressure pretty much all over town, but more particularly in the northeast part of the town at certain periods of the day; it was almost impossible in 1904 and 1905, as I remember, to get a pressure on the gas stoves. I was living on the east side myself and happen to know personally of the conditions, and by reason of investigating it on the complaint of my wife; the complaint was pretty general and the question arose as to how to correct the trouble. While the complaint was not so definite nor strong from the south and southeast end of the town, yet there was some complaint in that direction also, and it was determined to relieve it. Relief was obtained by tying in the mains so as to get a better circulation, but it was determined that it was necessary to do one of two things, either to build much heavier mains in all directions from the gas plant or to build a separate holder on the East side, which would take care of the northeast—the development of the northeast territory independently and at the same time relieve the plant from the demand on it for that section to the southeast section and in that way the southeast as well as the northeast section would be relieved; and the general opinion was

that in the long run it would be cheaper and less expensive operation to build the holder than to try to correct the main situation; that was assuming, too, that provision would in the future again have to be made for still further enlargement or extension by reason of the anticipated growth." (4088-89).

1833 Mr. CAMPEN:

Q. In the matter of granting a permit for the location of a main in the street, as I understand you, that was within the duties of your office?

A. Yes; well, as to the position in the street, the position in the street is governed by an ordinance.

Q. Was there any rule of your department or any ordinance of the city the fixed the location of the gas mains in the street?

A. There was, and there is today, if it hasn't been repealed.

Q. Where is that main required to be located with reference to the curb line?

A. They located the gas main one-third of the width of the street from the south and west line, as I remember it, and the water works one-third of the distance from the north and east line.

Q. So that the gas mains were given one side of the street and the water mains the other?

A. Yes, sir.

Q. And in both instances the mains were required to be located in the street?

A. Yes, sir. (1297).

1834 Mr. CAMPEN:

Q. In other words, you have not assumed in mains now laid under paving could be duplicated by laying the mains parallel thereto in the park way in the unpaved part of the street?

A. We couldn't do it without changing the law.

Q. You haven't assumed that it would be done then in your estimates?

A. No sir, it couldn't be done; it is impossible (1316).

Q. Now what price per square yard have you figured here in Lincoln for laying the paving that may have to be removed or a duplication of this, what price for each kind of paving per square yard?

A. The specified price for brick on concrete at $1.25 per square yard. I took the average—that is, knowing the conditions here in Lincoln up to say 1906, and knowing that the concrete runs in repaved streets from 5 to 12 and in some places 14 inches, I have taken $1.90 as the average. * * *

A. I think on an 18 inch ditch you should have 26 inches wide of concrete. * * * (1318-20).

1835 Mr. A. D. ADAMS:

"Q. Did you make any inquiry at the gas office or of the foreman in charge of the work of putting in gas mains to ascertain from

him whether it was an 18 inch trench or a 22 inch or a 24 inch trench?

A. No, but I measured at least one gas trench, I am not sure whether I talked with your superintendent of construction or not, if I did I have forgotten what he said.

Q. He would be the party who knew from actual experience?

A. I was too when I laid the rule across the trench.

Q. Where was the trench and when was it?

A. One of the early day- I was here.

Q. Now what year was it, I want to know and where was it?

A. You can't find out because the witness don't know.

Q. You don't know when or where it was?

A. No, except that it was in the early part of the time of my being here, I can't tell the date or where.

Q. Is there anything in the gas company's record that shows anything about the width of the trenches?

A. I haven't found it. (3737-3738).

Q. So you went out and measured one ditch and found the width and depth; did it have any pipe in it?

A. Yes, 2 inch pipe."

1836 Mr. A. D. ADAMS:

Q. "How many cubic yards did you figure one man would dig?

A. I didn't figure that out.

Q. Would it be possible for you to estimate how much a man could move in a day?

A. I could if you didn't work me all the time day and night.

Q. Have you any information now on that.

A. No, sir. (3671).

Q. Is there any difference in the cost of removing dirt from trenches in Massachusetts and the cost here?

A. In some places in Massachusetts, yes; other places, no; there is a different rate in Massachusetts, and we do differently there.

Q. You have got to know the local conditions, the kind of soil that must be moved and the conditions under which it is to be moved before you can form an intelligent estimate of the cost?

A. Yes, before you can form an accurate idea. (3660-61).

Q. Did you inquire of any of the men living in this vicinity as to the cost of removing dirt from trenches or basements before you made your estimate?

A. No, I preferred to go to the figures and not go around and ask people on the streets.

Q. You didn't seek that source of information?

A. No, I didn't think it reliable. (3668)."

1837 Mr. A. D. ADAMS:

Q. Was the price of pipe per ton in 1902 more than it was in 1912?

A. I can't say without looking up my records.

Q. Well, look at your records, you have them here, the price to this company here per ton?

A. Well, I have one purchase of pipe in 1902, that wouldn't necessarily represent the whole year, but taking that one purchase in June, it shows the price of $33.60 per ton.

Q. But for that pipe in your estmate you allowed $28.00 per ton for that same pipe?

A. Yes, I allowed $28.00.

Q. Now, in 1903, as shown by the records of the company, what did the company pay for pipe per ton?

A. I have just one record given for 1903, on March 26, they bought 4 inch pipe at $36.60; that is all I got for the year.

Q. And for that pipe you allowed the company $28.00 a ton for the purchase of it?

A. Yes, sir.

Q. Notwithstanding the fact that you knew they paid $36.60 per ton for that pipe?

A. Oh, yes, back in 1903; I am not valuing the property as of 1903.

Q. What did the company pay for pipe in 1905?

A. $36.60 on the one purchase that I have.

Q. But you allow $28.00 for the purchase of that pipe as of January 1, 1913?

A. As of January 1, 1913, yes.

Q. In 1906 what did the company pay?

A. I have three purchases showing $32.35 per ton of a small amount.

Q. And as against that you allow $26.00, don't you?

A. Yes, I think that way my price.

Q. That would be for the purchase of pipe January 1, 1913, to take the place of this identical pipe that the Company paid $32.35 per ton for in 1906?

A. I am estimating the cost of reproducing such pipe January 1, 1913.

Q. If you are estimating the cost of reproducing it as of January 1, 1913, why don't you take the bills of the company for the purchase of pipe under date of January 17, 1913?

A. In the first place I have no knowledge of the time I ever saw that bill and in the second place I should not consider that one transaction a criterion to go by in the purchase of enough pipe to replace this great gas system.

Q. You find in that one transaction a purchase of more than $1,000.00 worth of pipe under date of January 17, 1913, don't you?

A. The two accounts do figure just over $1,000.00.

Q. Do you think the purchase of $1,000.00 worth of pipe under date of January 17, 1913, wouldn't be a fair indication to the Court what pipe would cost?

A. Absolutely not. When bought in quantities necessary to reproduce this system.

Q. Well, Mr. Lea estimated the value of 4 inch pipe at $32.00 and this bill shows that 4 inch pipe cost $31.55 on January 17, 1913, doesn't it?

A. Yes, I just testified to that a moment ago." (3760.)

1838 Mr. A. D. ADAMS:

"Q. You have indiacted that you thought the commission knew of this practice that you referred to as existing in Massachusetts?

A. I know they know; it is brought up repeatedly in the hearing there, there is no 'think' about it, it is just as well known as any practice could be, and the commission can't help it.

Q. The- can't help it?

A. No, sir.

Q. They cannot change or direct that item to be entered as it should be entered in the returns to the commission?

A. The trouble would be that it would require an army of accountants and engineers to chase up the fifty companies to see what they entered as repairs or as renewals was in fact an extension; it is the practical enforcement of a regulation of that kind, on a matter involving as much judgment, engineering and skilled judgment as that does, that makes it impossible and impracticable for the commission to enforce a rule on that matter (4393).

Q. Now if you think they haven't the time down there in Massachusetts to see that those companies make a proper report as to whether the money expended is for repairs and renewals or expended for extensions, do you think they have sufficient time to check over and determine whether the items expended for operation of the plant are properly entered and applied?

A. * * * Not generally by any means. * * * (4394.)

Q. Now you referred to the matter of repairs and renewals in Massachusetts and said that some of the companies in Massachusetts were in the habit of covering up their earnings by entering as renewals or repairs what were in fact extensions, I think you said that?

A. Well, that maybe a fair summary of what I said.

Q. Now do you think the Commission in Massachusetts knows that that is being done?

A. Oh, it is notorious." (4391-4392.)

1839 Mr. A. D. ADAMS:

Q. Now take the items of salaries, office, distribution and general expenses for the years 1907 to 1912 inclusive; now, for the year 1907 you have offered a tabulation showing that the amount of salaries, etc., should have been $24,214.41?

A. Yes.

Q. Now will you refer to the records of the company that we have here and show the items going to make up the amount entered in the record covering those items for expense for 1907?

A. Reading meters $952.10; collection, clerical salaries $5,355.20, etc., etc.

Q. Now, that is the total as shown by the records, $36,912.39?

A. Yes, for those various items mentioned.

Q. And as against that amount you have allowed for those items the sum of $24,214.41?

A. I have allowed $24,214.41 in 1907 for the estimate of salaries, office, distribution and general expenses.

Q. So that the difference, you eliminated from those items $12,698.48?

A. I didn't subtract the difference, but it is the difference between them. (3932.)

Q. Now, refer to the items as shown in the records of the company and state what particular items in that exhibit of the records of the company you reduced, eliminated or in any way changed?

A. As previously testified I am not able to make the reduction item by item from my study so far of these accounts—I haven't carried the study of the actual labor you charged under those items to a sufficient extent as to be able to do that. Of course, the item of promoting new business of $13,394.04 it looks to me would suffer a large reduction, but I am not going to testify what reduction I would make without further study, because I don't know enough about what you charged under that.

Q. Take just the single item of reading meters—do you think that item of $952.10 is excessive?

A. No, I don't think it is excessive.

Q. Now take the collections, clerical salaries—do you know about how many clerks they have in the service?

A. I don't know the number.

Q. Did you ever know?

A. I don't remember.

Q. Would the number of clerks necessary to transact the business have anything to do with that item? (3933.)

A. To transact the business of selling gas and get the money would have a good deal to do with it, but the number of clerks you have to sell appliances wouldn't have anything to do with it.

Q. Have you any idea whether that item of over $5,000 is excessive?

A. No, I haven't any precise idea, because I don't know what services were performed for that $5,353.20 what you have got charged and how much should be charged some *under* item. (3934.)

Q. Collections, office expense $770.14. Did you notice that?

A. It may be entirely unnecessary in view of the $5,000.00 that just precedes it.

Q. But you don't know whether it is or not?

A. No.

Q. And you haven't any opinion on it at all?

A. No, sir; that is all this answer amounts to.

Q. The item of executive salaries of $3,215.52, you wouldn't be able to offer any criticism upon that item or approve it because you wouldn't know what would be included in that item?

A. I wouldn't know what the value was the company received for that $3,000, if any. (3942.) * * *

1840 Q. So you prefer to criticise the whole account rather than put your finger down on any one thing?

A. On that section of the account, general office, yes," (3952). * * *

Q. Now, for the years 1908, 9, 10, and 11, you pursued the same course as in 1907 in the classification of the account of this company?

A. I pursued the indicated classification right through. (3961.)

Q. And your criticism with reference to those accounts of those years would be the same as in 1907?

A. The same in kind.

Q. And your knowledge about the particular items of each of those accounts for those years would be the same in kind as the accounts of 1907?

A. Yes, sir.

Q. Now take the accounts of salaries, office, distribution and general expenses for 1912, you have eliminated something like $44,818.67 for those accounts, haven't you?

A. I don't remember the amount, my estimate differs from your statement. (3964.) * * *

Q. Do you think that any part or portion of the 250 million feet we are selling now is due to the money expended in the new business department?

A. I would have to make the same answer, I think it is an evidence of it, I never suggested that I didn't think so.

Q. You think it was?

A. I think it was a factor, yes.

Q. Do you know what proportion of that increase would be attributed to the money spent by this company in its new business department?

A. No, I don't.

Q. Is there any way you can estimate the amount of that increase that you would attribute to the money spent in the new business department?

A. I could arrive at a rough estimate, but I haven't. (3971.)

Q. If you go back to the time we had 80 millions of gas would it increase the cost of gas per thousand if you had to base your computation on the sale of 80 millions?

A. Yes sir."

1841 Mr. H. S. WIGGINS:

"Q. Now you have had access to the books, records and vouchers of the gas company practically since last September, have you not?

A. I did some work since last October, I think for about ten days.

Q. And at intervals since then you have applied to the company for access to its books and records?

A. Yes, sir.

Q. And you have been given fair access consistent with the convenience of the company in administering its own business?

A. Yes, sir.

Q. Now, from your examination of the books would you say that the methods of accounting of the company seem to be fairly accurate and conscientious?

A. Yes sir.

Q. So far as your examination shows the company has attempted at least to keep an honest and fair record of its business transactions?

A. So far as my examination goes, I would say so.

Q. And after checking those out you would feel justified in relying upon the general summary, exhibiting the business in summarized form?

A. Yes I think so." (Pr. R. 337-338.)

Q. And you found that the books of the company were accurate and disclosed that they were honestly kept, didn't you?

A. Well, I couldn't say that I found anything to the contrary.

Q. You found an honest effort made on the part of the company to keep a correct record of the cost and expenditures of the company?

A. Well, yes." * * * (2044.)

1842 Mr. A. D. ADAMS:

"Q. Is there any standard recognized by engineers as to the normal life of equipment such as is found here?

A. I haven't been able to discover any uniformity in that regard.

Q. The engineers don't agree?

A. I think that is true.

Q. Some engineers don't even agree with themselves?

A. That might be true, a conscientious engineer sometimes changes his opinion.

Q. And the oftener he changes his opinion the greater the indication that he is conscientious?

A. I should want to know all the facts in regard to that.

Q. Suppose a gentleman who is an expert testified in Racine, Wisconsin, and gave the life of equipment materially different from what he had given it here, and also testified in Cedar Rapids, Iowa, and gave the life of the same equipment as this different from the life he gave for this equipment, would you assume that to be an indication of conscientiousness?

A. It might or might not be; I should have to know more of the facts." (3712.)

1843 On Going Value.

Mr. HURD:

"Q. Assuming that the rate were to be reduced to $1.00, would it make any difference in the computation, that is, in the net results obtained as to the value of the item 'going concern'?

A. Well, I should say it might, it would be introducing a new factor into the equation; yes, sir.

Q. That the rate of return is an essential element in this computation, there is no question?

A. Yes, sir, it is the vital element.

Q. So that if you take the rate in force at the present time and the rate which is sought to be enforced by the City, and make a computation with the two different rates you would arrive at two different results?

A. Most assuredly, because you would have different factors entering into the tabulation. That might be exemplified if you had a losing concern, at present it was losing money, you would have a

very different result in the going value than you would have if it was a profitable one, or a concern that was running on a profitable basis.

Q. So that in that case you would get a different value for 'going concern'?

A. Yes, sir.

Q. That is, in each instance?

A. Yes, sir."

1844 On Weights of Cast Iron Pipe.

Mr. GEORGE L. CAMPEN:

"Q. Why did you select those weights?

A. I took them from the United States Cast Iron Foundry Company's standard, their latest catalogue gotten out about the 1st of December.

Q. Those are the weights of the United States Cast Iron Pipe Company, given in their regular catalogue for regular standard cast pipe?

A. That is the one I saw.

Q. What reason have you to think, if any, that this weight of pipe shown in the listed catalogue of the United States Company are weights that actually exist in the streets of Lincoln for carrying gas?

A. Oh, I think they are about the average; the fact is, the pipe company used to skin up all companies by overmarked weights, unless you weighed the pipe you had to pay for it. On a 300 or 400 ton order we saved 19 tons by reweighing it. In the old days they used to sell it and marked it up 5 or 10 per cent above the costs; it would make no difference what they marked on there, unless you weighed the pipe."

"Q. You say you were asked to take the standard weight at this time of pipe?

A. In getting the reproduction cost, how would I take it any other way?

Q. I say you were asked to do that?

A. Yes, sir.

Q. And that is the basis you went on without regard to the weight of the pipe in the ground?

A. I have no means of knowing that they are not practically the same; there has been no difference between them in the last few years practically (p. 1329).

Q. You did't figure that on the reproduction of the actual pipe in the ground at all, but simply to lay the present weight of standard pipe of certain lengths?

A. Yes, sir"( p. 1331).

1845 On Meter Connections.

Mr. BAXTER:

"Q. What style of meter connections are you using now on small meters?
A. Rigid connections.
Q. Rigid pipe connections?
A. Yes, sir.
Q. Has that been the rule all of the time since you have been in charge of that work?
A. I think it has.
Q. Well, you people have been about a great deal with meters. Take the meters installed prior to the time you had charge of the work—what was the general style of connections used?
A. Well, I am not exactly sure when the solid connections were started, but before that time all connections were lead.
Q. Do you remember anything about the ordinary size and length of those lead connections as you used them here?
A. Well, they run about fifteen or eighteen inches. I am not sure exactly just how long they were.
Q. For a five-light meter, say?
A. That is about it.
Q. As long as that for a five light meter?
A. Yes sir."

1846 On Coal Gas Benches.

Mr. HONEYWELL:

(P. 151, Pr. R.)
"I cannot tell you how many time- those arches have been rebuilt, or how many times those benches were rebuilt, but we built the arches and refilled them last year."

1847 Mr. PHILLIPS:

(P. 1700.)
"Q. Then what is the system of keeping up the plant, the replacing of old apparatus with new, taking out a section of main that has become defective and cannot be used and putting in a new section, and taking out an old water gas set and putting in a new, the expense has either been added to your construction account or entered in your operating expense under the items of 'repairs and maintenance'?
A. Yes, sir, it has to go into one of the two places.
Q. And sometimes, as you have said, part of the item is entered in each account?
A. Yes, sir.
Q. And that is the way the company has kept up its plant and kept an efficient and working plant in times past?
A. Yes, sir.

Q. And what is the present condition of the plant, is it in good condition or has it been allowed to run down and deteriorate?

A. As far as I know it is in good condition. I am not an engineer and do not know much about that end of it.

Q. But such condition as we now find it in, and you say it is in good condition, has been maintained in the manner you have outlined there by adding new articles of construction and entering it in your construction account and adding it to the assets or adding it into current expense?

A. Yes, sir.

Q. Then in your opinion has the amount and sums expended by the company since this present management took charge of it been sufficient to maintain the value of the plant and keep the investment unimpaired?

A. It has.

Q. That is the method employed by this company to take care of depreciation and keep the plant from depreciating and running down?

A. Yes, sir, we call it that."

1848 On Office Rent.

Mr. B. C. ADAMS:

(P. 1485.)

"Q. Mr. Adams, the item of office furniture is carried on your books and inventory at what valuation?

A. $12,391.21.

Q. And the same item is carried on the books at a valuation of what in 1901?

A. Well, it wouldn't be the same item. The same heading was carried at $240.00.

Q. In other words, you had your office furniture valued November 30, 1901, and entered on your books at a valuation of $240.00?

A. Yes, sir.

Q. Whereas, you have it now $12,391.21?

A. Yes, sir."

1849 On Loss on Appliances.

B. C. ADAMS:

(P. 1493.)

"Q. Isn't it a fact that your annual report ending December 31, 1912, shows a total loss on gas appliances along of $7,301.93, or thereabouts?

A. I don't remember; I could tell by looking at the report.

Q. What do you recognize from this report? (Handing paper to witness.)

A. Referring to the copy of the report handed to me, are the totals for advertising and newspaper space, exhibition, salaries, wages

and miscellaneous expenses, and then adding the cost of appliances sold to the appliance expense and from that getting the total cost of the appliances, I find for the year represented in this sheet $7,301.93.

Q. And that is a loss that is reflected in the operating expenses of this company for that year, is it not?

A. Yes, sir."

1850 Professor BEMIS:

(P. 362 Pr. R.)

"I have studies the effect in scores of companies, that is, I have studies the effect in every company in Massachusetts in the last twenty years where I have had an opportunity in their files to study it, the files of the gas commission. * * *

Ordinarily the year after the reduction made the profits are found not to have fallen, not over one-half of what one would have expected from the basis of the previous year's business. That is, suppose a reduction were made in 1908, the net earnings of 1909 have not fallen more than one-half as much as you would expect from the conditions of business in 1907, because there is such an increase in output from the reduction in price, usually without a corresponding increase of expense. * * *

I found the general result was that a decrease of 20 cents would mean a decrease in net earnings only from 10 to 15 cents per thousand feet in the following year.

(P. 390.)

What I have observed was that a decline of 20 cents in price would generally mean a decline in profits of not over 15 cents, owing to the large increase in business; and the second year it would be a decline of not over 10 cents usually. * * * It is not a precise mathematical rule; it would depend upon the energy of the company in following it up."

1851 Franchise Value.

Mr. H. I. LEA (p. 221):

"There isn't any franchise value. Whether the company has a franchise or not there is no value to the franchise, that should be included in determining the value of the property as a whole, unless the Company has actually paid a specific sum for a franchise, and I know of no such payment having been made here for a franchise."

1852 In the District Court of the United States for the District of Nebraska, Lincoln Division.

THE LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Plaintiff,

vs.

THE CITY OF LINCOLN, NEBRASKA, et al., Defendants.

*Condensed Statement of the Evidence.*

Appearances:

For Plaintiff: E. C. Strode, Esq., and H. F. Rose, Esq.

For Defendants: C. Petrus Peterson, Esq., City Attorney, W. M. Morning, Esq., Special Counsel.

It is stipulated and agreed between the parties hereto that the foregoing condensed statement of the evidence with all exhibits material to the issues in the case, including all objections to the evidence and rulings thereon is a true, complete and properly prepared condensed statement of such evidence including all such exhibits, objections and rulings, and it is agreed that the same may be settled and allowed by the court or the judge thereof as a true, complete and properly prepared condensed statement of all of the evidence and all of the exhibits material to the issues in the case and all of the objections and rulings thereon filed with the clerk of the court in the above entitled cause as a part of the record in this case and in full compliance with rule 75 of equity rules of the court.

It is further stipulated and agreed that the original exhibits are to be used on appeal and are to be made a part of the record, so that copies need not be made thereof on such appeal and that in the preparation of the printed record by the clerk of the court such exhibits are to be used in all respects the same as copies thereof, and that an order of the court may be entered herein in accordance therewith by and with the consent of the parties hereto.

Dated this 11th day of August, 1916.

E. C. STRODE,
*Attorneys for Plaintiff.*
C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Defendants.*

1853 I hereby certify that the statement of the evidence hereto attached, consisting of one volume, and the exhibits material to the issues, consisting of volumes 1, 2, and 3, in each of which a copy of this certificate is attached and likewise signed and allowed and including certain testimony reproduced in the exact words of the witnesses, desired by the parties and ordered to be so set out by the

court; the objections to the evidence and the rulings of the court thereon as set out herein, and including the stipulations of counsel, is a true, complete and properly prepared condensed statement of such evidence, stipulations, exhibits, and objections and rulings of the court thereon, properly prepared and submitted, and that the same is hereby signed, settled and allowed, and ordered made a part of the record in the above entitled case under the provisions of Rule 75 of said court, as a true, complete and properly prepared condensed statement of all the evidence upon said trial.

Witness my hand this 12th day of August, 1916.

PAGE MORRIS, *Judge.*

1 In the District Court of the United States District of Nebraska, Lincoln Division.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Plaintiff,

vs.

THE CITY OF LINCOLN et al., Defendants.

*Stipulation.*

It is hereby stipulated and agreed that the clerk of the court in the preparation of the printed record on appeal of this case shall omit therefrom two exhibits 11 referring to meters, found in this volume, for the reason that the matters contained in such exhibits are fully covered by the testimony of witnesses or other exhibits, or are deemed by the parties hereto immaterial under the issues on this appeal.

E. C. STRODE,
*Attorneys for Plaintiffs.*
W. M. MORNING,
ANDREW PETERSON,
*Attorneys for Defendants.*

2 This is one of seven volumes of evidence taken before me at the trial of the case of Lincoln Gas and Electric Light Company vs. City of Lincoln, et al., pending in the United States District Court, for the District of Nebraska, Lincoln Division. These volumes, together with the original printed record containing the evidence given on the first trial and certified to the Supreme Court of the United States, constitute the whole of the evidence submitted to me, and upon which my report heretofore filed in this case is based.

JOHN J. SULLIVAN,
*Special Master.*

3 *Certificate.*

I hereby certify that the statement of the evidence hereto attached, consisting of one volume, and the exhibits material to the issues, consisting of volumes 1, 2 and 3, in each of which a copy of this certificate is attached and likewise signed and allowed, and including certain testimony reproduced in the exact words of the witnesses, desired by the parties and ordered to be so set out by the court; the objections to the evidence and the rulings of the court thereon as set out herein, and including the stipulations of counsel, is a true, complete and properly prepared condensed statement of such evidence, stipulations, exhibits, and objections and rulings of the court thereon, properly prepared and submitted, and that the same is hereby signed, settled and allowed, and ordered made a part of the record in the above entitled case under the provisions of Rule 75 of said court, as a true, complete and properly prepared condensed statement of all the evidence upon said trial.

Witness my hand this 12th day of August, 1916.

PAGE MORRIS, *Judge.*

3½ *Index to Henry I. Lea's Exhibits.*

| Exhibit #. | Description. |
|---|---|
| 7. | H. I. Lea's valuation. |
| 11. | Meter Inventory. |
| 103. | Proposed Occupation tax. |
| 104. | Corrected net earnings affected by occupation tax. |
| 105. | Corrected net earnings affected by occupation tax. |
| 106. | Corrected gross earnings 1st 6 mos. 1913. |
| 107. | Corrected gross earnings 1st 6 mos. 1913. |
| 108. | Corrected net earning 1st 6 mos. 1913. |
| 425. | H. I. Lea's comparison of valuation data, operating statistics, etc. |

4 Henry I. Lea, Consulting Gas Engineer.

Member American Gas Institute, American Society of Mechanical Engineers.

People's Gas Building.

CHICAGO, March 13th, 1913.

Lincoln Gas & Electric Light Co., Lincoln, Nebraska.

GENTLEMEN: In accord with your instructions, I have made an examination of the property and business of your Gas Department and of the operating expenses and income of that Department, for the purpose of determining the present value of such property and business.

I am now able to report that, in my judgment, the present costs of reproduction and the present value of the property and business of your Gas Department, are fairly shown in the table following:

| (As of Jan. 1st, 1913.) | Reproduction costs. | Present value. |
|---|---|---|
| Organization & Legal Expense..... | $33,000.00 | $33,000.00 |
| Working Capital ..... | 72,038.00 | 72,038.00 |
| Real Estate ..... | 21,700.00 | 21,700.00 |
| Buildings ..... | 41,312.00 | 30,967.00 |
| Works Equipment ..... | 253,298.00 | 196,759.00 |
| Distribution System ..... | 659,727.00 | 553,650.00 |
| Going Value ..... | 225,000.00 | 225,000.00 |
| Total..... | $1,306,075.00 | $1,133,114.00 |

In the form of Exhibits attached hereto, as per Index following, you will find a large amount of the data and some of the calculations through which I have arrived at the above conclusions.

Respectfully submitted,

HENRY I. LEA.

H. I. L.—M. S.

4½

*Index.*

| | Exhibit. |
|---|---|
| Organization & Legal Expense..... | A |
| Working Capital ..... | B |
| Engineering, etc. ..... | C |
| Total Reproduction Costs, etc. (Physical Equipment)..... | D |
| Detail Reproduction Costs, etc. ( " " )..... | E |
| Total Net Construction Costs ( " " )..... | F |
| Detail Net Construction Costs: | |
| Real estate ..... | G |
| Buildings ..... | H |
| Works Equipment ..... | I |
| Distribution System ..... | J |
| Going Value Calculation..... | K |
| Operating Data for Ten Years Preceding Date of this Examination ..... | L |
| Analysis of Present Gas Consumption..... | M |
| Gas Consumption Outside of Lincoln..... | N |
| Curves Showing Growth of Distribution System & of Gas Sales | O |
| Statement of Earnings for Past Six Years as Corrected for Sales Outside of Lincoln, excessive Residuals Credit & Depreciation ..... | P |
| Composite Age of Mains, Services & Meters..... | Q |

EXHIBIT A.

*Organization and Legal Expenses.*

| | |
|---|---|
| Preliminary investigation | $3,000.00 |
| Preparing articles of incorporation, making & certifying abstracts, drawing & examining contracts, and general retaining fee | 7,500.00 |
| Salaries of manager & clerical force during construction (2 years) | 18,000.00 |
| Incidental & travelling expenses (2 years) | 2,500.00 |
| Rent & stationery (2 years) | 2,000.00 |
| | $33,000.00 |

EXHIBIT B.

*Working Capital.*

| | | |
|---|---|---|
| 1. Material & Supplies | | $16,334.42 |
| 2. Accounts Receivable | | 35,431.75 |
| 3. Advance Ins. & Exp. Paid in Advance | | 8,324.07 |
| 4. Cash on Hand | | 2,105.84 |
| 5. Cash in Banks | | 56,920.39 |
| | | $119,116.47 |
| 6. Bills Payable | $32,000.00 | |
| 7. Accounts Payable | 4,588.18 | |
| 8. Unpaid Wages & Salaries | 2,903.71 | |
| 9. Coupons & Int. Accrued | 3,944.26 | |
| 10. Customers Deposits | 2,533.83 | |
| 11. Main Extension Deposits | 1,108.86 | |
| | $47,078.84 | |
| | | 47,078.84 |
| | | $72,037.63 |

(For details, see following pages.)

1. *Gas Materials & Supplies:*

| | |
|---|---|
| @ $.03765 Oil for Enricher | $447.39 |
| @ $6.76 (Stock) Coke | 1,636.55 |
| Tar | 194.63 |
| Purifying Material | 267.97 |
| Main Stock | 1,451.83 |
| Service Stock | 546.47 |
| Fittings Stock | 584.65 |

| | |
|---|---|
| Appliance Stock | 5,627.22 |
| Miscellaneous Stock | 12.62 |
| Gas Stock | 227.74 |
| W. G. Repair Stock | 200.73 |
| Pipe & Fixture Stock | 1,248.75 |
| Office Stock (80%) | 575.87 |
| Loan Account Stock | 3,312.00 |
| Total | $16,334.42 |

2. *Accounts Receivable (Gas)*:

| | | |
|---|---|---|
| Gas Bills Current Month | | $18,059.32 |
| Gas Arrears | | 3,822.68 |
| Petty Ledger Accts. (16,666.63—80%) | | 13,333.60 |

General Ledger Accounts:

| | | |
|---|---|---|
| H. C. Porter | $40.00 | |
| Standard Oil Co. | 32.04 | |
| Union Coal Co. | 76.20 | |
| Gas Oil Co. | 115.57 | |
| Henry R. Worthington | 4.75 | |
| Cusack Co. | 2.00 | |
| | $270.56—80% | 216.45 |
| | | $35,431.75 |

3. *Expenses Paid in Advance:*

| | |
|---|---|
| Work Coll. Ins. Gas | $225.00 |
| Emp. Lia. Ins. Gas | 115.20 |
| Insurance Accrued—2/3rds | 416.33 |
| Surety Bonds 80% | 30.25 |
| Special Inc'd Exp. 80% | 507.95 |
| Special Legal Exp. 80% | 216.94 |
| Hay Account 80% | 144.02 |
| Feed Account 80% | 78.92 |
| Bench Repairs 100% | 4,254.22 |
| Traveling Expense 80% | 276.00 |
| Dollar Gas Agreement 100% | 1,559.24 |
| Special Appraisement Exp. 100% | 500.00 |
| | $8,324.07 |

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4. *Cash on Hand—Dec. 31st, 1912*:

| | |
|---|---|
| Total Amount | $3,158.76 |
| 2/3 to Gas | 2,105.84 |

5. *Cash in Banks—Dec. 31st, 1912:*

| | |
|---|---|
| Henry L. Doherty & Co. | $27,445.89 |
| First National Bank | 10,311.90 |
| Central National Bank | 20,197.86 |
| Nebraska State Bank | 6,985.14 |
| City National Bank | 6,168.40 |
| Emerson McMillin | 40.30 |
| Total Amount | $71,150.49 |
| 80% to Gas | 56,920.39 |

6. *Bills Payable:*

| | |
|---|---|
| Total Amount | $40,000.00 |
| 80% to Gas | 32,000.00 |

7. *Accounts Payable:*

| | |
|---|---|
| Chapin Bros.—Rent | 448.39 |
| Fruehauff—Salary | 160.00 |
| Gas Oil Co.—Oil | 454.64 |
| L. G. & E. Lt. Co.—Contg. C. D. etc | 500.00 |
| Omaha Gas Co.—Tar | 228.00 |
| Pickands-Brown Co.—coke | 976.87 |
| Stryker Brown System—Adv. | 25.00 |
| E. C. Strode—Salary | 200.00 |
| Western Newspaper Union—Adv. | 120.00 |
| Lincoln Water Works—Water | 631.35 |
| All Others—50% to Gas | 843.93 |
| | $4,588.18 |

8. *Unpaid Wages & Salaries:*

| | |
|---|---|
| Total | $4,511.99 |
| Amount chargeable to Gas | 2,903.11 |

9. *Coupons & Interest Accrued:*

| | |
|---|---|
| Total amount for year | $70,996.66 |
| Total for one month | 5,916.39 |
| 2/3 to Gas | 3,944.26 |

10. *Customers' Deposits:*

| | |
|---|---|
| Total amount | $3,167.29 |
| 80% to Gas | 2,533.83 |

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11. *Line & Main Extension:*

| | |
|---|---|
| Total Amount | $1,386.07 |
| 80% to Gas main | 1,108.86 |

## EXHIBIT C.

*Engineering, etc.*

| | |
|---|---|
| Engineering & Supervision | 6% |
| Casualty Liability | 2% |
| Taxes & Loss of Interest During Construction | 4% |
| Ommissions & Contingencies | 4% |
| | 16% |

(The above percentage (16) has been added to "Net Construction Costs" of all physical equipment except Real Estate and items going into working Capital.)

## EXHIBIT D.

*Reproduction Totals.*

| | Total reproduction cost. | Present per cent condition. | Present value. | Depreciation annuity. Straight line. | Depreciation annuity. Sinking fund. |
|---|---|---|---|---|---|
| Real estate | $21,700.00 | 100. | $21,700.00 | ..... | ..... |
| Buildings | 41,312.00 | 74.95 | 30,967.00 | $893 10 | $481.53 |
| Works equipment | 253,298.00 | 77.67 | 196,759.00 | 7,882.93 | 5,166.65 |
| Distribution system | 659,727.00 | 83.92 | 553,650.00 | 22,863.72 | 15,216.85 |
| Totals | $976,037.00 | *81.87 | $803,076.00 | $31,639.75 | $20,865.03 |

*Exclusive of real estate.

16 EXHIBIT E.

(Here follows tables, marked pages 17-24.)

## SUMMARY OF PHYSICAL EQUIPMENT

| | Total Reproduction Cost | Age (Years) | Assumed Life (Years) | Present Per Cent Condition | Present Value | Depreciation Annuity Straight Line | Depreciation Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|
| Real Estate | $ 21700.00 | | | 100. | $ 21700.00 | $ | $ |
| Buildings:- | | | | | | | |
| Purifying House | $ 19279.00 | 22 | 50 | 73. | $ 14074.00 | $ 385.58 | $ 197.80 |
| Generator House | 4337.00 | 5 | 50 | 95. | 4120.00 | 86.74 | 44.49 |
| Retort House | 8919.00 | 22 | 50 | 73. | 6511.00 | 178.38 | 91.50 |
| Meter Shop & Booster House | 3035.00 | 5 | 50 | 95. | 2883.00 | 60.70 | 31.13 |
| Coal Shed | 2080.00 | 22 | 25 | 25. | 520.00 | 83.20 | 57.05 |
| Oil Tank House | 1807.00 | 15 | 50 | 83. | 1500.00 | 36.14 | 18.53 |
| Oxide Shed | 70.00 | 3 | 20 | 90. | 63.00 | 3.50 | 2.60 |
| Stable & Blacksmith Shop | 949.00 | 15 | 25 | 52. | 493.00 | 37.96 | 26.03 |
| District Holder Booster House | 836.00 | 3 | 40 | 96. | 803.00 | 20.90 | 12.40 |
| Total Buildings- | $ 41312.00 | | 46.25 | 74.95 | $ 30967.00 | $ 893.10 | $ 481.53 |

PLAINTIFF'S EXHIBIT 67

## SUMMARY OF PHYSICAL EQUIPMENT

| WORKS EQUIPMENT:- | Total Reproduction Cost | Age (Years) | Assumed Life (Years) | Present Per Cent Condition | Present Value | Depreciation Annuity Straight Line | Depreciation Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|
| 7'6" Water Gas Set | $ 9833.00 | 1 | 30 | 98. | $ 9636.00 | $ 327.76 | $ 223.99 |
| 7'6" Water Gas Set | 9833.00 | 3 | 30 | 95. | 9341.00 | 327.76 | 223.99 |
| Water Gas Condenser & Scrubber | 1414.00 | 3 | 30 | 95. | 1343.00 | 47.13 | 32.21 |
| Operating Floor | 2380.00 | 3 | 50 | 98. | 2332.00 | 47.60 | 24.41 |
| 6'6" Water Gas Set | 9364.00 | 12 | 30 | 71. | 6648.00 | 312.10 | 213.31 |
| 6'6" Water Gas Set (Springer) | 5790.00 | 22 | 30 | 38. | 2200.00 | 193.00 | 131.89 |
| Operating Floor | 2170.00 | 12 | 50 | 73. | 1564.00 | 43.40 | 22.26 |
| #7 Sturtevant Blower | 316.00 | 5 | 25 | 87. | 275.00 | 12.64 | 8.66 |
| #7 Sturtevant Blower | 324.00 | 4 | 25 | 89. | 288.00 | 12.96 | 8.88 |
| #1 Roots ' Blower | 317.00 | 12 | 25 | 63. | 200.00 | 12.68 | 8.69 |
| #8 Sturtevant Turbo-Blower | 1665.00 | 4 | 20 | 86. | 1432.00 | 83.25 | 61.97 |
| #8 Sturtevant Blower | 525.00 | 4 | 25 | 89. | 467.00 | 21.00 | 14.40 |
| #6 Roots Exhauster. | 918.00 | 21 | 30 | 41. | 376.00 | 30.60 | 20.91 |
| #6 Sturtevant Exhauster | 401.00 | 5 | 30 | 90. | 361.00 | 13.36 | 9.13 |
| 10" McKenzie Exhauster | 510.00 | 21 | 30 | 41. | 209.00 | 17.00 | 11.61 |
| 4" x 5" Greenfield Engine | 278.00 | 15 | 20 | 35. | 97.00 | 13.90 | 10.34 |
| 5" x 5" Sturtevant Engine | 313.00 | 5 | 20 | 82. | 257.00 | 15.65 | 11.64 |
| 7" x 6" Sturtevant Engine | 426.00 | 4 | 20 | 86. | 366.00 | 21.30 | 15.85 |
| 40 H.P. Motor | 760.00 | 7 | 20 | 75. | 570.00 | 38.00 | 28.28 |
| 35 H.P. Motor | 657.00 | 10 | 20 | 61. | 401.00 | 32.85 | 24.45 |
| Countershafting, etc. | 89.00 | 21 | 25 | 25. | 22.00 | 3.56 | 2.44 |
| 6 Benches 6'8 | 20672.00 | 8 | 25 | 78. | 16280.00 | 834.88 | 572.51 |

## SUMMARY OF PHYSICAL EQUIPMENT

| | Total Reproduction Cost | Age (Years) | Assumed Life (Years) | Present Per Cent Condition | Present Value | Depreciation Annuity Straight Line | Depreciation Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|
| WORKS EQUIPMENT (Cont'd):- | | | | | | | |
| Charging Floor | $ 2830.00 | 15 | 50 | 83. | $ 2349.00 | $ 56.60 | $ 29.03 |
| 4'6"x 25'0" Condenser | 883.00 | 22 | 30 | 38. | 336.00 | 29.43 | 20.11 |
| 5'6"x 31'0" Scrubber | 477.00 | 22 | 30 | 38. | 181.00 | 15.90 | 10.86 |
| 4'6"x 5'0" Rotary Scrubber | 2460.00 | 22 | 30 | 38. | 935.00 | 82.00 | 56.03 |
| 4 - 20'x 24'x 4' Purifying Boxes | 15182.00 | 11 | 30 | 74. | 11235.00 | 506.00 | 345.84 |
| 10' Station Meter | 4525.00 | 11 | 40 | 83. | 3756.00 | 112.12 | 67.15 |
| 6' Station Meter | 1575.00 | 30 | 40 | 28. | 41.00 | 39.37 | 23.37 |
| 500,000 Cu.Ft. Gas Holder | 51023.00 | 5 | 40 | 93. | 47451.00 | 1275.57 | 757.18 |
| 200,000 Cu.Ft. Gas Holder | 29138.00 | 23 | 40 | 55. | 16026.00 | 728.45 | 432.40 |
| 50,000 Cu.Ft. Gas Holder | 12074.00 | 31 | 40 | 34. | 4105.00 | 301.85 | 179.17 |
| 20" Connolly Governor | 974.00 | 21 | 50 | 74. | 721.00 | 19.48 | 9.99 |
| 12" Reynolds Governor | 481.00 | 4 | 30 | 92. | 443.00 | 16.03 | 10.95 |
| 6"x 10"x 5"x 10" Knowles Pump | 418.00 | 10 | 20 | 61. | 255.00 | 20.90 | 15.55 |
| 3"x 4" Vertical Pump | 186.00 | 20 | 20 | 25. | 47.00 | 9.30 | 6.92 |
| 3 1/2"x 4"x 6" Gardner Pump | 104.00 | 6 | 20 | 78. | 81.00 | 5.20 | 3.87 |
| 4 1/2"x 3 3/4"x 4" Worthington Pump | 116.00 | 2 | 20 | 93. | 108.00 | 5.80 | 4.31 |
| 4 1/2"x 2 3/4"x 4" Gardner Pump | 110.00 | 4 | 20 | 86.5 | 95.00 | 5.50 | 4.09 |
| 4 1/2"x 2 3/4"x 4" Worthington Pump | 110.00 | 4 | 20 | 86. | 95.00 | 5.50 | 4.09 |
| 3"x 2"x 3" Worthington Pump | 99.00 | 1 | 20 | 97. | 96.00 | 4.95 | 3.68 |
| 6"x 4"x 6" Warren Pump | 186.00 | 20 | 20 | 25. | 47.00 | 9.30 | 6.92 |
| 2 1/2"x 3"x 4" Marsh Pump | 93.00 | 4 | 20 | 86. | 80.00 | 4.65 | 3.46 |
| Otis Platform Elevator | 1230.00 | | 20 | 86. | 1058.00 | 61.50 | 43.78 |



PLAINTIFF'S EXHIBIT 82

## SUMMARY OF PHYSICAL EQUIPMENT

| | Total Reproduction Cost | Age (Years) | Assumed Life (Years) | Present Per Cent Condition | Present Value | Depreciation Annuity Straight Line | Depreciation Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|
| WORKS EQUIPMENT:-(Cont'd) | | | | | | | |
| Fairbanks Scale | $ 70.00 | 5 | 15 | 72. | $ 50.00 | $ 4.66 | $ 3.76 |
| Photometer | 522.00 | 7 | 10 | 35. | 183.00 | 52.20 | 45.53 |
| Calorimeter | 244.00 | 3 | 10 | 73. | 178.00 | 24.40 | 21.28 |
| #90 Drill Press | 52.00 | 5 | 15 | 72. | 37.00 | 3.46 | 2.79 |
| Shop Tools & Miscellaneous | 536.00 | 8 | 15 | 56. | 300.00 | 35.73 | 28.83 |
| 4 - Steel Tar Tanks | 882.00 | 7 | 40 | 88. | 776.00 | 22.05 | 13.08 |
| Tar Separator | 208.00 | 7 | 40 | 88. | 193.00 | 5.20 | 3.08 |
| 3'3"x 3'3"x 10'0" Tar Well | 121.00 | 21 | 40 | 61. | 74.00 | 3.02 | 1.79 |
| 3'0"x 20'0"x 12'0" Tar Well | 548.00 | 15 | 40 | 75. | 411.00 | 13.70 | 8.13 |
| 2 - Steel Tar Tanks | 1841.00 | 5 | 30 | 90. | 1657.00 | 61.26 | 41.93 |
| 2 - Steel Oil Tanks | 2152.00 | 7 | 30 | 85. | 1829.00 | 71.73 | 49.02 |
| 2 - Steel Oil Tanks | 1415. 00 | 10 | 30 | 77. | 1090.00 | 47.16 | 32.23 |
| Brick Oil Tank | 264.00 | 15 | 40 | 75. | 198.00 | 6.60 | 3.91 |
| Drain Piping | 1952.00 | 10 | 30 | 77. | 1503.00 | 65.08 | 44.46 |
| Water Piping | 952.00 | 9 | 20 | 67. | 638.00 | 47.60 | 35.43 |
| Oil Piping | 514.00 | 6 | 20 | 79. | 406.00 | 25.70 | 19.13 |
| Gas Yard Mains | 7630.00 | 12 | 40 | 81. | 6342.00 | 195.75 | 116.19 |
| Steam Piping | 3082.00 | 8 | 20 | 71. | 2188.00 | 154.10 | 114.71 |
| Tar Piping | 680.00 | 12 | 20 | 51. | 347.00 | 34.00 | 25.30 |
| Works Tools | 696.00 | 3 | 10 | 73. | 508.00 | 69.60 | 60.71 |
| Main Office Furniture & Fixtures | 9983.00 | 3 | 20 | 90. | 8985.00 | 499.15 | 371.56 |
| 100,000 Cu.Ft.Gas Holder (District Station) | 21675.00 | 3 | 40 | 86. | 20808.00 | 541.87 | 321.65 |

PLAINTIFF'S EXHIBIT 62

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## SUMMARY OF PHYSICAL EQUIPMENT

| | Total Reproduction Cost | Age (Years) | Assumed Life (Years) | Present Per Cent Condition | Present Value | Depreciation Annuity Straight Line | Depreciation Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|
| WORKS EQUIPMENT (Cont'd):- | | | | | | | |
| Water Piping (District Station) | $ 205.00 | 3 | 20 | 90. | $ 185.00 | $ 10.25 | $ 7.63 |
| Gas Yard Mains(District Station) | 537.00 | 3 | 40 | 96. | 516.00 | 13.42 | 7.96 |
| Manholes ( " " ) | 1778.00 | 3 | 40 | 96. | 1707.00 | 44.45 | 27.38 |
| 25 H.P. Motor ( " " ) | 491.00 | 3 | 20 | 90. | 442.00 | 24.55 | 18.27 |
| 5 H.P. Motor ( " " ) | 186.00 | 3 | 20 | 90. | 176.00 | 9.30 | 6.92 |
| #5 Sturtevant Blower (District Station) | 209.00 | 3 | 25 | 94. | 196.00 | 8.36 | 5.75 |
| #5 Sturtevant Blower (District Station) | 244.00 | 3 | 25 | 94. | 229.00 | 9.76 | 6.69 |
| | $ 253298.00 | | 32.13 | 77.67 | $196759.00 | $ 7882.93 | $ 5166.65 |

## SUMMARY OF PHYSICAL EQUIPMENT

### DISTRIBUTION SYSTEM

| Street Mains:- Size | Kind | Total Reproduction Cost | Composite Age (Years) | Assumed Life (Years) | Present Per Cent Condition Depreciable Portion | Present Value | Depreciation Annuity Straight Line | Depreciation Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|---|
| In Lincoln - 1 1/4" | W.I. | $ 1547.00 | 10.86 | 25 | 70. | $ 1401.00 | $ 61.88 | $ 42.43 |
| 2" | W.I. | 160964.00 | 10.86 | 25 | 70. | 131944.00 | 6438.56 | 4415.24 |
| 3" | C.I. | 448.00 | 10.86 | 40 | 81. | 406.00 | 11.20 | 6.64 |
| 4" | C.I. | 103402.00 | 10.86 | 50 | 90. | 97203.00 | 2068.04 | 1060.90 |
| 6" | C.I. | 36917.00 | 10.86 | 75 | 94. | 35518.00 | 492.10 | 171.29 |
| 8" | C.I. | 8093.00 | 10.86 | 75 | 94. | 7760.00 | 107.87 | 37.55 |
| 10" | C.I. | 17989.00 | 10.86 | 75 | 94. | 17060.00 | 239.79 | 83.45 |
| 12" | C.I. | 8651.00 | 10.86 | 75 | 94. | 8221.00 | 115.31 | 40.14 |
| 16" | C.I. | 4439.00 | 10.86 | 75 | 94. | 4220 .00 | 59.17 | 20.59 |
| 20" | C.I. | 5774.00 | 10.86 | 75 | 94. | 5428.00 | 76.96 | 26.79 |
| Total in Lincoln- | | $ 348224.00 | 10.86 | 36 | 88.76 | $309161.00 | $9670.88 | $5905.02 |
| Outside of Lincoln - | | | | | | | | |
| State Farm - 4" | C.I. | $ 1321.00 | 3 | 50 | 98. | $ 1295.00 | $ 26.42 | $ 13.55 |
| University Place 2" | W.I. | 7491.00 | 3 | 25 | 92. | 6892.00 | 299.64 | 205.47 |
| 4" | C.I. | 8023.00 | 3 | 50 | 98. | 7863.00 | 160.46 | 82.31 |
| Havelock - 2" | W.I. | 3304.00 | 3 | 25 | 92. | 3040.00 | 132.16 | 90.62 |
| 4" | C.I. | 5458.00 | 3 | 50 | 98. | 5349.00 | 109.15 | 55.99 |
| Total Outside of Lincoln- | | $ 25597.00 | 3 | 35.18 | 95.47 | $ 24439.00 | $ 727.84 | 447.94 |
| Total Street Mains - | | $ 373821.00 | 10.32. | 35.95 | 89.24 | $333600.00 | $10398.72 | $6352.96 |

PLAINTIFF'S EXHIBIT 63

DISTRIBUTION SYSTEM (Cont'd)

| | Total Reproduction Cost | Composite Age (Years) | Assumed Life (Years) | Present Per Cent Condition Depreciable Portion | Present Value | Depreciation Straight Line | Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|
| **Street Main Miscellaneous:-** | | | | | | | |
| Street Main drips | $ 1291.00 | 10.86 | 35 | 81. | $ 1046.00 | $ 36.88 | $ 23.50 |
| Street main valves | $ 380.00 | 10.86 | 35 | 81. | $ 308.00 | $ 10.85 | $ 6.91 |
| District governor | $ 261.00 | 5. | 30 | 90. | $ 235.00 | $ 8.70 | $ 5.94 |
| Railway crossing | $ 7552.00 | 10.86 | 35 | 81. | $ 6117.00 | $ 215.77 | $137.52 |
| Distribution Tools, etc. | $ 7204.00 | 3. | 10 | 73. | $ 5259.00 | $ 720.40 | $614.06 |
| Gas Appliances loaned | $ 4398.00 | 2. | 5 | 54. | $ 2375.00 | $ 879.60 | $812.00 |
| Total Street Main Miscellaneous - | $ 21086.00 | | 11.26 | 72.74 | $ 15340.00 | $1872.20 | $1599.93 |
| **Services:-** | | | | | | | |
| House Services in Lincoln | $145290.00 | 7.7 | 25 | 77. | $111873.00 | $5811.60 | $3985.30 |
| Stub Services in Lincoln | 1167.00 | 3. | 25 | 93. | 1085.00 | 46.68 | 32.01 |
| Total Services in Lincoln - | $146457.00 | 7.6 | 25 | 77.12 | $112958.00 | $5858.28 | $4017.31 |
| House Services outside of Lincoln | $ 5316.00 | 3. | 25 | 93. | $ 4944.00 | $ 212.64 | $ 145.81 |
| Total Services - | $151773.00 | 7.4 | 25 | 77.74 | $117902.00 | $6070.92 | $4163.12 |
| **Service Governors:-** | | | | | | | |
| In Use in Lincoln | $ 22434.00 | 5. | 25 | 87. | $ 19518.00 | $ 897.36 | $ 615.36 |
| In Stock | 652.00 | 1. | 25 | 98 | 639.00 | 26.08 | 17.88 |
| Total In Lincoln | $ 23086.00 | 4.8 | 25 | 87.31 | $ 20157.00 | $ 923.44 | $ 633.24 |
| Total Outside of Lincoln | $ 542.00 | 3. | 25 | 93. | $ 504.00 | $ 21.68 | $ 14.86 |
| Total Service Governors | $ 23628.00 | 4.8 | 25 | 87.40 | $ 20661.00 | $ 945.12 | $ 648.10 |
| Total Service Boxes & Cocks - | $ 12839.00 | 7.7 | 25 | 77. | $ 9886.00 | $ 813.56 | $ 352.17 |

PLAINTIFF'S EXHIBIT E3

DISTRIBUTION SYSTEM (Cont'd)

| | Total Reproduction Cost | Composite Age (Years) | Assumed Life (Years) | Present Per Cent Condition Depreciable Portion | Present Value | Depreciation Annuity Straight Line | Depreciation Annuity Sinking Fund |
|---|---|---|---|---|---|---|---|
| Meters:- | | | | | | | |
| In Use in Lincoln | $ 71400.00 | 9.82 | 25 | 72 | $ 51408.00 | $ 2856.00 | $ 1958.50 |
| In Stock | 2195.00 | 2. | 25 | 96 | 2107.00 | 87.80 | 60.20 |
| Total Meters in Lincoln | $ 73595.00 | 9.58 | 25 | 72.71 | $ 53515.00 | $ 2943.80 | $ 2018.70 |
| In Use outside of Lincoln | $ 2985.00 | 3. | 25 | 92 | $ 2746.00 | $ 119.00 | $ 81.87 |
| Total Meters - | $ 76580.00 | 9.3 | 25 | 73.46 | $ 56261.00 | $ 3063.20 | $ 2100.57 |
| Total Distribution System - | $ 659727.00 | | 28.9 | 83.92 | $ 553650.00 | $ 22863.72 | $ 15216.85 |



TORN PAGES

EXHIBIT F.

*Net Construction Totals.*

| | |
|---|---|
| Real Estate | $21,700.00 |
| Buildings | 35,614.00 |
| Works Equipment | 218,358.00 |
| Distribution System | 568,731.00 |
| Total | $844,403.00 |

EXHIBIT G.

*Real Estate.*

| | Net construction cost. |
|---|---|
| Lots #1 to #15 (inclusive) Block #2 of Peck's Grove Addition to City of Lincoln | $4,500.00 |
| Lots #1 to #15 (inclusive) Block #7 of Peck's Grove Addition to City of Lincoln | 4,500.00 |
| South 92 feet of the E. ½ of Lot #11, Block #77, original plat of City of Lincoln | 300.00 |
| West ½ of Lot #11, Block #77, original plat of City of Lincoln | 300.00 |
| South 92 feet of Lot #12, Block #77, original plat City of Lincoln | 300.00 |
| Lots #1 to #12 (inclusive) Block #79, original plat City of Lincoln | 11,000.00 |
| South 20 feet, West 16 feet, Lot #2, Block #32, original plat of Havelock | 200.00 |
| Lots #18 & #19, Block #17, original plat of Havelock | 600.00 |
| Total | $21,700.00 |

EXHIBIT H.

*Buildings.*

| | Net construction cost. |
|---|---|
| Purifying House: | |
| (37'3"x176'3"x21'0" to wall plate. Foundation, stone; Walls, brick; Roof, corrugated iron on wood frame; Floors, concrete and wood.) | |
| Excavation—4,536.0 cu. yds. | $3,402.00 |
| Foundations: | |
| Stone—cemented—505.9 cu. yds. | 3,288.00 |

Backfilling and Removing:
Surplus material—4,536.0 cu. yds..... 2,268.00

Walls:
Brick—187.843 M. ..... 3,193.00

Pilasters:
Brick—4.452 M. ..... 95.00

Cornice:
Brick—fancy—5.860 M. ..... 125.00

Framing:
Wood—rough—.186 M' B M..... 8.00

Covering:
Wood—T and G—1"—259. sq. ft..... 11.00

Roof:

Framing:
Wood—S 4 S—8.102 M'B M..... 340.00
Wood—rough— .069 M'B M..... 3.00
Steel—834 lbs. ..... 42.00

Covering:
Wood—T and G—1"—8,449 sq. ft..... 355.00
Wood—rough—1"—98 sq. ft..... 4.00
Corrugated iron —#24—97.16 squares..... 729.00
Tar felt—9.75 squares..... 44.00

Floors:
Concrete—8"—3,465 sq. ft..... 485.00

Framing:
Wood—rough—7.738 M'B M..... 325.00
Cast-iron—805 lbs. ..... 32.00
Steel—3,009 lbs. ..... 150.00

31 *Buildings*—(Cont'd).

Purifying House—(Cont'd):

| | Net construction cost. |
|---|---|
| Covering: | |
| Wood—T and G—1"—3,502 sq. ft..... | $147.00 |
| Wood—rough—2"— 88 " " ..... | 4.00 |

Stairways:

Framing: :

| | |
|---|---|
| Wood—rough—1.129 M'B M..... | 47.00 |

Covering:

| | |
|---|---|
| Wood—T and G—1" 56 sq. ft..... | 2.00 |

Doors:

| | |
|---|---|
| Single panel hinged—147 sq. ft..... | 37.00 |
| Double panel hinged—975 " " ..... | 244.00 |
| Single batten " —439 " " ..... | 88.00 |
| Double " " — 49 " " ..... | 10.00 |

Windows:

Double Sash Box:

| | |
|---|---|
| Plain—144 sq. ft. ..... | 101.00 |
| Mullioned—126 sq. ft. ..... | 113.00 |
| Storm type—462 sq. ft. ..... | 323.00 |

Double Sash Jamb:

| | |
|---|---|
| Plain—37 sq. ft. ..... | 26.00 |
| Storm type—272 sq. ft..... | 190.00 |

Gutters:

| | |
|---|---|
| Galv. iron—U—8"—50 Lin. ft. ..... | 10.00 |

Downspouts:

| | |
|---|---|
| Galv. Corr. iron—4"—30 Lin. ft..... | 5.00 |

Plaster:

| | |
|---|---|
| On brick—1,940 sq. ft. ..... | 19.00 |

Painting:

| | |
|---|---|
| Water—On brick—9,348 sq. ft. ..... | 2.00 |
| Water—On wood —8,546 " " ..... | 2.00 |

Electric Wiring:

Copper wire:

| | |
|---|---|
| W. P. #14—420 Lin. ft. | |
| R. C. #14—740 " " | |
| Lamp cord —216 " " | |
| Conduit ½" 215 " " ..... | 80.00 |
| Outlets—37 ..... | 7.00 |

32 *Buildings*—(Cont'd).

Purifying House—(Cont'd):

| | Net construction cost. |
|---|---|
| Miscellaneous: | |
| Framing: | |
| Wood—rough—2.96 M'B M ..... | $12.00 |
| Covering: | |
| Wood—T and G—1"—801 sq. ft. ..... | 34.00 |
| Wood—Rough —1"—499 " " ..... | 21.00 |
| Wood—Rough —2"—556 " " ..... | 47.00 |
| Painting ..... | 150.00 |
| | $16,620.00 |

*Generator House:*

(35'0"x51'0" outside x 30'6" to wall plate. Foundations, concrete; Walls, brick & tile; Roof, corrugated iron on steel frame; Floor, concrete.)

(17'9"x26'3" outside x13'6" to wall plate. Foundations, concrete; Walls, brick & tile; Roof, tar felt on wood frame; Floor, concrete.)

(9'3"x16'6" outside x 33'0" to wall plate. Foundation, concrete; Walls, corrugated iron on wood frame; Roof ,tar felt on wood frame; Floor, dirt.)

| | |
|---|---|
| Excavation—247.9 cu. yds. ..... | $248.00 |
| Foundations: | |
| Concrete—82.5 cu. yds. ..... | 660.00 |
| Backfilling and Removing: | |
| Surplus material—247.9 cu. yds..... | 124.00 |
| Walls: | |
| Tile—hollow—13.270 M..... | 226.00 |
| Brick—39.179 M. ..... | 666.00 |
| Pilasters: | |
| Brick—2.799 M. ..... | 59.00 |

33 *Buildings*—(Cont'd).

Generator House—(Cont'd).

| | Net construction cost. |
|---|---|
| Framing: | |
| Wood—rough—1.583 M'B M | $66.00 |
| Covering: | |
| Corr. iron #24—16.41 squares | 123.00 |
| Roof: | |
| Framing: | |
| Steel—9,479 lbs. | 474.00 |
| Wood—rough—.811 M'B M | 34.00 |
| Covering: | |
| Corr. iron #24—22.54 squares | 169.00 |
| Wood—rough—1"—616 sq. ft. | 26.00 |
| Tar felt—6.16 squares | 28.00 |
| Louvers: | |
| Wood—5 slat—130 sq. ft. | 5.00 |
| Floor: | |
| Concrete—4"—1,942 sq. ft. | 136.00 |
| Doors: | |
| Single—batten—slide—68 sq. ft | 14.00 |
| Double—batten—slide—136 sq. ft. | 27.00 |
| Single—panel—hinged—27 sq. ft. | 7.00 |
| Windows: | |
| Double Sash Box: | |
| Plain—368 sq. ft. | 258.00 |
| Mullioned—231 sq. ft. | 208.00 |
| Gutters: | |
| Galv. iron—box—6"—51 Lin. ft. | 9.00 |
| Downspouts: | |
| Galv. corr. iron—6"—30 Lin. ft. | 5.00 |
| Plaster: | |
| On tile—1,136 sq. ft. | 11.00 |

Platform:

Framing:

Wood—rough—.901 M'B M ..... 38.00

Covering:

Wood—rough—2"—357 sq. ft. ..... 30.00

34 *Buildings*—(Cont'd).

Generator House—(Cont'd).

| | Net construction cost. |
|---|---|
| Electric Wiring: | |
| Copper Wire: | |
| W. P.—#14—460 Lin. ft. Lamp Cord—71 Lin. ft..... | $27.00 |
| Outlets—21 ..... | 4.00 |
| Miscellaneous: | |
| Wood—T and G—1"—71 sq. ft..... | 3.00 |
| Wood—Rough —1"—52 " " ..... | 2.00 |
| Wood—Rough —2"—18 " " ..... | 2.00 |
| Painting ..... | 50.00 |
| | $3,739.00 |

*Retort House:*

(32'9"x47'3" outside x 26'9" to wall plate, & 33'6"x 70'0" outside x 19'6" to wall plate. Foundations, stone; Walls, brick; Roof, corrugated iron on steel frame; Floors, concrete.)

Excavation—1,244.5 cu. yds. ..... $1,245.00

Foundations:

Stone—cemented—206.4 cu. yds. ..... 1,342.00

Backfilling and Removing:

Surplus material—1,244.5 cu. yds..... 622.00

Walls:

Brick—157.381 M ..... 2,675.00

Pilasters:

Brick—.848 M ..... 18.00

Cornice:
Brick—fancy—2.311 M ..... 49.00

Framing:
Wood—rough—.008 M'B M ..... .....

35 *Buildings*—(Cont'd).

Retort House—(Cont'd).

| | Net construction cost. |
|---|---|
| Covering: | |
| Wood—T and G—1"—.084 M'B M..... | $4.00 |
| Roof: | |
| Framing: | |
| Steel—14,523 lbs. ..... | 726.00 |
| Wood—rough—.022 M'B M..... | 1.00 |
| Covering: | |
| Corr. iron #24—51.87 squares..... | 389.00 |
| Wood— T and G—1"—52 sq. ft. ..... | 2.00 |
| Tar felt—.52 squares ..... | 2.00 |
| Floors: | |
| Concrete—8"—3,390 sq. ft. ..... | 475.00 |
| Framing: | |
| Wood—rough—.020 M'B M ..... | 1.00 |
| Covering: | |
| Wood—rough—2"—36 sq. ft..... | 3.00 |
| Doors: | |
| Single—batten slide—54 sq. ft. ..... | 10.00 |
| Single—panel—hinged—33 sq. ft. ..... | 8.00 |
| Wood—Galv. sheathed—41 sq. ft. ..... | 8.00 |
| Electric Wiring: | |
| Copper Wire: | |
| W. P.—#14—150 Lin. ft. | |
| W. P.—#10—165 " " | |
| R. C.—#14—300 " " | |
| R. C.—#12—160 " " | |
| Lamp Cord — 35 " " | |
| Conduit ½" 145 " " ..... | 48.00 |
| Outlets—30 ..... | 6.00 |

| | |
|---|---|
| Miscellaneous: | |
| Wood—T and G—1"—125 sq. ft. ..... | 5.00 |
| Painting ..... | 50.00 |
| | $7,689.00 |

36 *Buildings*—(Cont'd).

Net construction cost.

Meter Shop & Booster House.

(22'9"x42'3" outside x 13'6" to wall plate, & 15'9"x 22'6" outside x 10'6" to wall plate. Foundations, concrete; Walls, brick; Roof, tar felt and gravel on wood frame; Floor, concrete).

(10'9"x14'6" outside x 4'0". Foundations, brick; Walls, brick; Roof, wood shingles on wood frame; Floors, concrete and wood.)

(9'3" x 14'0" outside x 7'6" to wall plate. Foundations, wood; Walls, wood on wood frame; Roof, tar felt on wood frame; Floor, dirt.)

| | |
|---|---|
| Excavation—386.0 cu. yds. ..... | $386.00 |
| Foundations: | |
| Concrete—38.0 cu. yds. ..... | 304.00 |
| Brick—6.439 M ..... | 109.00 |
| Backfilling and Removing: | |
| Surplus material—386.0 cu. yds..... | 193.00 |
| Walls: | |
| Brick—44.162 M ..... | 751.00 |
| Cornice: | |
| Brick—fancy—.527 M ..... | 11.00 |
| Framing: | |
| Wood—rough—.155 M'B M ..... | 7.00 |
| Covering: | |
| Wood—T and G—1"—279 sq. ft..... | 12.00 |
| Building paper—279 sq. ft. ..... | 3.00 |

Roof:

Framing:

| | |
|---|---|
| Wood—rough—2.018 M'B M ..... | 85.00 |

Covering:

| | |
|---|---|
| Wood—rough—1"—1,429 sq. ft. ..... | 60.00 |
| Wood—T and G—1"—436 sq. ft. ..... | 18.00 |
| Tar felt and gravel—11.50 squares..... | 58.00 |
| Tar felt—1.57 squares ..... | 7.00 |
| Wood—shingles—2.79 squares ..... | 13.00 |

37 *Buildings*—(Cont'd).

Meter Shop & Booster House—(Cont'd).

| | Net construction cost. |
|---|---|
| Floors: | |
| Concrete— 4"—856 sq. ft. ..... | $60.00 |
| Concrete— 8"—156 " " ..... | 22.00 |
| Concrete—10"—354 " " ..... | 60.00 |
| Framing: | |
| Wood—rough—.993 M'B M ..... | 42.00 |
| Covering: | |
| Wood—rough—1"—294 sq. ft. ..... | 12.00 |
| Wood—rough—2"—243 " " ..... | 20.00 |
| Doors: | |
| Single—batten—slide—35 sq. ft. ..... | 7.00 |
| Single—batten—hinged—19 sq. ft. ..... | 4.00 |
| Single—panel—hinged—42 sq. ft. ..... | 11.00 |
| Windows: | |
| Double Sash Box: | |
| Plain—259 sq. ft. ..... | 181.00 |
| Mullioned—47—sq. ft. ..... | 42.00 |
| Single Sash Jamb: | |
| Plain—32 sq. ft. ..... | 22.00 |
| Gutters: | |
| Galv. iron box—6"—42 Lin. ft..... | 8.00 |
| Downspouts: | |
| Galv. corr. iron—4"—13 Lin. ft. ..... | 2.00 |

Ventilators:
"Star"—14"—1 ..... 9.00

Plaster:
On brick—132 sq. ft. ..... 1.00

Painting:
Water—on brick—2,443 sq. ft. ..... 5.00

Platform:
Framing:
Wood—rough—.095 M'B M ..... 4.00

Covering:
Wood—rough 2"—50 sq. ft. ..... 4.00

38 *Buildings*—(Cont'd).

Meter Shop & Booster House—(Con't).

| | Net construction cost. |
|---|---|
| Electric Wiring: | |
| Copper Wire: | |
| W. P.—#14— 75 Lin. ft.. | |
| W. P.—#10— 30 " " | |
| R. C.—#14—175 " " | |
| Lamp cord —102 " " ..... | 19.00 |
| Outlets —16 ..... | 3.00 |
| Miscellaneous: | |
| Wrt. iron pipe—1¼"—49 Lin. ft..... | 7.00 |
| Covering: | |
| Wood—rough—1"— 8 sq. ft. | |
| Wood—rough—2"— 88 " " | |
| Wood—S 2 S —1"—141 " " ..... | 14.00 |
| Painting ..... | 40.00 |
| | $2,616.00 |

*Coal Shed:*

(20'0"x111'0" outside x 16'0" to wall plate. Foundations, stone & brick; Walls, Roof and Floor, wood.)

Excavation—146.4 cu. yds. ..... $146.00

Foundation:

| | |
|---|---|
| Stone—cemented—63.1 cu. yds. | 410.00 |
| Brick—3.593 M | 61.00 |

Backfilling and Removing:

| | |
|---|---|
| Surplus material—146.4 cu. yds. | 73.00 |

Walls:

Framing:

| | |
|---|---|
| Wood—rough—3.532 M'B M | 148.00 |

Covering:

| | |
|---|---|
| Wood—rough—2,488 sq. ft. | 104.00 |

Roof:

Framing:

| | |
|---|---|
| Wood—rough—3.993 M'B M | 168.00 |

Covering:

| | |
|---|---|
| Wood—rough—1"—2,775 sq. ft. | 117.00 |

39 *Buildings*—(Cont'd).

Coal Shed—(Cont'd).

| | Net construction cost. |
|---|---|
| Floor: | |
| Framing: | |
| Wood—rough—7.168 M'B M | $310.00 |
| Covering: | |
| Wood—rough—2"—2,220 sq. ft. | 186.00 |
| Runway: | |
| Framing: | |
| Wood—rough—1.009 M'B M | 42.00 |
| Covering: | |
| Wood—rough—2"—34 sq. ft. | 3.00 |
| Wood—T and G—1"—144 sq. ft. | 6.00 |
| Tar felt—.48 squares | 2.00 |

Electric Wiring:

Copper Wire:

| | |
|---|---|
| W. P.—#14—300 Lin. ft. | 15.00 |
| Outlets —9 | 2.00 |
| | $1,793.00 |

*Oil Tank House:*

(22'9"x35'3" outside x 1'0". Foundations, stone; Walls, brick; roof, corrugated iron on wood & steel frame; Floors, concrete & wood.)

| | |
|---|---|
| Excavation—428.9 cu. yds. | $429.00 |
| Foundation: | |
| Stone—cemented—65.5 cu. yds. | 426.00 |
| Backfilling and Removing: | |
| Surplus material—428.9 cu. yds. | 214.00 |
| Walls: | |
| Brick—5.851 M | 99.00 |

40 *Buildings*—(Cont'd).

Oil Tank House—(Cont'd).

| | Net construction cost. |
|---|---|
| Roof: | |
| Framing: | |
| Steel—1,514 lbs. | $76.00 |
| Wood—rough—.180 M'B M | 8.00 |
| Covering: | |
| Wood—T and G—1"—1,124 sq. ft. | 47.00 |
| Corr. iron #26—12.93 squares | 97.00 |
| Floor: | |
| Concrete—10"—642 sq. ft. | 109.00 |
| Framing: | |
| Wood—rough—.108 M'B M | 5.00 |
| Covering: | |
| Wood—rough—2"—219 sq. ft. | 18.00 |

Doors:
Single—panel—hinged—21 sq. ft. ..... 5.00

Windows:
Plain—5—sq. ft. ..... 4.00

Electric Wiring:
Copper Wire:
W. P.—#14—10 Lin. ft.
Outlets —1 ..... 1.00
Painting ..... 20.00

$1,558.00

*Oxide Shed:*

(5'6"x15'0" outside x 7'6" to wall plate. Foundations and Walls, wood; Roof, corrugated iron on wood frame; Floors, wood and dirt.)

Walls:
Framing:
Wood—rough—.219 M'B M ..... $9.00

Covering:
Wood—rough—2"—334 sq. ft. ..... 28.00
Wood—T and G—1"—80 sq. ft. ..... 3.00

41 *Buildings*—(Cont'd).

Oxide Shed—(Cont'd).

Net construction cost.

Roof:
Framing:
Wood—rough—.023 M'B M ..... 1.00

Covering:
Wood—rough—1"—90 sq. ft. ..... 4.00
Wood—T and G—1"—28 sq. ft. ..... 1.00
Corr. iron #24—1.07 squares ..... 8.00

Floor:
Framing:
Wood—rough—.069 M'B M ..... 3.00

Covering:
Wood—T and G—1"—83 sq. ft. ..... 3.00

$60.00

*Stable and Blacksmith Shop:*

(18′3″x36′3″ outside x 10′0″ to wall plate, & 15′3″x 25′3″ outside x 8′3″ to wall plate. 5′0″x10′6″ outside x 9′3″ to wall plate. Foundations, wood; Walls, wood on wood frame; Roof, wood and tar felt on wood frame; Floors, wood and dirt.)
(24′0″x45′6″x11′0″ & 8′0″x10′6″x7′6″ to wall plate.)

Walls:

Framing:

| | |
|---|---|
| Wood—rough—1.937 M′B M ..... | $81.00 |

Covering:

| | |
|---|---|
| Wood—shiplap—1″—1314 sq. ft. ..... | 55.00 |
| Wood—rough—1″—3352 sq. ft. ..... | 141.00 |

Roof:

Framing:

| | |
|---|---|
| Wood—rough—1.518 M′B M ..... | 64.00 |

Covering:

| | |
|---|---|
| Wood—shingles—4.02 squares ..... | 19.00 |
| Wood—rough—1″—3,028 sq. ft. ..... | 127.00 |
| Tart felt—22.64 squares ..... | 101.00 |

42 *Buildings*—(Cont'd).

Stable & Blacksmith Shop—(Cont'd).

| | Net construction cost. |
|---|---|
| Floor: | |
| Framing: | |
| Wood—rough—.741 M′B M ..... | $31.00 |
| Covering: | |
| Wood—rough—2″—1,142 sq. ft. ..... | 96.00 |
| Doors: | |
| Single—batten—Slide—53 sq. ft. ..... | 11.00 |
| Single—batten—hinged—56 sq. ft. ..... | 11.00 |
| Windows: | |
| Single Sash Jamb: | |
| Plain—81 sq. ft. ..... | 57.00 |

Electric Wiring:

Copper Wire:

W. P.—#14— 80 Lin. Ft.
R. C.—#14—225 " "
Lamp cord —104 " " ..... 20.00
Outlets—22 ..... 4.00

$818.00

*Booster House at District Holder:*

(17'6"x21'3" outside x 12'6" (aver.) to wall plate. Foundations and Walls, brick; Floors, concrete and wood. Roof, tar felt & gravel on wood frame.)

Excavation—155.4 cu. yds. ..... $155.00

Foundations:

Brick—5.829 M ..... 99.00

Backfilling & Removing:

Surplus material—155.4 cu. yds. ..... 78.00

Walls:

Brick—10.307 M ..... 175.00

43 *Buildings*—(Cont'd).

Booster House at District Holder—(Cont'd).

| | Net construction cost. |
|---|---|
| Roof: | |
| Framing: | |
| Wood—rough—.451 M'B M ..... | $19.00 |
| Covering: | |
| Wood—T and G—1"—316 sq. ft. ..... | 13.00 |
| Tar felt and gravel—3.16 squares..... | 16.00 |
| Floors: | |
| Concrete—4"—163 sq. ft. ..... | 11.00 |
| Framing: | |
| Wood—rough—.174 M'B M ..... | 7.00 |
| Covering: | |
| Wood—rough—2"—128 sq. ft. ..... | 11.00 |

Doors:

Single—batten—hinged—26 sq. ft..... 5.00

Windows:

Mullioned—wire glass—100 sq. ft. ..... 125.00

Electric Wiring:

Copper Wire:

W. P.—#14—40 Lin. ft.
Lamp Cord—30 Lin. ft. ..... 4.00
Outlets —4 ..... 1.00

Miscellaneous:

Framing:

Wood—rough—.020 M'B M

Covering:

Wood—rough—2"—14 sq. ft. ..... 2.00

$721.00

44 EXHIBIT I.

45 *Works Equipment.*

Net construction cost.

7'6"—Water Gas Set (W. G. C. Co.):

Capacity—40,000 cu. ft. per hour.
Generator—7'6"x13'6"
Superheater—7'6"x19'6"
Carburetter—7'6"x25'0"
Wash-Box—5'6"x2'9"

Foundation:

Excavation—50.3 cu. yds.
Concrete—26.5 cu. yds.

Backfilling & Removing:

Surplus material—50.3 cu. yds..... $8,477.00

7'6"—Water Gas Set (W. G. C. Co.):

Capacity—40,000 cu. ft. per hour.
Generator—7'6"x13'6"
Superheater—7'6"x19'6"
Carburetter—7'6"x25'0"
Wash-Box—5'6"x2'9"

Foundation:

Excavation—50.3 cu. yds.
Concrete—26.5 cu. yds.

Backfilling & Removing:

Surplus material—50.3 cu. yds..... 8,477.00

W. G. Condenser—6′0″x20′0″
W. G. Scrubber—6′6″x21′0″

Foundation:

Excavation—28.2 cu. yds.
Concrete—11.3 cu. yds.

Backfilling & Removing:

Surplus material—28.2 cu. yds..... 1,219.00

Operating Floor:

Framing::

Wrought Iron —518 lbs.
Steel —9,830 lbs.
Wood—rough—.063 M′B M

Plates:

Cast Iron—⅝″—942 sq. ft.

Railing:

Wrought Iron Pipe—1″—73 Lin. Ft..... 2,052.00

46 *Works Equipment*—(Cont'd).

Net construction cost.

6′6″—Water Gas Set (W. G. C. Co.):

Capacity—30,000 cu. ft. per hour
Generator—6′6″x13′0″
Superheater—6′0″x18′0″
Carburetter—6′0″x24′0″
Wash-Box—5′0″x2′6″
Condenser—5′6″x20′0″
Scrubber—5′6″x20′0″

Foundation:

Excavation—41.7 cu. yds.
Concrete—17.5 cu. yds.
Brick—1.809 M

Backfilling & Removing:

Surplus material—41.7 cu. yds..... $8,072.00

6'6"—Water Gas Set—(Springer):

Capacity—15,000 cu. ft. per hour
Generator—6'6"x10'0"
Superheater—6'0"x31'3"
Wash-Box—4'0"x2'6"
Scrubber—6,0"x20'3"
Scrubber—4'0"x20'0"

Foundation:

Excavation—33.1 cu. yds.
Concrete—12.3 cu. yds.
Brick—3.046 M

Backfilling & Removing:

Surplus material—33.1 cu. yds. ..... 4,991.00

Operating Floor (W. G.):

Framing:

Cast Iron—891 lbs.
Steel—8,279 lbs.

Plates:

Cast-Iron—½"—666 sq. ft.
Cast-Iron—⅝"—281 sq. ft. ..... 1,871.00

#7—Sturtevant Blower (belted):

Foundation:

Excavation—2.0 cu. yds.
Concrete—.8 cu. yds.

Backfilling & Removing:

Surplus material—2.0 cu. yds..... 272.00

47 *Works Equipment*—(Cont'd).

Net construction cost.

#7—Sturtevant Blower (belted):

Foundation:

Excavation—4.3 cu. yds.
Concrete—1.2 cu. yds.

Backfilling & Removing:
Surplus material—4.3 cu. yds..... $279.00

#1—Roots Positive Blower:
Foundation:
Brick—2.792 M ..... 273.00

#8—Sturtevant Turbo—Blower:
Turbine Type C—3
Steam Pressure—100 lbs.

Foundation:
Excavation—10.6 cu. yds
Concrete—4.6 cu. yds.

Backfilling & Removing:
Surplus material—10.6 cu. yds..... 1,435.00

#8—Sturtevant Blower—(Booster—Belted):
Foundation:
Concrete—9.2 cu. yds. ..... 453.00

#6—Roots Exhauster—16" Connections:
Foundation:
Brick—6.894 M ..... 791.00

#6—Sturtevant Exhauster:
(Fan Type—Belted) ..... 346.00

10"—McKenzie Exhauster ..... 440.00
4"x5"—Greenfield Vertical Steam Engine..... 240.00
5"x5"—Sturtevant Vertical Steam Engine (High Speed—Automatic) ..... 270.00
7"x6"—Sturtevant Vertical Steam Engine (High Speed—Automatic).

Foundation:
Concrete—4.3 cu. yds. ..... 367.00

48 *Works Equipment*—(Cont'd).

Net construction cost.

40 H. P.—General Electric Co. Motor:
Direct Current
500 Volts—975 R. P. M.

Foundation:

Excavation—10.5 cu. yds.
Concrete—3.2 cu. yds.
Wood—rough—.253 M'B M

Backfilling & Removing:

Surplus material—10.5 cu. yds. ..... $655.00

35 H. P.—Fort Wayne Motor:

Direct Current
Compound Wound—Type M T
500 Volts—1,045 R. P. M.

Foundation:

Cast-Iron—648 lbs.
Steel—177 lbs.
Wood—rough—.108 M'B M ..... 566.00

Hangers:

Double—Cast Iron—15"—4

Shafting:

Steel—2¾"—21.5 Lin. ft.

Pulleys:

Wood—6"x12"—1
" —6"x24"—1
Cast Iron 5"x24"—2..... 77.00

6—Benches—6's—¾ Depth

Foundation:

Excavation—159.5 cu. yds.
Concrete—114.8 cu. yds.

Backfilling & Removing:

Surplus material—159.5 cu. yds. ..... 17,993.00

Charging Floor:

Framing:

Cast-Iron—1,418 lbs.
Steel—9,149 lbs.

Plates:

Cast-Iron—½"—1,284 sq. ft. ..... 2,440.00

49 *Works Equipment*—(Cont'd).

| | Net construction cost. |
|---|---|
| C. G. Condenser—4'6"x25'0" | |
| Foundation: | |
| Excavation—10.0 cu. yds. | |
| Concrete—3.3 cu. yds. | |
| Backfilling & Removing: | |
| Surplus material—10.0 cu. yds..... | $761.00 |
| C. G. Scrubber—5'6"x31'0" | |
| Foundation: | |
| Excavation—12.2 cu. yds. | |
| Concrete —4.7 cu. yds. | |
| Backfilling & Removing: | |
| Surplus material—12.2 cu. yds. ..... | 411.00 |
| 4'6"x5'0"—Smith & Sayre Rotary Scrubber: | |
| Foundation: | |
| Steel—1,187 lbs. ..... | 2,121.00 |
| Purifying Boxes: | |
| 4—(20'0"x24'0"x4'0") | |
| Boxes—Cast-Iron; Covers, Steel | |
| Center Seal, 16" | |
| Cover Hoist, Hydraulic Operated | |
| Foundation, Cast Iron & Steel..... | 11,800.00 |
| Foundation: | |
| Cast-Iron—2,705 lbs. ..... | 108.00 |
| Steel—19,800 lbs. ..... | 980.00 |
| Footings ..... | 200.00 |
| | 13,088.00 |
| 10'0"—McDonald Station Meter: (Hinman Drum) | |
| Foundation: | |
| Brick—5.961 M ..... | 3,901.00 |
| 6'0"—American Station Meter: (Parkinson Drum) ..... | 1,358.00 |

50 *Works Equipment*—(Cont'd).

Net construction cost.

500,000 cu. ft. Gas Holder:

Three Lifts—Steel Tank
Diameter of Tank—91'6"
Height of Tank—30'0"
Foundation, concrete, Maximum pressure 8"

Foundation:

Excavation—456 cu. yds.
Reinforcement—Steel—4,936 lbs.
Concrete—661.4 cu. yds.

Backfilling & Removing:

Surplus material—456 cu. yds.
Plaster—cement—on concrete—6,612 sq. ft.

Water:

For Tank—197,267 cu. ft.
Steel & Iron—690,550# ..... $43,985.00

200,000 cu. ft. Gas Holder:

Two Lifts—Brick Tank, Concrete Bottom
Inside Diameter of Tank—85'6"

Inside Depth of Tank:

Maximum—21'3"
Minimum—6'0" Max. pressure—4.5"

Tank:

Excavation—5,649.7 cu. yds.
Brick—191.840 M
Concrete—174.0 cu. yds.
Stone—Dressed 8.9 cu. yds.

Plaster:

Cement—On Brick—5,708 sq. ft.
Cement—On Concrete—4,697 sq. ft.

Backfilling & Removing:

Surplus material—5,649.7 cu. yds.

Water:

For Tank—99,932 cu. ft.
Steel & Iron—242,660# ..... 25,119.00

51 *Works Equipment*—(Cont'd).

| | Net construction cost. |
|---|---|
| 50,000 cu. ft. Gas Holder: | |
| Single Lift—Brick Tank, Concrete Bottom | |
| Inside Diameter of Tank—57'0" | |
| Inside Depth of Tank: | |
| Maximum—21'9" | |
| Minimum—6'0" Max. pressure—2.5" | |
| Tank: | |
| Excavation—3,409.0 cu. yds. | |
| Brick—140.405 M | |
| Concrete—85.8 cu. yds. | |
| Dressed Stone—10.3 cu. yds. | |
| Plaster—Cement: | |
| On Brick—3,895 sq. ft. | |
| On Concrete—3,089 sq. ft. | |
| Backfilling & Removing: | |
| Surplus material—3,409.0 cu. yds. | |
| Water: | |
| For Tank—43,523 cu. ft. | |
| Steel & Iron—58,200# | $10,409.00 |
| 20" Connelly Automatic Governor | 840.00 |
| 12" Reynolds Station Governor | 415.00 |
| 6"x10"x5"x10"—Knowles Compound Pump | 360.00 |
| 3"x4"—Vertical Plunger Pump | 160.00 |
| 3½"x4"x6"—Gardner Duplex Pump | 90.00 |
| 4½"x3¾x4"—Worthington Duplex Pump | 100.00 |
| 4½"x2¾"x4"—Gardner Duplex Pump | 95.00 |
| 4½"x2¾x4"—Worthington Duplex Pump | 95.00 |
| 3"x2"x3"—Worthington Duplex Pump | 85.00 |
| 6"x4"x6"—Warren Simplex Pump | 160.00 |
| 2½"x3"x4"Marsh Simplex Pump | 80.00 |
| Otis Elevator: | |
| Platform—6'0"x7'0" | |
| Electrically operated | 1,060.00 |

52 *Works Equipment*—(Cont'd).

| | Net construction cost. |
|---|---|
| Scale—Fairbanks: | |
| Platform—4'0"x4'0" | $60.00 |
| Photometer—American 60" Bar | 450.00 |
| Calorimeter—Junkers (with extra meter) | 210.00 |
| Shop Tools & Miscellaneous: | |
| Drill Press—Buffalo Forge Co. | |
| Post Type—#90 | |
| Drill Press—Buffalo Forge Co. | |
| Post Type—#99 | |
| Blower—Buffalo Forge Co. | |
| #2 E—Direct Connected to ¼ H. P. Motor. | |
| Induction Type—110 Volts | |
| Forge—Buffalo Forge Co. | |
| Cast Iron Body—3'6"x4'0" | |
| Emery Wheel—Duplex | |
| Anvils (two) | |
| #99 Buffalo Forge Co. Drill Press | |
| Vise—6" Jaw—Smith | |
| Grind Stone—2"x24" | |
| Vise—6" Jaw—Bench | |
| American Oil Filter | |
| Tire Setter | |
| Two 20 gal. Waste Cans | |
| Galvanized Iron Lye Tank | |
| Tire Roller | |
| Meter Test Tank | |
| U Gauges | |

53 *Works Equipment*—(Cont'd).

| | Net construction cost. |
|---|---|
| Manning Iron | |
| Two 2'0"x4'6" Oil Tanks | |
| Three 1" Denny Steam Traps | |
| Four #1 Lion Water Heaters | |
| Pipe rack | |
| Pipe dipping trough | $462.00 |
| Four Boilers—63"x16'0": | |
| Used as Tar Tanks | |
| No Settings | 760.00 |

Tar Separator:
5'0"x17'0"x10'0"
Walls, etc. Wood—
Excavation—90.9 cu. yds.

Framing:
Wood—rough—.234 M'B M

Bottom:
Wood—rough—2"—85 sq. ft.

Walls:
Wood—rough—2"—440 sq. ft.

Baffles:
Wood—rough—2"—175 sq. ft.

Cover:
Wood—rough—2"—85 sq. ft.

Backfilling & Removing:
Surplus material—90.9 cu. yds..... 179.00

3'3"x3'3"x10'0" Tar Well:
Walls, Brick; Bottom, Concrete.
Excavation—44.8 cu. yds.

Walls:
Brick—1.713 M

Bottom:
Concrete—.2 cu. yds.

Backfilling & Removing:
Surplus material—44.8 cu. yds. ..... 104.00

54 *Works Equipment*—(Cont'd).

Net construction cost.

6'0"x20'0"x12'0" Tar Well:
Walls, Brick.
Excavation—243.2 cu. yds.

Walls:
Brick—5.930 M

Backfilling & Removing:

| | |
|---|---|
| Surplus material—243.2 cu. yds. ..... | $472.00 |

2 Steel Tar Tanks:

Diameter Each—10′6″
Length Each—29′3″
Thickness of Steel—¼″
Foundation, Concrete & Wood.

Tanks:

| | |
|---|---|
| Steel—25,540 lbs. ..... | 1,149.00 |

Foundation:

| | |
|---|---|
| Excavation—38.7 cu. yds. ..... | 29.00 |
| Concrete—40.4 cu. yds. ..... | 364.00 |

Backfilling & Removing:

| | |
|---|---|
| Surplus material—38.7 cu. yds..... | 19.00 |
| Wood—rough—.629 M′B M ..... | 26.00 |
| | $1,587.00 |

2 Steel Oil Tanks:

Diameter Each—10′9″
Length Each—29′3″
Thickness of Steel—¼″
Foundation, Concrete & Wood

Tanks:

| | |
|---|---|
| Steel—25,727 lbs. ..... | 1,158.00 |

Foundation:

| | |
|---|---|
| Excavation—240.9 cu. yds. ..... | 181.00 |
| Concrete—41.1 cu. yds. ..... | 370.00 |

Backfilling & Removing:

| | |
|---|---|
| Surplus Material—240.9 cu. yds..... | 120.00 |
| Wood—rough—.629 M′B M ..... | 26.00 |
| | $1,855.00 |

2—Oil Tanks:

One—Diameter—8′0″
Length—24′0″
Thickness ¼″
Foundation, Brick.

Tank:

Steel—7,896 lbs.

Foundation:

Brick —3.204 M

55 *Works Equipment*—(Cont'd).

Net construction cost.

One—Diameter—8′6″
Length—30′0″
Thickness—¼″
Foundation, Brick

Tank:

Steel—10,261 lbs.

Foundation:

Brick—4.005 M ..... $1,220.00

Oil Tank:

10′0″x10′0″
Walls, Brick; Bottom, Concrete;
Cover, Wood.
Excavation—91.7 cu. yds.

Walls:

Brick—3.613 M

Bottom:

Concrete—1.5 cu. yds.

Cover:

Wood—rough—2″—104 sq. ft.

Backfilling & Removing:

Surplus material—91.7 cu. yds..... 228.00

100,000 cu. ft. Gas Holder (District Station):

Single Lift—Brick Tank, Concrete Bottom
Inside Diameter of Tank—82′0″

Inside depth of Tank:

Maximum—22′9″
Minimum—7′0″ Max. pressure—3.2″
85—744

Tank:

Excavation—5,487.5 cu. yds.
Reinforcement—Steel—1,365 lbs.
Concrete—225.3 cu. yds.
Brick—176,611 M
Stone—Dressed—8.0 cu. yds.
Plaster—Cement:
On Brick—5,861 sq. ft.
On Concrete 5,771 sq. ft.

Backfilling & Removing:
Surplus material—5,487.5 cu. yds.

Water:

For Tank—98,429 cu. ft.
Steel & Iron—137,600# ..... 18,685.00

56 *Works Equipment*—(Cont'd).

Net construction cost.

Water Piping.

Above ground:

| | | | | |
|---|---|---|---|---|
| Wrought Iron— | ¼″ | 4 | Lin. | Ft. |
| " " — | ⅜″ | 22 | " | " |
| " " — | ½″ | 224 | " | " |
| " " — | ¾″ | 321 | " | " |
| " " — | 1″ | 339 | " | " |
| " " — | 1¼″ | 164 | " | " |
| " " — | 1½″ | 21 | " | " |
| " " — | 2″ | 370 | " | " |
| " " — | 2½″ | 45 | " | " |

Below ground:

| | | | | |
|---|---|---|---|---|
| Wrought Iron— | ¾″ | 190 | Lin. | Ft. |
| " " — | 1″ | 15 | " | " |
| " " — | 1¼″ | 374 | " | " ..... $732.00 |

Valves:

| | | |
|---|---|---|
| Globes— | ⅜″ | 4 |
| " — | ½″ | 13 |
| " — | ¾″ | 13 |
| " — | 1″ | 13 |
| " — | 1¼″ | 4 |
| " — | 1½″ | 1 |
| " — | 2″ | 9 |
| " — | 2½″ | 1 ..... 89.00 |

Total ..... $821.00

Drain Piping.

Below ground:

Terra Cotta— 6″ 216 Lin. Ft.
" " —12″ 920 " " ..... $1,310.00

Manholes:

7 (4′6″x6′0″)
Brick—Circular,
Cast Iron Covers.

Excavation—122.2 Cu. Yds. ..... 122.00
Walls—Brick—5.294 M ..... 106.00

Backfilling & Removing:

Surplus Material 122.2 Cu. Yds..... 61.00
Covers—Cast Iron—26″—7..... 84.00

Total ..... $1,683.00

57 *Works Equipment*—(Cont'd).

Net construction cost.

Oil Piping.

Above ground:

Wrought Iron— ¾″ 27 Lin. Ft.
" " —1″ 249 " "
" " —1¼″ 28 " "
" " —1½″ 34 " "
" " —2″ 219 " "
" " —3″ 2 " " ..... $153.00

Below ground:

Wrought Iron—2″ 272 Lin. Ft. ..... 215.00

Valves:

Globes— ¾″ 3
" —1″ 16
" —1¼″ 3
" —1½″ 1
" —2″ 12 ..... 75.00

Total ..... $443.00

58 *Works Equipment*—(Cont'd).

| | Net construction cost. |
|---|---|
| **Gas Piping.** | |
| Above ground: | |
| Cast Iron, B & S— 6″ 191 Lin. Ft. | |
| " " " —10″ 330 " " | |
| " " " —12″ 42 " " | |
| " " " —16″ 539 " " | |
| " " " —20″ 30 " " ..... | $2,113.00 |
| Below ground: | |
| Cast Iron, B & S—10″ 56 Lin. Ft. | |
| " " " —12″ 25 " " | |
| " " " —16″ 254 " " | |
| " " " —20″ 320 " " ..... | 2,419.00 |
| Valves: | |
| Gates—10″ 13 | |
| " —16″ 15 | |
| " —20″ 4 ..... | 1,909.00 |
| Checks—16″ 1 ..... | 50.00 |
| Angles—16″ 1 | |
| " —20″ 2 ..... | 259.00 |
| Total ..... | $6,750.00 |

59 *Works Equipment*—(Cont'd).

| | Net construction cost. |
|---|---|
| **Steam Piping.** | |
| Above ground: | |
| Covered: | |
| Wrought Iron—1¼″ 63 Lin. Ft. | |
| " " —1½″ 8 " " | |
| " " —2″ 278 " " | |
| " " —2½″ 45 " " | |
| " " —3″ 136 " " | |
| " " —4″ 141 " " | |
| " " —6″ 66 " " ..... | $713.00 |

Uncovered:

| | | | | |
|---|---|---|---|---|
| Wrought Iron— | ¼″ | 12 | Lin. | Ft. |
| " " — | ⅜″ | 46 | " | " |
| " " — | ½″ | 367 | " | " |
| " " — | ¾″ | 847 | " | " |
| " " — | 1″ | 203 | " | " |
| " " — | 1¼″ | 3239 | " | " |
| " " — | 1½″ | 134 | " | " |
| " " — | 2″ | 420 | " | " |
| " " — | 2½″ | 166 | " | " |
| " " — | 3″ | 51 | " | " |
| " " — | 4″ | 17 | " | " |
| " " — | 8″ | 19 | " | " ..... 1,436.00 |

Below ground:

| | | | | |
|---|---|---|---|---|
| Wrought Iron— | ½″ | 62 | Lin. | Ft. |
| " " — | ¾″ | 278 | " | " |
| " " — | 1¼″ | 160 | " | " |
| " " — | 2″ | 142 | " | " |
| " " — | 3″ | 15 | " | " ..... 287.00 |

Valves:

| | | |
|---|---|---|
| Gates— | 3″ | 1 |
| " — | 4″ | 1 |
| Checks— | 1″ | 1 |
| Globes— | ¼″ | 1 |
| " — | ⅜″ | 6 |
| " — | ½″ | 23 |
| " — | ¾″ | 26 |
| " — | 1″ | 15 |
| " — | 1¼″ | 24 |
| " — | 1½″ | 3 |
| " — | 2″ | 18 |
| " — | 2½″ | 1 ..... 221.00 |

Total ..... $2,657.00

60 *Works Equipment*—(Cont'd).

Net construction cost.

Tar Piping.

Above ground:

| | | | | |
|---|---|---|---|---|
| Wrought Iron— | 1¼″ | 224 | Lin. | Ft. |
| " " — | 2″ | 85 | " | " ..... $87.00 |

Below ground:

| | | | | |
|---|---|---|---|---|
| Wrought Iron— | 1¼″ | 38 | Lin. | Ft. |
| " " — | 2″ | 386 | " | " ..... 329.00 |

| | |
|---|---|
| Cast Iron, B & S—3″ 58 Lin. Ft. | |
| " " " —4″ 62 " " ..... | 147.00 |
| Valves: | |
| Globes— ⅜″ 2 | |
| " — ¾″ 1 | |
| " —1″ 1 | |
| " —1¼″ 9 | |
| " —2″ 1 ..... | 23.00 |
| Total ..... | $586.00 |
| Works Tools, Miscellaneous..... | $600.00 |

61 *Office Furniture & Fixtures.*

| | Net construction cost. |
|---|---|
| Electric ceiling & window fixtures..... | $879.13 |
| Office railings & marble..... | 2,340.40 |
| 70 Yds. Linoleum ..... | 140.00 |
| 235 Yds. " ..... | 470.00 |
| 208¼ Yds. special heavy cork..... | 312.38 |
| 115½ Yds. special heavy cork..... | 173.25 |
| Linoleum (2nd floor) ..... | 39.00 |
| 170 Ft. turned edge brass binding..... | 17.00 |
| 3—Austrian transom shades .....<br>6—Puff shades for cashier's windows..... | 90.00 |
| 10—Coat racks ..... | 50.00 |
| 3—Three-fold screens ..... | 9.00 |
| 2—Ferns ..... | 3.50 |
| 10—Palms ..... | 12.50 |
| 13—Abolite fixtures ..... | 16.15 |
| 1—2 Light bracket ..... | 12.00 |
| 3—1 Light brackets ..... | 12.00 |
| 10—Cuspidors ..... | 8.30 |
| 1—Protectograph ..... | 30.00 |
| 4—Sections book case with top & base..... | 17.25 |
| 1—3 Section letter file..... | 16.00 |
| 1—3x5, 6 Drawer letter file index cabinet..... | 13.25 |
| 1—Stenographer's stationery cabinet ..... | 19.00 |
| 1 Pr.—package & letter scales..... | 1.00 |
| 2—National cash registers ..... | 30.00 |
| 3—Wales hand-operated adding machines..... | 750.00 |
| 1—Wales electric operated adding machine..... | 350.00 |
| 1—Diebold safe ..... | 300.00 |
| 1—Multigraph complete ..... | 550.00 |
| 1—Addressograph complete ..... | 730.25 |
| 1—Book omnibus ..... | 21.00 |
| 4—Awnings (2nd floor)..... | 21.00 |
| 2—Awnings—(east side first floor)..... | 11.50 |

| | |
|---|---|
| 6—Awnings—(west side first floor) | 99.00 |
| 3—Screens (windows south side) | 27.00 |
| 4—Screens (windows east side) | |
| 4—Screen doors (entrance) | 24.00 |
| 1—Screen door—(side entrance) | 8.75 |
| 2—3x4 Rubber mats | 19.20 |
| 2—Exterior brass signs | 60.00 |
| Office door signs | 3.00 |
| 3—Auto-card indexes | 75.60 |
| 9—Waste baskets | 6.20 |
| 1—Electric dumb-waiter | 1,050.00 |
| 3—27x23 D. S. Glass for elevator doors | 2.15 |
| 2—Russwin door checks for elevator doors | 7.50 |
| 2—K. & K. Calculating machines | 70.00 |
| 1—Cabinet for electric globe sales dept | 34.00 |
| 19—Linen puff shades—sash curtains with rods | 385.00 |

62 *Office Furniture & Fixtures*—(Cont'd).

| | Net construction cost. |
|---|---|
| 2—High back desk stools | $10.00 |
| 1—Wax oak chair (telephone) | 15.00 |
| 2—Ceiling fans | 62.00 |
| 1—Numbering machine | 15.00 |
| 1—Stool | 2.75 |
| 1—Stool | 2.75 |
| 1—Swivel stool | 3.50 |
| | |
| 2—Upholstered seats | 200.00 |
| 3—Display tables | 37.50 |
| 1—8 Ft. display table | 65.00 |
| 1—Mahogany desk (Johnston) | 75.00 |
| 1—Revolving desk chair (Johnston) | 7.50 |
| 2—Vienna bent wood chairs (Johnston) | 5.00 |
| 1—Magazine rack | 37.50 |
| 1—Pedestal lavatory & basin | 48.14 |
| | |
| 1—Office desk | 125.00 |
| 1—Office table | 55.00 |
| 1—14 x 10 Rug | 275.00 |
| 6—Wax chairs | 90.00 |
| 1—Revolving desk chair | 17.50 |
| 1—Ceiling fixture complete | 22.10 |
| | |
| 1—Office desk | 55.00 |
| 1—Revolving desk chair | 7.50 |
| 3—Sections book case | 15.25 |
| 1—2 Section letter file | 5.50 |
| 2—Office chairs | 15.00 |
| 1—Rug 9x14 | 52.00 |

| | |
|---|---|
| 1—Office desk | 125.00 |
| 1—Revolving desk chair | 9.00 |
| 2—Office chairs | 22.50 |
| 1—12 drawer filing cabinet (contracts) | 27.75 |
| 1—9 x 14 Rug | 52.50 |
| 1—Office desk | 65.00 |
| 1—Revolving office chair | 12.00 |
| 1—4 Ft. Table | 10.00 |
| 1—Oak table | 15.00 |
| 2—Office chairs—cushion back | 30.00 |
| 1—Straight back chair—cushion bottom | 3.25 |
| 1—Office table—(voucher clerk) | 24.50 |

63 *Office Furniture & Fixtures*—(Cont'd).

| | Net construction cost. |
|---|---|
| 1—11 x 15 Rug | $90.00 |
| 1—Office table | 22.50 |
| 1—Oak chair | 5.00 |
| 1—Office desk | 33.00 |
| 2—Office chairs | 30.00 |
| 1—Typewriter desk (Mosher) | 45.00 |
| 1—Oliver typewriter (Mosher) | 60.00 |
| 1—Bent wood chair (Mosher) | 2.50 |
| 1—Typewriter desk (Roberts) | 30.00 |
| 1—Remington typewriter (Roberts) | 90.00 |
| 1—Bent wood chair (Roberts) | 2.50 |
| 1—Straight back chair (Roberts) | 5.00 |
| 2—5 Drawer filing cabinets for drawings | 54.00 |
| 1—12 Drawer 4x7 Filing cabinets (line orders) | 25.00 |
| 9—Sections letter filing cabinets (Roberts) | 18.00 |
| 1—24 Drawer 3x5 Filing cabinet (rep. & conn.) | 24.00 |
| 1—6 Drawer 3x5 Filing cabinet (meter set orders) | 9.50 |
| 1—2 Drawer 4x6 Filing cabinet (complaint orders) | 6.00 |
| 2—36 Drawer steel voucher filing cabinets | 180.00 |
| 1—2 Drawer filing cabinet | 5.00 |
| 1—2 Drawer filing cabinet (leak orders) | 5.00 |
| 2—2 Drawer filing cabinets (bad debts) | 10.00 |
| 2—12 Drawer filing cabinets (meter records) | 38.00 |
| 1—12 Drawer filing cabinets 5x8 (meter app.) | 26.50 |
| 1—Office desk | 37.50 |
| 1—Section book-case | 5.50 |
| 1—Table | 10.00 |
| 1—Revolving office chair | 12.00 |
| 1—Rocking chair | 9.00 |

| | |
|---|---|
| 1—Office chair | 6.25 |
| 1—6 Drawer 3x5 filing cabinet | 9.00 |
| 3—6 Drawer 3x5 filing cabinets (governors) | 22.50 |
| 1—5 Drawer 4x6 filing cabinets (governors) | 11.00 |
| 1—6 Drawer catalog cabinet | 13.00 |
| 1—Drawing board (July, 1905) | 25.00 |
| 1—High stool | 3.50 |
| 1—Rool map rack | 5.00 |
| 2—Map filing cases | 51.33 |

64 *Office Furniture & Fixtures*—(Cont'd).

| | Net construction cost. |
|---|---|
| 1—16 Drawer filing case with top | $17.50 |
| 1—2 Drawer catalog cabinet with base | 9.50 |
| 1—Blue print frame | 10.00 |
| 1—Flat top office desk | 18.00 |
| 1—Table | 3.25 |
| 1—Straight back chair | 5.00 |
| 1—Brandt automatic cashier | 150.00 |
| 1—Stub cutting machine | 25.00 |
| 1—Stub receipting & stub cutting machine | 92.76 |
| 1—¼ H. P. Motor with wiring & belt | 24.55 |
| 1—Stool | 2.75 |
| Counters & railing | 19.80 |
| Curtains with rods | 9.00 |
| 5—Standing desks | 45.00 |
| 1—Sorting table | 2.80 |
| 2—Round tables | 15.30 |
| 1—Filing case with drawers for stubs | 17.40 |
| 1—Filing case for meter books | 4.50 |
| 1—Double high desk | 40.00 |
| 1—Table | 18.00 |
| 2—High stools | 6.25 |
| 1—Rocking chair | 7.50 |
| 1—Straight back chair | 5.00 |
| 3—Bent wood chairs | 7.50 |
| 1—Cushion bottom chair | 3.25 |
| 1—6x9 Rug | 25.00 |
| 7—Bent wood chairs | 24.50 |
| 1—Seven ft. table | 35.00 |
| 3—Small desks | 37.50 |
| 1—3x5 Motor index | .75 |
| 1—4x6 Motor index | 1.10 |
| 1—Rocking chair | 7.50 |

| | |
|---|---|
| 1—Office desk | 50.00 |
| 1—Flat top desk | 12.50 |
| 1—Revolving desk chair | 7.50 |
| 1—2 Section letter file | 5.50 |
| 2—Straight back chairs | 5.00 |
| 1—Stationery cabinet | 42.50 |

65 *Office Furniture & Fixtures*—(Cont'd).

| | Net construction cost. |
|---|---|
| 1—Mahogany desk | $50.00 |
| 1—Flat top table | 3.50 |
| 1—Roll top office desk | 27.50 |
| 2—Revolving desk chairs | 11.50 |
| 1—Section book case | 3.50 |
| 1—2 Drawer 3x5 filing cabinet | 6.00 |
| 1—4 Drawer filing cabinet (pressure charts) | 18.00 |
| 1—12 Drawer filing cabinet (services) | 27.00 |
| 1—5 Fold screen | 5.00 |
| 1—1 Drawer filing cabinet (tar sales) | 3.00 |
| Total | $13,039.00 |
| 2/3 Above amount to Gas Dept.= Total | $8,606.00 |

66 *Works Equipment*—(Cont'd).

Water Piping at District Holder Station.

Net construction cost.

Above ground:

Wrought Iron— ½"—40 Lin. Ft.
Wrought Iron—1¼"—16 " "

Below ground:

Wrought Iron—1¼"—252 Lin. Ft.

Valves:

Globes—1¼"—4 ..... $177.00

Gas Piping at District Holder Station.

Above ground:

Cast-Iron—B & S— 6"— 3 Lin. Ft.
Cast-Iron—B & S— 8"—42 " "
Cast-Iron—B & S—10"—23 " "

Below ground:

Cast-Iron—B & S—10″—78 Lin. Ft.

Valves:

Gates— 8″—2
Gates—10″—4 ..... 463.00

Manholes at District Holder Station.

4 (6′6″x7′6″x15′0″)
Walls—Brick, Rectangular
Bottom—Concrete
Cast-Iron Covers—Circular

Excavation—699.6 cu. yds. ..... 700.00

Walls:

Brick—17.958 M ..... 352.00

Bottom:

Concrete—1.1 cu. yds. ..... 10.00

Backfilling & Removing:

Surplus material—699.6 cu. yds..... 350.00

Covers:

Cast-Iron—18″—4 ..... 20.00

Vent Pipes:

Above ground:

Cast-Iron—5″—168 Lin. ft..... 101.00

$1,533.00

67 *Works Equipment*—(Cont'd).

Net construction cost.

25 H. P.—General Electric Co. Motor:

Induction Type—Three Phase
220 Volts—855 R. P. M.—Variable Speed

Foundation:

Excavation—2.3 cu. yds.
Concrete—1.0 cu. yds.

Backfilling & Removing:

Surplus material—2.3 cu. yds..... $423.00

5 H. P.—General Electric Co. Motor:
Induction Type—Three Phase
220 Volts—1,200 R. P. M..... 160.00

#5—Sturtevant Blower (Belted):
Foundation:
Excavation—1.2 cu. yds.
Concrete—.4 cu. yds.

Backfilling & Removing:
Surplus material—1.2 cu. yds. ..... 180.00

#5—Sturtevant Positive Blower (geared)..... 210.00

68 EXHIBIT J.

69 *Distribution Department Summary.*

| | | Net construction cost. |
|---|---|---|
| Total Street mains | | $322,261.00 |
| Total Street Main Miscellaneous: | | |
| Drips | $1,113.00 | |
| Valves | 328.00 | |
| District Governor | 225.00 | |
| Railway Crossings | 6,510.00 | |
| Distribution Tools, etc. | 6,210.00 | |
| Gas Appliances Loaned | 3,791.00 | |
| | | 18,177.00 |
| Total Services | | 130,839.00 |
| Total Service Governors | | 20,369.00 |
| Total Service Boxes & Cocks | | 11,068.00 |
| Total Meters | | 66,017.00 |
| Total Distribution System | | $568,731.00 |

(Here follow tables, marked pages 70 and 71.)

DISTRIBUTION SYSTEM

Street Mains:-

| Size | Kind | Length (Feet) | Kind of Pavement | Net Construction Cost of Pipe Laid In Unpaved Street | Net Construction Cost of Tearing Up & Replacing Pavement | Total Net Construction Cost |
|---|---|---|---|---|---|---|
| In Lincoln:- | | | | | | |
| 1 1/4" | W.I. | 289 | Asphalt on Concrete | $ 54.00 | $ 168.00 | $ 222.00 |
| | | 193 | Brick on Concrete | 36.00 | 136.00 | 172.00 |
| | | 1258 | Two Course Brick | 234.00 | 610.00 | 844.00 |
| | | 518 | None | 96.00 | | 96.00 |
| | | 2258 | | $ 420.00 | $ 914.00 | $ 1334.00 |
| 2" | W.I. | 1330 | Wood Block | $ 308.00 | $ 859.00 | $ 1167.00 |
| | | 54316 | Asphalt on Concrete | 12596.00 | 31530.00 | 44126.00 |
| | | 15896 | Brick on Concrete | 3686.00 | 11175.00 | 14862.00 |
| | | 24342 | Two Course Brick | 5645.00 | 11906.00 | 17451.00 |
| | | 263717 | None | 61156.00 | | 61156.00 |
| | | 359601 | | $ 83391.00 | $ 55371.00 | $138762.00 |
| 3" | C.I. | 406 | Two Course Brick | $ 189.00 | $ 197.00 | $ 386.00 |
| 4" | C.I. | 19281 | Asphalt on Concrete | $ 10930.00 | $ 11193.00 | $ 22123.00 |
| | | 19525 | Brick on Concrete | 11069.00 | 13728.00 | 24797.00 |
| | | 22217 | Two Course Brick | 12595.00 | 10775.00 | 23370.00 |
| | | 33251 | None | 18850.00 | | 18850.00 |
| | | 94274 | | $ 53444.00 | $ 35696.00 | $ 89140.00 |
| 6" | C.I. | 431 | Wood Block | $ 335.00 | $ 278.00 | $ 613.00 |
| | | 3360 | Asphalt on Concrete | 2610.00 | 1950.00 | 4560.00 |
| | | 9130 | Brick on Concrete | 7091.00 | 6419.00 | 13510.00 |
| | | 6354 | Two Course Brick | 4935.00 | 3082.00 | 8017.00 |
| | | 6598 | None | 5125.00 | | 5125.00 |
| | | 25875 | | $ 20096.00 | $ 11729.00 | $ 31825.00 |
| 8" | C.I. | 1741 | Asphalt on Concrete | $ 1821.00 | $ 1103.00 | $ 2924.00 |
| | | 102 | Brick in Concrete | $ 107.00 | 76.00 | 183.00 |
| | | 1974 | Two Course Brick | 2005.00 | 1019.00 | 3084.00 |
| | | 751 | None | 786.00 | | 786.00 |
| | | 4568 | | $ 4779.00 | $ 2198.00 | $ 6977.00 |

DISTRIBUTION SYSTEM (Cont'd)

| | Size | Kind | Length (Feet) | Kind of Pavement | Net Construction Cost of Pipe Laid In Unpaved Street | Net Construction Cost of Tearing Up & Replacing Pavement | Total Net Construction Cost |
|---|---|---|---|---|---|---|---|
| In Lincoln- | 10" | C.I. | 1842 | Asphalt on Concrete | $ 2507.00 | $ 1264.00 | $ 3771.00 |
| | | | 457 | Brick on Concrete | 622.00 | 363.00 | 985.00 |
| | | | 964 | Two Course Brick | 1312.00 | 528.00 | 1840.00 |
| | | | 6547 | None | 8912.00 | | 8912.00 |
| | | | 9810 | | $ 13353.00 | $ 2155.00 | $ 15508.00 |
| | 12" | C.I. | 162 | Asphalt on Concrete | $ 277.00 | $ 111.00 | $ 388.00 |
| | | | 325 | Brick on Concrete | 557.00 | 258.00 | 815.00 |
| | | | 1644 | Two Course Brick | 2816.00 | 900.00 | 3716.00 |
| | | | 1482 | None | 2539.00 | | 2539.00 |
| | | | 3613 | | $ 6189.00 | $ 1269.00 | $ 7458.00 |
| | 16" | C.I. | 533 | Brick on Concrete | $ 1325.00 | $ 472.00 | $ 1797.00 |
| | | | 330 | Two Course Brick | 820.00 | 201.00 | $ 1021.00 |
| | | | 406 | None | 1009.00 | | 1009.00 |
| | | | 1269 | | $ 3154.00 | $ 673.00 | $ 3827.00 |
| | 20" | C.I. | 1472 | None | $ 4978.00 | $ | $ 4978.00 |
| Total in Lincoln - | | | 503144 | | $ 189993.00 | $ 110202.00 | $ 300195.00 |
| Outside of Lincoln:- | | | | | | | |
| State Farm - | 4" | C.I. | 2010 | None | $ 1139.00 | $ | $ 1139.00 |
| University Place | | | | | | | |
| | 2" | W.I. | 27850 | None | $ 6458.00 | | $ 6458.00 |
| | 4" | C.I. | 12200 | None | 6916.00 | | 6916.00 |
| Havelock - | 2" | W.I. | 12280 | None | 2848.00 | | 2848.00 |
| | 4" | C.I. | 8300 | None | 4705.00 | | 4705.00 |
| Total Outside of Lincoln | | | 62640 | | $ 22066.00 | $ | $ 22066.00 |
| Total Street Mains - | | | 563784 | | $ 212059.00 | $ 110202.00 | $ 322261.00 |



PLAINTIFF'S EXHIBIT 4

72 *Distribution System*—(Cont'd).

Street Main Drips.

In Lincoln:

| Size main. | Number. | Kind. | Net construction cost. |
|---|---|---|---|
| 2″ | 132 | Siphon | $495.00 |
| 4″ | 1 | " | 4.00 |
| 6″ | 1 | " | 9.00 |
| 8″ | 2 | " | 24.00 |
| 4″ | 27 | Line | 313.00 |
| 6″ | 7 | " | 99.00 |
| 8″ | 3 | " | 42.00 |
| 10″ | 4 | " | 56.00 |
| 12″ | 2 | " | 28.00 |
| 16″ | 1 | " | 19.00 |
| 20″ | 1 | " | 24.00 |
| | 181 | | $1,113.00 |

Street Main Valves.

In Lincoln:

| | | | |
|---|---|---|---|
| 2″ | 2 | Gate | $10.00 |
| 4″ | 10 | " | 90.00 |
| 6″ | 4 | " | 60.00 |
| 8″ | 2 | " | 40.00 |
| 10″ | 3 | " | 90.00 |
| 12″ | 1 | " | 38.00 |
| | 22 | | $328.00 |

District Governor.

| | | | |
|---|---|---|---|
| 4″ | 1 | | $225.00 |

Railway Crossings.

In Lincoln:

| | | | |
|---|---|---|---|
| | 153 | Electric—Single | $2,295.00 |
| | 103 | " —double | 2,060.00 |
| | 1 | " —triple | 25.00 |
| | 92 | Steam—single | 1,840.00 |
| | 349 | | $6,220.00 |

Outside of Lincoln.

| | | | |
|---|---|---|---|
| University Place | 11 | Electric—single | $165.00 |
| Havelock | 1 | Steam—single | 20.00 |
| | 7 | Electric—single | 105.00 |
| | 19 | | $290.00 |
| Total Crossings | 368 | | $6,510.00 |

73 *Distribution Department Tools.*

| | |
|---|---|
| 10—10″ Trimo wrenches | $6.80 |
| 9—14″ " " | 8.10 |
| 4—18″ " " | 5.76 |
| 12 Pr.—6″ gas pliers | 5.40 |
| 4—Claw hammers | 2.28 |
| 4—Machinists' hammers | 2.60 |
| 4—Key hole saws | .80 |
| 12—Screw drivers | 6.00 |
| 5 Pr. paper cutters | 7.90 |
| 5—Sets #1 Stock and dies | 50.00 |
| 1—Set #2 " | 12.50 |
| 4—Braces | 8.00 |
| 4—Feeling bits | 2.00 |
| 4—Bits for ⅜ pipe | 1.00 |
| 4—Bits for ¾ pipe | 2.00 |
| 4—Bits for ½ pipe | 1.88 |
| 4—25′ Tape lines | 1.00 |
| 4—2 Ft. rules | 1.00 |
| 4—Wood chisels 1¼″ | 2.40 |
| 4—Cold chisels | .60 |
| 4—Oil cans | .44 |
| 4—Hacksaw & blades | 4.80 |
| 4—Wagon vise | 20.00 |
| 1—Bench vise | 7.20 |
| 4—Tool boxes | 20.00 |
| 2—#14 Mueller tapping machines | 45.00 |
| Drills and taps | 30.50 |
| 10—Lantern (red globe) | 10.00 |
| 10—Tampers | 10.00 |
| 4—Levels | 3.00 |
| 2—10 Lb. sledge hammers | 4.00 |
| 2—Caulking hammers | 1.00 |
| 5—Caulking chisels | .75 |
| 5—Yarning " | .75 |
| 7—Cold chisels | 1.05 |
| 8—Diamond point chisels | .90 |
| 1—Saw | .85 |
| 4—#2 Oster stock & dies | 50.00 |
| 2—#2 Ratchet stock | 25.00 |
| 4—24″ Trimo wrenches | 9.40 |
| 4—18″ " " | 5.76 |
| 2—10″ " " | 1.36 |
| 3—3 Wheel cutters | 9.00 |
| 2—Roller cutters | 4.50 |
| 4—Oil cans | .44 |
| 4—22″ Drills | |
| 1—Chain tong | 3.00 |

74 *Distribution Department Tools*—(Cont'd).

| | |
|---|---|
| 1—3″ Vise | $3.00 |
| 1—Hatchet | .70 |
| 1—Brace | 2.50 |
| 1—Saw | .85 |
| 1—Keyhole saw | .20 |
| 1—Claw hammer | .57 |
| 1—Machinist's hammer | .65 |
| 1—Hack saw & blades | 1.20 |
| 1—14″ Pinch bar | .75 |
| 1—Set 3/16″ Steel number stamps | 1.50 |
| 1—Oil can | .11 |
| 1—Pr. 6″ gas pliers | .45 |
| 1—Screw driver | .50 |
| 3—Pr. 6″ side-cutting pliers | 3.30 |
| 2—Pr. snips | 3.00 |
| 9—Packing irons | 1.00 |
| 4—Stripping irons | .60 |
| 6—12″ Bastard files | 2.40 |
| 1—#14 Drill | .45 |
| 1—#10 Drill | .38 |
| 1—#4 Drill | .35 |
| 1—#8 Drill | .35 |
| 2—10″ Flat nose pliers | 1.00 |
| 4—6″ " " " | 3.60 |
| 3—6″ " " " | 2.40 |
| 7—6# Soldering irons with handles | 8.40 |
| 3—Small hammers | 1.05 |
| 3—Prs.—10″ Stuffing box pliers | 2.40 |
| 3—Cleaning brushes | 1.50 |
| 1—2½x6″ Wire brush | .75 |
| 1—Long handle wire brush | .75 |
| 2—Cold chisels | .30 |
| 1—18″ Monkey wrench | 1.25 |
| 1—18″ Trimo " | 1.44 |
| 1—10″ " " | .68 |
| 1—Rivet set | .25 |
| 1—12″ Round file | .40 |
| 1—Pr. 36″ Blacksmith tongs | .80 |
| 1—12″ "U" gauge | |
| 2—5′ Provers | 250.00 |
| 3—Soldering iron furnace | 10.50 |
| 5—2″ Pipe tongs | 3.75 |
| 5—Wagon vise | 25.00 |
| 3—2″ Auger | 9.00 |
| 1—3″ Auger | 3.50 |
| 3—16″ Files | 2.25 |
| 1—½x6′ Steel rod | |
| 1—½x4′ " " | |
| 1—Lead furnace and kettle | 45.00 |

75 *Distribution Department Tools*—(Cont'd).

| | |
|---|---|
| 2—Brace | $4.00 |
| 2—1″ Bits | 1.00 |
| 19—Picks | 13.30 |
| 19—Pick handles | 6.65 |
| 3—Water buckets | .90 |
| 1—Automobile | 2,000.00 |
| 1—Thor "V" motorcycle (1912) | 225.00 |
| 13—Horses | 1,800.00 |
| 10—Wagons | 750.00 |
| 2—Buggies | 90.00 |
| 4—12 "U" gauges | 6.00 |
| 4—8″ Recording pressure gauges (Bristol) | 30.00 |
| 1—12″ " " gauge (Bristol) | 36.00 |
| 12—Sets harness & miscellaneous | 450.00 |
| Total | $6,210.35 |

76 *Gas Appliances Loaned.*

| No. | | Net construction cost. |
|---|---|---|
| 79 | 5 Mantle gas arcs inverted | $730.75 |
| 20 | 4 " " " upright | 110.00 |
| 328 | 3 " " " inverted | 2,542.00 |
| 14 | 4 " " " upright (outside) | 119.00 |
| 1 | Hot plate | 1.50 |
| 18 | Second hand ranges | 220.05 |
| 1 | Water heater | 6.72 |
| 1 | Broiler | 49.59 |
| 2 | Burners | 11.20 |
| | Total | $3,790.81 |

**Services.**

| | Number. | Kind of pavement. | Net construction cost of pipe laid in unpaved street. | Net construction cost of tearing up & replacing pavement. | Total net construction cost. |
|---|---|---|---|---|---|
| In Lincoln— | | | | | |
| House Services: | | | | | |
| (Aver. length =73'.) | | | | | |
| (Aver. diam. =1¼".) | | | | | |
| | 33 | Wood Block | $447.00 | $144.00 | $591.00 |
| | 1222 | Asphalt on Concrete | 16,570.00 | 6,758.00 | 23,328.00 |
| | 189 | Asphalt with Brick Gutters | 2,562.00 | 854.00 | 3,416.00 |
| | 656 | Brick on Concrete | 8,895.00 | 3,116.00 | 12,011.00 |
| | 908 | Two Course Brick | 13,126.00 | 3,175.00 | 16,301.00 |
| | 5133 | None | 69,003.00 | ..... | 69,003.00 |
| | 8201 | | $111,203.00 | $14,047.00 | $125,250.00 |
| Stub Services: | | | | | |
| (Aver. length =23'.) | | | | | |
| (Aver. diam. =1¼".) | | | | | |
| | 1 | Wood Block | $4.00 | $4.00 | $8.00 |
| | 45 | Asphalt on Concrete | 192.00 | 249.00 | 441.00 |
| | 7 | Asphalt with Brick Gutters | 30.00 | 32.00 | 62.00 |
| | 24 | Brick on Concrete | 102.00 | 114.00 | 216.00 |
| | 37 | Two Course Brick | 158.00 | 121.00 | 279.00 |
| | 114 | | $486.00 | $520.00 | $1,006.00 |
| Total in Lincoln | 8315 | | $111,689.00 | $14,567.00 | $126,256.00 |

*Distribution System* (Cont'd).

Services—Continued.

| | Number. | Kind of pavement. | Net construction cost of pipe laid in unpaved street. | Net construction cost of tearing up & replacing pavement. | Total net construction cost. |
|---|---|---|---|---|---|
| Outside of Lincoln— | | | | | |
| House Services: | | | | | |
| State Farm | 13 | None | $176.00 | $..... | $176.00 |
| University Place | 213 | None | 2,888.00 | ..... | 2,888.00 |
| Havelock | 112 | None | 1,519.00 | ..... | 1,519.00 |
| Total Outside of Lincoln | 338 | | $4,583.00 | $..... | $4,583.00 |
| Total House Services in Use | 8539 | | $115,786.00 | $14,047.00 | $129,833.00 |
| Total Services | 8653 | | $116,272.00 | $14,567.00 | $130,839.00 |

78 *Distribution System*—(Cont'd).

Service Governors.

In Lincoln
In Use:

| Size. | Number. | Net construction cost. |
|---|---|---|
| ¾" | 6797 | $18,488.00 |
| 1¼" | 199 | 820.00 |
| 2" | 4 | 32.00 |
| Total in use in Lincoln | 7000 | $19,340.00 |
| In Stock: | | |
| ¾" | 284 | $460.00 |
| 1¼" | 34 | 96.00 |
| 2" | 1 | 6.00 |
| Total in Stock | 319 | $562.00 |
| Outside of Lincoln | | |
| In Use: | | |
| State Farm ¾" | 3 | $8.00 |
| 2" | 1 | 8.00 |
| University Place ¾" | 149 | 405.00 |
| Havelock ¾" | 17 | 46.00 |
| Total outside of Lincoln | 170 | $467.00 |
| Total Service Governors in use | 7170 | $19,807.00 |
| Total Service Governors | 7489 | $20,369.00 |
| Service Boxes & Cocks | 6149 | $11,068.00 |

79 *Distribution System*—(Cont'd).

Meters.

In Lincoln:
In Use:

| Size and kind. | Number. | Net construction cost. |
|---|---|---|
| #1 A | 23 | $161.00 |
| #2 | 11 | 89.00 |
| #2 A | 15 | 121.00 |
| 3 Lt. Ord. | 2783 | 18,117.00 |
| 5 Lt. " | 5125 | 41,308.00 |
| 10 Lt. " | 40 | 428.00 |
| 20 Lt. " | 54 | 819.00 |
| 30 Lt. " | 4 | 89.00 |
| 45 Lt. " | 12 | 379.00 |
| 60 Lt. " | 1 | 41.00 |
| Total in use in Lincoln | 8068 | $61,552.00 |

In Stock:

| | | |
|---|---|---|
| #1 A | 2 | $13.00 |
| #2 | 1 | 7.00 |
| #2 A | 2 | 15.00 |
| 3 Lt. Ord. | 89 | 530.00 |
| 5 " " | 131 | 965.00 |
| 10 " " | 10 | 99.00 |
| 20 " " | 3 | 42.00 |
| 45 " " | 3 | 90.00 |
| 60 " " | 1 | 40.00 |
| 150 " " | 1 | 91.00 |
| Total in stock | 243 | $1,892.00 |
| Total Meters in Lincoln | 8311 | $63,444.00 |

80 *Distribution System*—(Cont'd).

Meters—(Cont'd).

Outside of Lincoln:

In Use:

| | Size and kind. | Number. | Net construction cost. |
|---|---|---|---|
| State Farm | #1 A | 1 | $7.00 |
| | #2 | 1 | 8.00 |
| | 3 Lt. Ord. | 2 | 13.00 |
| | 5 Lt. " | 7 | 56.00 |
| | 30 Lt. " | 1 | 22.00 |
| | 60 Lt. " | 1 | 41.00 |
| | 100 Lt. " | 2 | 126.00 |
| University Place | #1 A | 12 | 84.00 |
| | 5 Lt. Ord. | 168 | 1,354.00 |
| Havelock | 3 Lt. " | 16 | 104.00 |
| | 5 Lt. " | 94 | 758.00 |
| Total Outside of Lincoln | | 305 | $2,573.00 |
| Total Meters in Use | | 8373 | $64,125.00 |
| Total Meters | | 8616 | $66,017.00 |

81 # EXHIBIT K.

82 *Reproduction Expenditures.*

| | 1913. | 1914. | 1915. |
|---|---|---|---|
| **Organization & Legal Expense:** | | | |
| Preliminary investigation ..... | $3.000.00 | ..... | ..... |
| Preparing articles, etc..... | 4,000.00 | $1,750.00 | $1,750.00 |
| Salaries of manager, etc..... | 9,000.00 | 9,000.00 | ..... |
| Incidental & travelling expenses ..... | 1,250.00 | 1,250.00 | ..... |
| Rent & Stationery..... | 1.000.00 | 1,000.00 | ..... |
| Real Estate ..... | $11,000.00 | $9,000.00 | $1,700.00 |
| **Buildings:** | | | |
| Purifying house ..... | $19,279.00 | ..... | ..... |
| Generator house ..... | ..... | 4,337.00 | ..... |
| Retort house ..... | 8,919.00 | ..... | ..... |
| Meter shop & Booster house... | ..... | 3,035.00 | ..... |
| Coal shed ..... | 2,080.00 | ..... | ..... |
| Oil tank house..... | ..... | 1,807.00 | ..... |
| Oxide shed ..... | 70.00 | ..... | ..... |
| Stable & Blacksmith Shop.... | 949.00 | ..... | ..... |
| District Holder Booster house. | ..... | ..... | 836.00 |
| **Works Equipment:** | | | |
| 7' 6" Water Gas set..... | ..... | 9,833.00 | ..... |
| 7' 6" Water Gas set..... | ..... | 9,833.00 | ..... |
| W. G. Condenser & scrubber.. | ..... | 1,414.00 | ..... |
| Operating floor ..... | ..... | 2 380.00 | ..... |
| 6' 6" W. G. Set..... | ..... | 9,364.00 | ..... |
| 6' 6" W. G. Set (Springer)... | ..... | 5,790.00 | ..... |
| Operating floor ..... | ..... | 2,170.00 | ..... |
| #7 Sturtevant blower..... | ..... | 316.00 | ..... |
| #7 Sturtevant blower..... | ..... | 324.00 | ..... |
| #1 Roots blower..... | 317.00 | ..... | ..... |
| #7 Sturtevant turbo-blower.... | ..... | 1,665.00 | ..... |
| #8 Sturtevant blower..... | ..... | 525.00 | ..... |
| #6 Roots exhauster ..... | 918.00 | ..... | ..... |
| #6 Sturtevant exhauster..... | 401.00 | ..... | ..... |
| 10" McKenzie exhauster..... | 510.00 | ..... | ..... |
| 4" x 5" Greenfield engine..... | 278.00 | ..... | ..... |
| 5" x 5" Sturtevant engine..... | 313.00 | ..... | ..... |
| 7" x 6" Sturtevant engine..... | 426.00 | ..... | ..... |
| 40 H. P. Motor..... | 760.00 | ..... | ..... |
| 35 H. P. Motor..... | 657.00 | ..... | ..... |
| Countershafting, etc. ..... | 89.00 | ..... | ..... |
| 6 Benches 6's..... | 20,872.00 | ..... | ..... |

83 *Reproduction Expenditures* (Cont'd).

| | 1913. | 1914. | 1915. |
|---|---|---|---|
| **Works Equipment:** | | | |
| Charging floor ..... | $2,830.00 | ..... | ..... |
| 4' 6" x 25' 0" Condenser..... | 883.00 | ..... | ..... |
| 5' 6" x 31' 0" Scrubber..... | 477.00 | ..... | ..... |
| 4' 6" x 5' 0" Rotary scrubber.. | 2,460.00 | ..... | ..... |
| 4 — 20' x 24' x 4' Purifying Boxes ..... | 15.162.00 | ..... | ..... |
| 10' Station meter..... | ..... | ..... | $4,525.00 |
| 6' Station meter..... | 1.575.00 | ..... | ..... |
| 500,000 Cu. Ft. Holder..... | ..... | ..... | 51,023.00 |
| 200,000 Cu. Ft. Holder..... | 29,138.00 | ..... | ..... |
| 50,000 Cu. Ft. Holder..... | ..... | 12,074.00 | ..... |
| 20" Connelly governor..... | 974.00 | ..... | ..... |
| 12" Reynolds governor..... | ..... | ..... | 481.00 |
| 6" x 10" x 5" x 10" Knowles pump ..... | 418.00 | ..... | ..... |

| | | | |
|---|---|---|---|
| 4" x 4" Vertical pump | 186.00 | ..... | ..... |
| 3½" x 4" x 6" Gardner pump. | 104.00 | ..... | ..... |
| 4½" x 3¾" x 4" Worthington pump | ..... | 116.00 | ..... |
| 4½" x 2¾" x 4" Gardner pump | ..... | 110.00 | ..... |
| 4½" x 2¾" x 4" Worthington pump | ..... | 110.00 | ..... |
| 3" x 2" x 3" Worthington pump | ..... | ..... | 99.00 |
| 6" x 4" x 6" Warren pump | ..... | ..... | 186.00 |
| 2½" x 3" x 4" Marsh pump | ..... | ..... | 93.00 |
| Otis platform elevator | ..... | 1,230.00 | ..... |
| Fairbanks scale | ..... | 70.00 | ..... |
| Photometer | 522.00 | ..... | ..... |
| Calorimeter | ..... | 244.00 | ..... |
| #90 Drill Press | 52.00 | ..... | ..... |
| Shop tools & miscellaneous | 536.00 | ..... | ..... |
| 4 Steel tar tanks | 882.00 | ..... | ..... |
| Tar separator | ..... | 208.00 | ..... |
| 3' 3" x 3' 3" x 10' 0" Tar well | 121.00 | ..... | ..... |
| 6' x 20' x 12' Tar well | ..... | 548.00 | ..... |
| 2 Steel tar tanks | ..... | 1,841.00 | ..... |
| 2 Steel oil tanks | ..... | 2,152.00 | ..... |
| 2 Steel oil tanks | ..... | ..... | 1,415.00 |
| Brick oil tank | ..... | ..... | 264.00 |
| Drain piping | 1,400.00 | 552.00 | ..... |
| Water piping | 500.00 | 452.00 | ..... |
| Oil piping | ..... | 514.00 | ..... |
| Gas yard mains | 5,000.00 | 2,830.00 | ..... |
| Steam piping | 1,000.00 | 2,082.00 | ..... |
| Tar piping | 340.00 | 340.00 | ..... |
| Works tools | 500.00 | 196.00 | ..... |
| Main office furniture & fixtures | 3,000.00 | 4,000.00 | 2,983.00 |
| 100,000 Cu. Ft. Gas holder (District Station) | ..... | ..... | 21,675.00 |

84 *Reproduction Expenditures* (Cont'd).

| | 1913. | 1914. | 1915. |
|---|---|---|---|
| **Works Equipment:** | | | |
| Water piping (District Station) | ..... | ..... | $205.00 |
| Gas yard mains " " | ..... | ..... | 537.00 |
| Manholes " " | ..... | ..... | 1,778.00 |
| 25 H. P. Motor " " | ..... | ..... | 491.00 |
| 5 H. P. Motor " " | ..... | ..... | 186.00 |
| #5 Sturtevant blower | ..... | ..... | 209.00 |
| #5 Sturtevant blower | ..... | ..... | 244.00 |
| **Distribution System:** | | | |
| Street mains in Lincoln | $116,074.00 | $116,074.00 | $116,074.00 |
| Street mains outside Lincoln | ..... | ..... | 25,597.00 |
| Street main, miscellaneous | 7,000.00 | 7,000.00 | 7,086.00 |
| Services in Lincoln | 40,000.00 | 60,000.00 | 45,773.00 |
| Services outside Lincoln | ..... | ..... | 6,000.00 |
| Service governors in Lincoln | 6,000.00 | 10,000.00 | 7,086.00 |
| " " outside Lincoln. | ..... | ..... | 542.00 |
| " boxes & cocks | 4,000.00 | 5,000.00 | 3,839.00 |
| Meters in Lincoln | 20,000.00 | 30,000.00 | 23,595.00 |
| " outside Lincoln | ..... | ..... | 2,985.00 |
| Working Capital | 30,000.00 | 30,000.00 | 12,038.00 |
| | $377,222.00 | $362,536.00 | $341,317.00 |

(Here follow tables, marked pages 85-93.)

## ASSUMED ACQUISITION OF BUSINESS BY HYPOTHETICAL PLANT

(The increase in equipment necessary in providing for growth of Going Plant beyond 1912, is not here considered, as all charges and credits incident thereto may fairly be assumed to affect Hypothetical Plant also, and in same degree).

| | | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 |
|---|---|---|---|---|---|---|---|
| Total number meters in Use in Going Plant end of year | - | 3857 | 9321 | 9786 | 10286 | 10750 | 11250 |
| Total number meters in Use in Hypothetical Plant end of year | - | 2000 | 5000 | 7750 | 9750 | 10750 | 11250 |
| Average number meters in use throughout year | - | 333 | 3500 | 6375 | 9750 | 10250 | 11000 |
| Per cent of Going Plant's consumption per meter per year obtained | - | 40 | 60 | 80 | 90 | 95 | 100 |
| Total consumption for year | - | 3730 M | 58800 M | 142800 M | 220500 M | 272650 | 308000 M |



PLAINTIFF'S EXHIBIT K

## OPERATION & MAINTENANCE OF GOING PLANT (SUMMARY)

| | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 |
|---|---|---|---|---|---|---|
| Manufacturing Department Expense | $ 94963.00 | $ 102115.00 | $107302.00 | $115105.00 | $120405.00 | $126112.00 |
| Distribution Department Expense | 22419.00 | 23594.00 | 24770.00 | 26035.00 | 27210.00 | 28476.00 |
| Collection Department Expense | 13814.00 | 14538.00 | 15262.00 | 16042.00 | 16766.00 | 17546.00 |
| Executive Department & General Expense | 70655.00 | 73837.00 | 76967.00 | 80323.00 | 83347.00 | 86594.00 |
| * Totals | $201851.00 | $ 214084.00 | $224301.00 | $237505.00 | $247728.00 | $258728.00 |
| *Total Operation &Maintenance per M.Cu.Ft.Sold | $ .8139 | .8202 | $ .8186 | $ .8246 | $ .8230 | $ .8213 |

* Exclusive of depreciation, and of interest charges.

## OPERATION & MAINTENANCE OF GOING PLANT

| | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 |
|---|---|---|---|---|---|---|
| Gas Sales | 248000 M | 261000 M | 274000 M | 2980000 M | 301000 M | 315000 M |
| Gas used and unaccounted for | 9% | 8.8% | 8.6% | 8.4% | 8.2% | 8% |
| Gas Made | 270320 M | 283968 M | 297564 M | 312192 M | 325682 M | 340200 M |
| Manufacturing Dept. Expense (W.G.):- (Per M/Cu.Ft. Made) | | | | | | |
| Steam for generating water gas | $ .0153 | $ .0153 | $ .0153 | $ .0153 | $ .0153 | $ .0153 |
| Generator fuel | .1110 | .1120 | .1130 | .1140 | .1150 | .1160 |
| Enricher | .1292 | .1365 | .1365 | .1436 | .1436 | .1436 |
| Total Water Gas Making Material | $ .2555 | $ .2638 | $ .2648 | $ .2729 | $ .2739 | $ .2749 |
| Water Gas for tar residual account | .0100 | .0100 | .0100 | .0100 | .0100 | .0100 |
| Net Cost W.G. Mfg.Material | $ .2455 | $ .2538 | $ .2548 | $ .2629 | $ .2639 | $ .2649 |
| Gas making labor | $ .0148 | $ .0148 | $ .0148 | $ .0148 | $ .0148 | $ .0148 |
| Repairs to W.G. generating apparatus | .0038 | .0038 | .0038 | .0038 | .0038 | .0038 |
| W.G.Generating house expense | .0009 | .0009 | .0009 | .0009 | .0009 | .0009 |
| Total Cost Generating Water Gas | $ .2650 | $ .2733 | $ .2743 | $ .2824 | $ .2834 | $ .2844 |
| Steam | $ .0175 | $ .0175 | $ .0175 | $ .0175 | $ .0175 | $ .0175 |
| Purifying W.G.Labor, expense & repairs | .0015 | .0015 | .0015 | .0015 | .0015 | .0015 |
| Purifying W.G. material | .0025 | .0025 | .0025 | .0025 | .0025 | .0025 |
| General works repairs, buildings | .0017 | .0017 | .0017 | .0017 | .0017 | .0017 |
| General apparatus repairs | .0101 | .0101 | .0101 | .0101 | .0101 | .0101 |
| Sundry labor | .0121 | .0121 | .0121 | .0121 | .0121 | .0121 |
| Works expense & supplies | .0171 | .0171 | .0171 | .0171 | .0171 | .0171 |
| General supervision | .0140 | .0140 | .0140 | .0140 | .0140 | .0140 |
| District Holder Station | .0098 | .0098 | .0098 | .0098 | .0098 | .0098 |
| Total Cost Purification &Storage | $ .0863 | $ .0863 | $ .0863 | $ .0863 | $ .0863 | $ .0863 |
| Total Cost Water Gas in Holder | $ .3513 | $ .3596 | $ .3606 | $ .3687 | $ .3697 | $ .3707 |
| " " " " " " | $94963.00 | $102115.00 | $107302.00 | $115105.00 | $120405.00 | $126112.00 |

## OPERATION & MAINTENANCE OF GOING PLANT (Cont'd)

| | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 |
|---|---|---|---|---|---|---|
| **Distribution Dept. Expense:- (Per M. Cu. Ft. Sold)** | | | | | | |
| Street main maintenance | $ .0057 | $ .0057 | $ .0057 | $ .0057 | $ .0057 | $ .0057 |
| Service maintenance | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 |
| Street Department expense | .0101 | .0101 | .0101 | .0101 | .0101 | .0101 |
| Meter maintenance | .0179 | .0179 | .0179 | .0179 | .0179 | .0179 |
| Meter Department expense | .0073 | .0073 | .0073 | .0073 | .0073 | .0073 |
| Setting &Removing meters | .0117 | .0117 | .0117 | .0117 | .0117 | .0117 |
| Gratuitous work | .0131 | .0131 | .0131 | .0131 | .0131 | .0131 |
| Total above Items | $ .0693 | $ .0693 | $ .0693 | $ .0693 | $ .0693 | $ .0693 |
| Gas lost & unaccounted for | .0211 | .0211 | .0211 | .0211 | .0211 | .0211 |
| Total Distribution Expense | $ .0904 | $ .0904 | $ .0904 | $ .0904 | $ .0904 | $ .0904 |
| " " " | $22419.00 | $23594.00 | $24770.00 | $26035.00 | $27210.00 | $28476.00 |
| **Collection Dept. Expense:- (Per M.Cu.Ft. Sold)** | | | | | | |
| Reading meters | $ .0060 | $ .0060 | $ .0060 | $ .0060 | $ .0060 | $ .0060 |
| Collection clerical salaries | .0298 | .0298 | .0298 | .0298 | .0298 | .0298 |
| Collection Office expense | .0080 | .0080 | .0080 | .0080 | .0080 | .0080 |
| Rent of Collection office | .0036 | .0036 | .0036 | .0036 | .0036 | .0036 |
| Delivering bills | .0013 | .0013 | .0013 | .0013 | .0013 | .0013 |
| Outside collections | .0070 | .0070 | .0070 | .0070 | .0070 | .0070 |
| Total Collection Expenses | $ .0557 | $ .0557 | $ .0557 | $ .0557 | $ .0557 | $ .0557 |
| " " " | $13814.00 | $14538.00 | $15262.00 | $12042.00 | $16766.00 | $17546.00 |

## OPERATION & MAINTENANCE OF GOING PLANT (Cont'd)

| | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 |
|---|---|---|---|---|---|---|
| **Executive Dept. & General Expenses:-** (Per M. Cu.Ft. Sold) | | | | | | |
| Executive salaries | $ .0380 | $ .0380 | $ .0380 | $ .0380 | $ .0380 | $ .0380 |
| General clerical salaries | .0054 | .0083 | .0053 | .0053 | .0053 | .0053 |
| General office expense | .0050 | .0050 | .0050 | .0050 | .0050 | .0050 |
| Incidental expense | .0204 | .0264 | .0204 | .0204 | .0204 | .0204 |
| Rent of Executive offices | .0074 | .0074 | .0074 | .0074 | .0074 | .0074 |
| Legal expense | .0500 | .0480 | .0460 | .0440 | .0420 | .0400 |
| Total Above Items | $ .1261 | $ .1241 | $ .1221 | $ .1201 | $ .1181 | $ .1161 |
| Promoting new business | .0838 | .0838 | .0838 | .0838 | .0838 | .0838 |
| Taxes | .0750 | .0750 | .0750 | .0750 | .0750 | .0750 |
| Total General Expenses | $ .2849 | .2829 | $ .2809 | $ .2789 | $ .2769 | $ .2749 |
| " " " | $70655.00 | $73837.00 | $76967.00 | $80323.00 | $83347.00 | $86594.00 |

PLAINTIFF'S EXHIBIT K

## OPERATION & MAINTENANCE OF HYPOTHETICAL PLANT

| | 1913 | 1914 | 1915 | 1916 | 1917 | 1918 |
|---|---|---|---|---|---|---|
| Gas Sales | 3730 M | 58800 M | 142800 M | 220500 M | 272650 M | 308000 M |
| Gas used & unaccounted for | 14 % | 13 % | 12 % | 11 % | 10 % | 9 % |
| Gas made | 4252 M | 66444 M | 139936 M | 244755 M | 299915 M | 335720 M |
| Total Cost Gas in Holder (per M. Made) | $ .7026 | $ .5270 | $ .4391 | $ .3864 | $ .3596 | $ .3697 |
| " " " " " | $ 2987.00 | $35016.00 | $70228.00 | $94573.00 | $107849.00 | $124116.00 |
| Total Distribution Expense (per M Sold) | $ .1808 | $ .1356 | $ .1130 | $ .0994 | $ .0904 | $ .0904 |
| " " " | $ 674.00 | $ 7973.00 | $16136.00 | $21917.00 | $ 24648.00 | $ 27843.00 |
| Total Collection Dept. Expense (per M.Sold) | $ .1114 | $ .0836 | $ .0696 | $ .0613 | $ .0557 | $ .0557 |
| " " " " " | $ 416.00 | $ 4915.00 | $ 9938.00 | $13516.00 | $ 15187.00 | $ 17156.00 |
| Total Executive Dept. & Gen'l Expense (Per M.Sold) | $ .5698 | $ .4274 | $ .3561 | $ .3134 | $ .2829 | $ .2769 |
| " " " " " " | $ 2125.00 | $25131.00 | $50851.00 | $69105.00 | $ 77133.00 | $ 85285.00 |
| *Total Operating Expense (Per M.Sold) | $ 1.6800 | $ 1.2420 | $ 1.0304 | $ .9029 | $ .8245 | $ .8259 |
| * " " " | $ 6202.00 | $ 73035.00 | $147153.00 | $199111.00 | $224817.00 | $254400.00 |

* Exclusive of depreciation, and of interest charges.

GOING PLANT

| Year | Gas Sales (M.Cu.Ft.) | Population | #17 Gross Earnings from Gas Sales ( 1.2039 per M.Sold) | #18 Increase for the Year | #19 Increase for the Year (%) | #20 Total Cost of Operation & Maintenance | #20 Depreciation Annuity (S.F.) | #22 Total Operating Expenses | #23 Net Earnings | #24 6% Factor for Present Worth | #25 Present Worth of Net Future Returns |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | 248000 | 47000 | $ 298567.00 | $16405.00 | 5.8 | $201851.00 | $ 20865.00 | $222716.00 | $75851.00 | .9434 | $ 71558.00 |
| 1914 | 261000 | 48000 | 314218.00 | 15651.00 | 4.9 | 214084.00 | 20665.00 | 234949.00 | 79269.00 | .8900 | 70549.00 |
| 1915 | 274000 | 49000 | 329869.00 | 15651.00 | 4.8 | 224301.00 | 20865.00 | 245166.00 | 84703.00 | .8396 | 71117.00 |
| 1916 | 288000 | 50000 | 346723.00 | 16854.00 | 4.8 | 237505.00 | 20865.00 | 258370.00 | 88353.00 | .7921 | 69984.00 |
| 1917 | 301000 | 51000 | 362374.00 | 15651.00 | 4.3 | 247728.00 | 20865.00 | 268593.00 | 93781.00 | .7473 | 70083.00 |
| 1918 | 315000 | 52000 | 379229.00 | 16855.00 | 4.4 | 258728.00 | 20865.00 | 279593.00 | 99636.00 | .7030 | 70243.00 |

PLAINTIFF'S EXHIBIT K

## HYPOTHETICAL PLANT

(With no allowance for Going Value)

| Year | #1 Total Investment Made at End of Year | #2 Money Held For Investment But Earning 2 1/2% | #3 Money Withdrawn For Construction During Year | #4 Interest @ 2 1/2 % On Accounts in Column #2 | #5 Interest @ 2% For Half Year On Amounts in Col.#3 | #6 Total Interest (Col's 4 & 5) |
|---|---|---|---|---|---|---|
| 1913 | $ 377222.00 | $ 703853.00 | $ 377222.00 | $ 17596.00 | $ 3772.00 | $ 21368.00 |
| 1914 | 739758.00 | 341317.00 | 362536.00 | 8533.00 | 3625.00 | 12158.00 |
| 1915 | 1081075.00 | 0. | 341317.00 | 0. | 3413.00 | 3413.00 |
| 1916 | | | | | | |
| 1917 | | | | | | |
| 1918 | | | | | | |

HYPOTHETICAL PLANT (Cont'd)

| Gas Sales (M.Cu.Ft.) | Year | #7 Revenue From Gas Sales ($1.2039per M Sold) | #8 Interest on Unemployed Capital (From Col.#6 ) | #9 Gross Revenue (Col's 7&8) | #10 Operation & Maintenance | #11 Depreciation Annuity (S. F.) | #12 Total Operating Expense | #13 Net Earnings | #14 6% Factor For Present Worth | #15 Present Worth Of Net Future Returns |
|---|---|---|---|---|---|---|---|---|---|---|
| 3730 | 1913 | $ 4491.00 | $ 21368.00 | $ 25859.00 | $ 6202.00 | $ 4031.00 | $ 10233.00 | $15626.00 | .9434 | $ 14742.00 |
| 58800 | 1914 | 70789.00 | 12158.00 | 82947.00 | 73035.00 | 11935.00 | 84970.00 | -2023.00 | .8900 | -1800.00 |
| 142800 | 1915 | 171917.00 | 3413.00 | 175330.00 | 147153.00 | 19455.00 | 166608.00 | 8722.00 | .8395 | 7323.00 |
| 220500 | 1916 | 265460.00 | | 265460.00 | 199111.00 | 20865.00 | 219976.00 | 45484.00 | .7921 | 36028.00 |
| 272650 | 1917 | 328243.00 | | 328243.00 | 324817.00 | 20865.00 | 245682.00 | 82561.00 | .7473 | 61698.00 |
| 308000 | 1918 | 370801.00 | | 370801.00 | 254400.00 | 20865.00 | 275265.00 | 95536.00 | .7050 | 67353.00 |

PLAINTIFF'S EXHIBIT K Burch & Bacon

94 *First Comparison of Net Future Returns.*

| Year. | 226. Present worth of net future returns of going plant (Col. 225). | 227. Present worth of net future returns of hypothetical plant (Col. 215). | 228. Going value (before interest adjustment. |
|---|---|---|---|
| 1913..... | $71,558.00 | $14,742.00 | $56,816.00 |
| 1914..... | 70,549.00 | −1,800.00 | 72,349.00 |
| 1915..... | 71,117.00 | 7,323.00 | 63,794.00 |
| 1916..... | 69,984.00 | 36,028.00 | 33,956.00 |
| 1917..... | 70,083.00 | 61,698.00 | 8,385.00 |
| 1918..... | 70,243.00 | 67,353.00 | 2,890.00 |
| | | | $238,190.00 |

(Here follow tables, marked pages 95 and 96.)

## HYPOTHETICAL PLANT

(With interest adjustment a/c Going Value, which is here included in sum of $225,000.00)

| Year | #1 Total Investment Made at End of Year | #2 Money Held For Investment | #3 Money Withdrawn During Year | #4 Interest @ 2 1/2% On Amounts in Col. #2 | #5 Interest @2% For Half Year On Amounts in Col.#3 | #6 Total Interest (Col's 4 & 5) |
|---|---|---|---|---|---|---|
| 1913 | $ 381722.00 | $ 924352.00 | $ 381722.00 | $ 23109.00 | $ 3817.00 | $ 26926.00 |
| 1914 | 802758.00 | 503317.00 | 421036.00 | 12583.00 | 4210.00 | 16793.00 |
| 1915 | 1290325.00 | 15750.00 | 487567.00 | 394.00 | 4876.00 | 5270.00 |
| 1916 | 1306075.00 | 0. | 15750.00 | | 158.00 | 158.00 |
| 1917 | | | | | | |
| 1918 | | | | | | |

PLAINTIFF'S EXHIBIT K

## HYPOTHETICAL PLANT (Con't)

(With interest adjustment a/c Going Value).

| | #7 | #8 | #9 | #10 | #11 | #12 | #13 | #14 | #15 |
|---|---|---|---|---|---|---|---|---|---|
| Year | Revenue From Gas Sales ( 1.2039 per M. Sold) | Interest on Unemployed Capital (From Col.6) | Gross Revenue (Col's 7 & 8) | Operations Maintenance | Depreciation Annuity | Total Operating Expense | Net Earnings | 6% Factor For Present Worth | Present Worth of Net Future Returns |
| 1913 | $ 4491.00 | $ 26926.00 | $ 31417.00 | $ 6202.00 | $ 4031.00 | $ 10233.00 | $ 21184.00 | .9434 | $ 19985.00 |
| 1914 | 70789.00 | 16793.00 | 87582.00 | 73035.00 | 11935.00 | 84970.00 | 2612.00 | .8900 | 2325.00 |
| 1915 | 171917.00 | 5270.00 | 177187.00 | 147153.00 | 19455.00 | 166608.00 | 10579.00 | .8396 | 8882.00 |
| 1916 | 265480.00 | 158.00 | 265818.00 | 199111.00 | 20865.00 | 219976.00 | 45642.00 | .7921 | 36153.00 |
| 1917 | 328243.00 | | 328243.00 | 224817.00 | 20865.00 | 245682.00 | 82561.00 | .7473 | 61698.00 |
| 1918 | 370801.00 | | 370801.00 | 254400.00 | 20865.00 | 275265.00 | 95536.00 | .7050 | 67353.00 |

PLAINTIFF'S EXHIBIT K

97 *Second Comparison of Net Future Returns.*

(Adjusted a/c Interest Allowance on Going Value.)

| Year. | #26. Present worth of net future returns of going plant (Col. #25). | #27. Present worth of net future returns of hypothetical plant (Col. #15). | #28. Going value. |
|---|---|---|---|
| 1913..... | $71,558.00 | $19,985.00 | $51,573.00 |
| 1914..... | 70,549.00 | 2,325.00 | 68,224.00 |
| 1915..... | 71,117.00 | 8,882.00 | 62,235.00 |
| 1916..... | 69,984.00 | 36,153.00 | 33,831.00 |
| 1917..... | 70,083.00 | 61,698.00 | 8,385.00 |
| 1918..... | 70,243.00 | 67,353.00 | 2,890.00 |
| | | | $227,138.00 |

98 EXHIBIT L.

(Here follow tables and diagrams, marked pages 99-114.)

## GAS MADE, SOLD & UNACCOUNTED FOR

(In M.Cu.Ft.)

| Year Ending December 31st | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Coal gas made during year | 33695 | 35823 | 37622 | 59427 | 70581 | 69790 | 55647 | 19747 | | | |
| Water gas made during year | 51581 | 70387 | 90880 | 107612 | 115337 | 132930 | 161516 | 200093 | 227440 | 244252 | 258206 |
| Total gas made | 85276 | 106210 | 128502 | 167039 | 185918 | 202720 | 217163 | 219840 | 227440 | 244252 | 258206 |
| Gas delivered to mains | 85395 | 106200 | 128445 | 166997 | 184689 | 203967 | 216727 | 219762 | 227337 | 244405 | 258204 |
| Gas sold | 75891 | 98343 | 117430 | 143691 | 153664 | 179366 | 195392 | 204284 | 210169 | 227268 | 234386 |
| Gas used by Co. | 1309 | 585 | 676 | 721 | 438 | 587 | 372 | 682 | 546 | 557 | 569 |
| Total Gas sold & used | 77000 | 98928 | 118106 | 144412 | 154102 | 179953 | 195764 | 204966 | 210715 | 227825 | 234955 |
| Gas unaccounted for (Total) | 8395 | 7273 | 10339 | 22585 | 30587 | 24013 | 20963 | 14797 | 16623 | 16581 | 23249 |
| Gas unaccounted for (in % of send-out) | 9.83 | 6.85 | 8.04 | 13.52 | 16.56 | 11.77 | 9.67 | 6.73 | 7.31 | 6.78 | 9.00 |
| Leakage per mile actual main (cu. ft.) | | 145400 | 198700 | 417600 | 499700 | 385213 | 320477 | 212221 | 209377 | 183331 | 239900 |
| Leakage per mile 3" main (equiv.)(cu.ft.) | | 134700 | 182500 | 370300 | 460000 | 354081 | 302370 | 206714 | 146385 | 125363 | 168700 |

PLAINTIFF'S EXHIBIT 21 Nov 5 Dec

## GROSS AND NET EARNINGS

| Year Ending December 31st | 1902 | | 1903 | | 1904 | | 1905 | | 1906 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Per M Sold | Total | Per M Sold | Total | Per M Sold | Total | Per M Sold | Total | Per M Sold |
| Total from Gas Sales | $102393.68 | $1.3520 | $131973.23 | $1.3420 | $149937.60 | $1.2768 | $171445.45 | $1.1935 | $184395.02 | $1.2000 |
| Meter Charge on Minimum Bills | 647.25 | .0085 | 707.72 | .0072 | 801.68 | .0068 | 708.75 | .0049 | 716.50 | .0045 |
| Forfeited Discount | 2321.08 | .0306 | 2472.28 | .0241 | 2455.88 | .0209 | 3230.75 | .0225 | 3456.74 | .0225 |
| Total Earnings From Gas | $105362.01 | $1.3911 | $131153.23 | $1.3733 | $153195.16 | $1.3045 | $175384.95 | $1.2209 | $188568.26 | $1.2270 |
| Bad Debts | 595.35 | .0078 | 682.17 | .0069 | 349.01 | .0030 | 1765.92 | .0123 | 2790.00 | .0180 |
| Gross Earnings Gas Dept. | $104766.66 | $1.3833 | $134471.06 | $1.3664 | $152846.15 | $1.3015 | $173619.03 | $1.2086 | $185778.26 | $1.2090 |
| Operating Expenses (Total) | 74164.96 | .9800 | 81582.79 | .8294 | 101472.85 | .8640 | 105421.95 | .7340 | 127059.24 | .8268 |
| *Net Earnings Gas Dept | $ 30601.70 | $ .4033 | $ 52888.27 | $ .5370 | $ 1373.30 | .4375 | $ 68197.08 | $ .4746 | 58729.02 | $ .3822 |

*Exclusive of Depreciation.

## GROSS AND NET EARNINGS (Con't)

| Year Ending December 31st - | 1907 | | 1908 | | 1909 | | 1910 | | 1911 | 1912 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Per M Sold | Total | Per M Sold | Total | Per M Sold | Total | Per M Sold | Total | Per M Sold | Total | Per M Sold |
| Total from Gas Sales | $214516.57 | $1.1960 | $233857.75 | $1.1970 | $244798.78 | $1.1983 | $251748.06 | $1.1978 | $273752.96 | $1.2045 | $281312.75 | $1.2003 |
| Meter Charge on Minimum Bills | 893.53 | .0039 | 704.14 | .0036 | 711.00 | .0035 | 765.12 | .0036 | 925.50 | .0041 | 900.25 | .0038 |
| Forfeited Discount | 3044.10 | .0170 | 2785.62 | .0142 | 2614.96 | .0128 | 2429.19 | .0116 | 2614.49 | .0115 | 2949.11 | .0126 |
| Total Earnings From Gas | $218251.20 | $1.2169 | $237347.51 | $1.2148 | $248124.74 | $1.2146 | $254942.37 | $1.2130 | $277292.95 | $1.2201 | $285162.11 | $1.2167 |
| Bad Debts | 2475.00 | .0138 | 3000.00 | .0154 | 3000.00 | .0146 | 3000.00 | .0141 | 3000.00 | .0132 | 3000.00 | .0128 |
| Gross Earnings Gas Dept. | $215776.20 | $1.2031 | $234347.51 | $1.1994 | $245124.74 | $1.2000 | $251942.37 | $1.1989 | $274292.95 | $1.2069 | $282162.11 | $1.2039 |
| *Operating Expenses (Total) | 141924.37 | .7912 | 137090.35 | .7016 | 134708.24 | .6594 | 143670.45 | .6837 | 158374.11 | .6970 | 175573.49 | .7491 |
| *Net Earnings Gas Dept. | $ 73851.83 | $ .4119 | $ 97257.16 | $ .4978 | $110416.50 | $ .5406 | $108271.92 | $ .5152 | $115918.84 | $ .5099 | $106588.62 | $ .4548 |

*Exclusive of Depreciation



PLAINTIFF'S EXHIBIT L 2

## APPORTIONMENT OF OPERATING EXPENSES

(Per M.Cu.Ft.Sold)

| Year Ending December 31st | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing Expense:- | | | | | | | | | | |
| Plant | $ .0548 | $.0616 | $.0657 | $.0716 | $.0715 | $.0654 | $.0464 | $.0570 | $.0764 | $.0707 |
| Output | .4637 | .4571 | .3523 | .4073 | .4093 | .3584 | .3087 | .2641 | .2350 | .2643 |
| | $ .5185 | $.5187 | $.4180 | $.4789 | $.4808 | $.4138 | $.3551 | $.3211 | $.3114 | $.3350 |
| Distribution Expense:- | | | | | | | | | | |
| Plant | $ .0451 | .0461 | .0646 | .0862 | .0633 | .0463 | .0295 | .0315 | .0239 | .0358 |
| Consumers | .0274 | .0224 | .0261 | .0266 | .0231 | .0178 | .0214 | .0119 | .0258 | .0308 |
| Meters | .0168 | .0242 | .0189 | .0149 | .0138 | .0171 | .0252 | .0442 | .0338 | .0335 |
| | $ .0893 | .0927 | .1096 | .1277 | .1002 | .0812 | .0761 | .0876 | .0835 | .1001 |
| Collection Dept. Expense:- | | | | | | | | | | |
| Consumers | $ .0343 | .0198 | .0196 | .0320 | .0336 | .0357 | .0350 | .0392 | .0390 | .0392 |
| Meters | .0123 | .0246 | .0202 | .0115 | .0143 | .0151 | .0145 | .0151 | .0152 | .0158 |
| | $ .0466 | .0444 | .0398 | .0435 | .0479 | .0508 | .0495 | .0543 | .0542 | .0550 |
| Executive Dept. & General Expense | | | | | | | | | | |
| Plant | $ .1750 | $.2082 | .1666 | .1767 | .1623 | .1558 | .1788 | .2206 | .2477 | .2591 |
| *Total Operating Expense - | $ .8294 | $.8640 | $.7340 | .8268 | $.7912 | .7016 | .6595 | .6836 | .6968 | .7492 |

*Exclusive of Depreciation

Resume:-

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Plant | $ .2749 | $.3159 | $.2969 | $.3345 | $.2971 | $.2575 | .2547 | .3091 | .3480 | .3656 |
| Output | .4637 | .4571 | .3523 | .4073 | .4093 | .3584 | .3087 | .2641 | .2350 | .2643 |
| Consumers | .0617 | .0422 | .0457 | .0586 | .0567 | .0535 | .0564 | .0511 | .0648 | .0700 |
| Meters | .0291 | .0488 | .0391 | .0264 | .0281 | .0322 | .0397 | .0593 | .0490 | .0493 |
| *Total Operating Expense | $ .8294 | $.8640 | $.7340 | $.8268 | $.7912 | $.7016 | $.6595 | .6836 | .6968 | .7492 |

*Exclusive of Depreciation

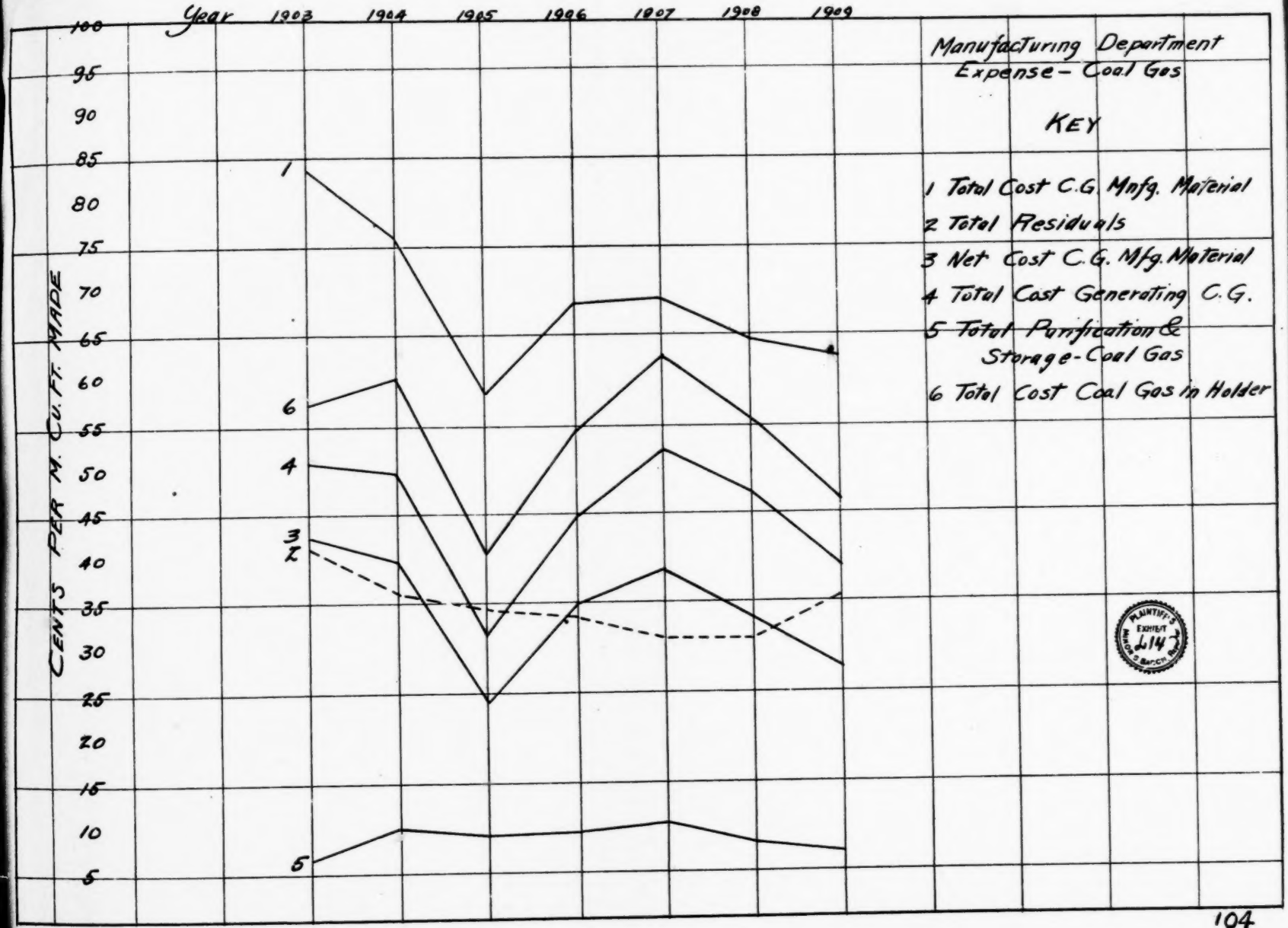
PLAINTIFF'S EXHIBIT 23 HIGGS & BACON

## MANUFACTURING DEPARTMENT EXPENSE-COAL GAS

(Per M.Cu.Ft.Made)

| Year Ending December 31st | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 |
|---|---|---|---|---|---|---|---|
| Coal carbonized | $ .7118 | $.6624 | $.5332 | $.6097 | $.6139 | $.5829 | $.5705 |
| Enricher | | | .0029 | .0033 | .0026 | | |
| Bench fuel | .1337 | .0987 | .0588 | .0722 | .0766 | .0625 | .0562 |
| Total Cost Coal Gas Mfg.Material | $ .8455 | .7611 | .5849 | .6852 | .6931 | .6454 | .6267 |
| Coke Residual | $ .3557 | .3230 | .3115 | .3197 | .2943 | .2938 | .3340 |
| Tar residual | .0554 | .0410 | .0374 | .0187 | .0179 | .0177 | .0200 |
| Ammonia residual | | | | | | | |
| Carbon residual | .0066 | | | | | | |
| Total Residuals | $ .4177 | .3640 | .3489 | .3384 | .3122 | .3115 | .3540 |
| Net Cost Coal Gas Mfg. Material | $ .4278 | .3971 | .2359 | .3468 | .3809 | .3340 | .2727 |
| Retort house labor | $ .0571 | .0704 | .0524 | .0679 | .0818 | .0929 | .0747 |
| Bench repairs | .0195 | .0258 | .0211 | .0280 | .0576 | .0436 | .0414 |
| Retort house expense | .0024 | .0058 | .0056 | .0038 | .0029 | .0035 | .0032 |
| Total Cost Generating Coal Gas | $ .5068 | .4991 | .3150 | .4465 | .5232 | .4740 | .3920 |
| Steam | .0097 | .0194 | .0252 | .0212 | .0236 | .0262 | .0185 |
| Purifying Coal Gas Labor,Expense & Repairs | .0009 | .0025 | .0027 | .0065 | .0055 | .0038 | .0069 |
| Material | .0045 | .0024 | .0015 | .0039 | .0056 | .0036 | .0025 |
| General Works Buildings repairs (C.G. ) | .0058 | .0049 | .0023 | .0056 | .0116 | .0015 | .0001 |
| " " Apparatus " (C.G. ) | .0122 | .0325 | .0158 | .0160 | .0130 | .0060 | .0049 |
| Sundry Labor (C.G.) | .0147 | .0137 | .0141 | .0165 | .0187 | .0145 | .0129 |
| Works Expense & supplies (C.G.) | .0078 | .0106 | .0147 | .0117 | .0126 | .0134 | .0141 |
| General Supervision (C.G.) | .0100 | .0166 | .6164 | .0147 | .0051 | .0144 | .0119 |
| District holder station(C.G.) | | | | | | | |
| Total Purification & Storage | $ .0658 | .1026 | .0927 | .0961 | .1057 | .0834 | .0719 |
| Total Cost Coal Gas in Holder | .5724 | .6017 | .4077 | .5426 | .6290 | .5574 | $.4639 |

PLAINTIFF'S EXHIBIT 4

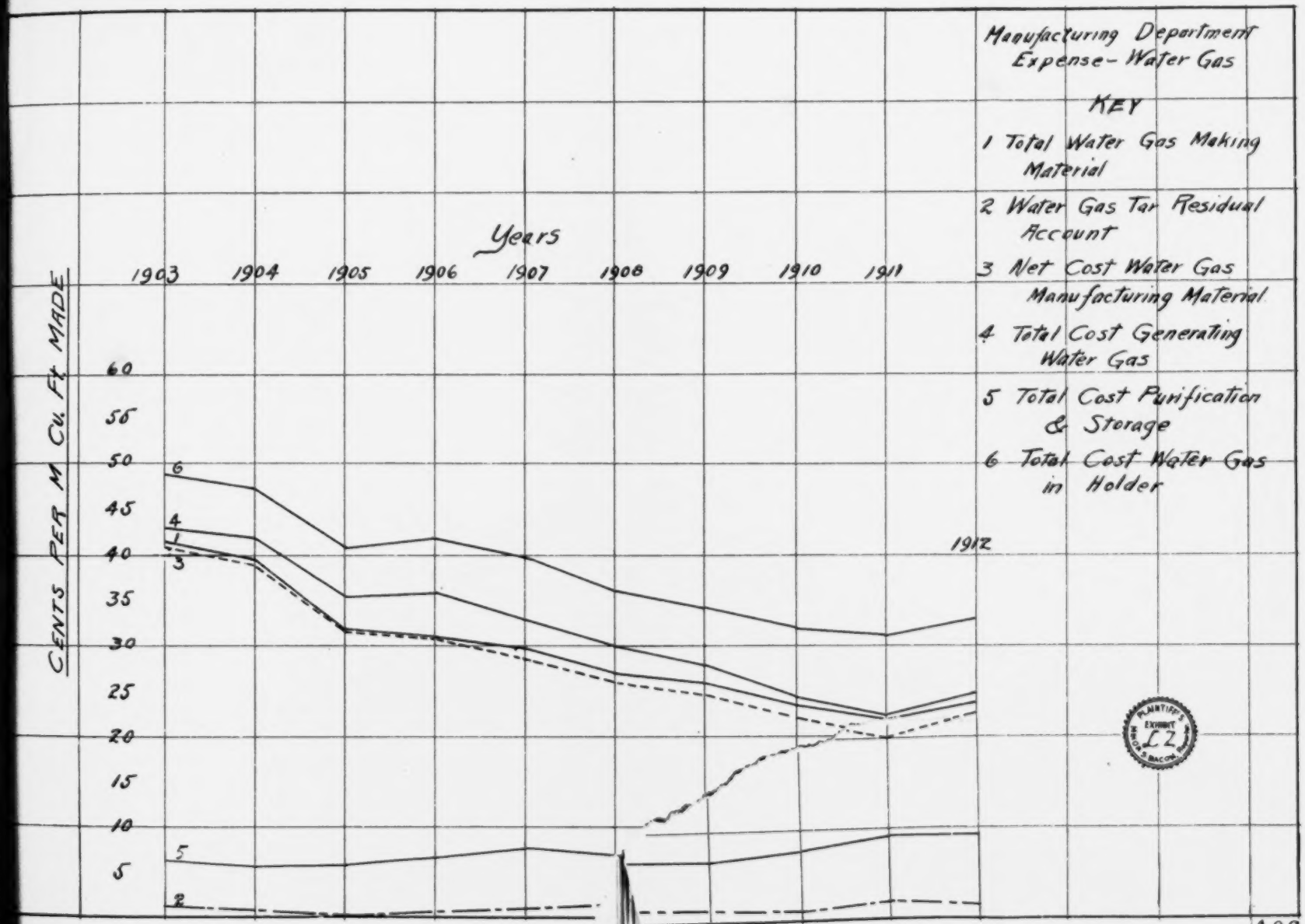

Year
1903
1904
1905
1906
1907
1908
1909
CENTS PER M. CU. FT. MADE
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
1
6
4
3
2
5
Manufacturing Department
Expense – Coal Gas
KEY
1 Total Cost C.G. Mnfg. Material
2 Total Residuals
3 Net Cost C.G. Mfg. Material
4 Total Cost Generating C.G.
5 Total Purification & Storage-Coal Gas
6 Total Cost Coal Gas in Holder
PLAINTIFF'S EXHIBIT 114

## MANUFACTURING DEPARTMENT EXPENSE - WATER GAS

(Per M.Cu.Ft. Made)

| Year Ending December 31st | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Steam for generating water gas | $.0286 | $.0245 | $.0353 | $.0356 | $.0315 | $.0221 | $.0112 | $.0133 | $.0176 | $.0151 |
| General fuel | .1094 | .1055 | .1176 | .1212 | .1090 | .1037 | .1333 | .1155 | .1064 | .1100 |
| Enricher | .2755 | .2638 | .1622 | .1525 | .1551 | .1406 | .1109 | .1010 | .0914 | .1081 |
| Total Water Gas Making Material | $.4135 | .3938 | .3151 | .3093 | .2956 | .2664 | .2554 | .2298 | .2154 | .2332 |
| Water Gas ter residual account | .0118 | .0062 | .0019 | | .0069 | .0120 | .0119 | .0020 | .0165 | .0128 |
| Net Cost Water Gas Mfg. Material | $.4017 | .3876 | .3132 | .3093 | .2887 | .2544 | .2435 | .2178 | .1989 | .2204 |
| Gas Making labor | $.0182 | .0187 | .0199 | .0253 | .0281 | .0285 | .0204 | .0174 | .0159 | .0148 |
| Repairs to W.G. Gen.apparatus | .0059 | .0123 | .0181 | .0201 | .0079 | .0071 | .0074 | .0036 | .0022 | .0056 |
| W.G. Generating house expense | .0009 | .0002 | .0004 | .0006 | .0002 | .0007 | .0008 | .0005 | .0007 | .0015 |
| Total Cost Generating W.G. | $.4267 | .4188 | .3516 | .3553 | .3249 | .2907 | .2721 | .2393 | .2177 | .2423 |
| Steam | $.0097 | .0082 | .0045 | .0042 | .0066 | .0150 | .0225 | .0199 | .0137 | .0189 |
| Purifying W.G. labor, expense & rep. | .0007 | .0010 | .0015 | .0054 | .0060 | .0036 | .0019 | .0018 | .0005 | .0011 |
| Purifying W.G. Material | .0019 | .0023 | .0019 | .0019 | .0030 | .0031 | .0028 | .0025 | .0025 | .0024 |
| General works repairs, buildings | .0069 | .0013 | .0012 | .0028 | .0019 | .0007 | .0007 | .0010 | .0033 | .0009 |
| " apperatus repairs | .0123 | .0104 | .0068 | .0083 | .0075 | .0041 | .0047 | .0076 | .0220 | .0017 |
| Sundry labor | .0131 | .0088 | .0118 | .0129 | .0170 | .0129 | .0108 | .0134 | .0100 | .0129 |
| Works expense & supplies | .0078 | .0094 | .0138 | .0126 | .0125 | .0130 | .0108 | .0149 | .0149 | .0216 |
| General supervision | .0098 | .0144 | .0163 | .0161 | .0157 | .0146 | .0135 | .0143 | .0139 | .0138 |
| District holder station | | | | | | | | .0001 | .0064 | .0132 |
| Total Cost Purification & Storage | $.0622 | .0558 | .0578 | .0642 | .0702 | .0670 | .0577 | .0755 | .0862 | .0865 |
| Total Cost Water Gas in Holder | $.4889 | .4746 | .4095 | .4195 | .3951 | .3577 | .3398 | .3148 | $.3039 | .3288 |

PLAINTIFF'S EXHIBIT £6 HOWARD & BACON


Manufacturing Department Expense – Water Gas
KEY
1 Total Water Gas Making Material
2 Water Gas Tar Residual Account
3 Net Cost Water Gas Manufacturing Material
4 Total Cost Generating Water Gas
5 Total Cost Purification & Storage
6 Total Cost Water Gas in Holder
Years
1903 1904 1905 1906 1907 1908 1909 1910 1911 1912
CENTS PER M Cu. Ft. MADE
60 55 50 45 40 35 30 25 20 15 10 5
6 4 1 3 5 2
PLAINTIFF'S EXHIBIT L 2

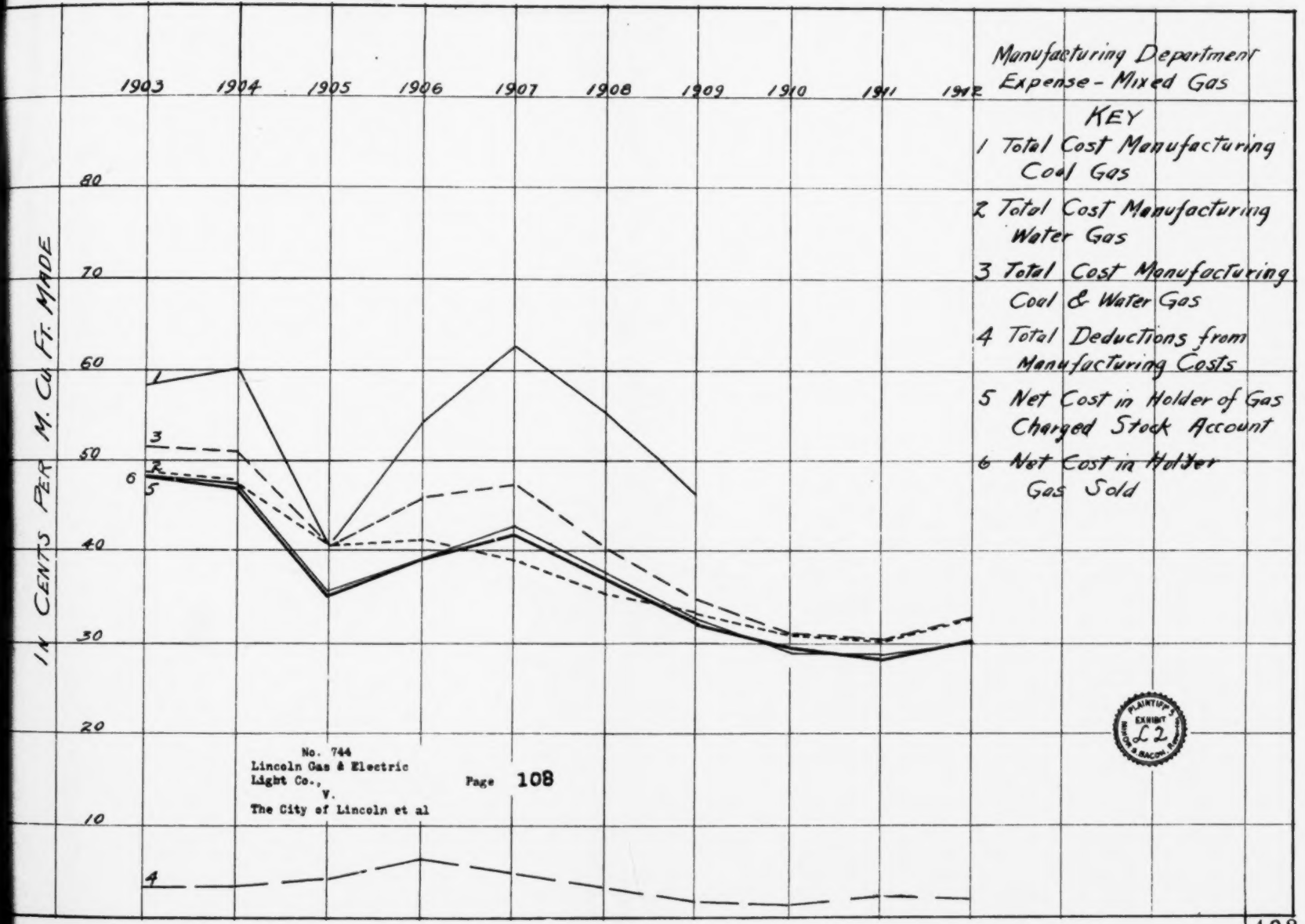


TORN PAGES

## MANUFACTURING DEPARTMENT EXPENSE - MIXED GAS

(Per M.Cu.Ft. Made)

| Year Ending December 31st | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Cost Manufacturing Coal Gas | $ .5724 | $.6017 | $.4077 | $.5426 | $.6290 | $.5574 | $.4639 | $. | $ | $. |
| " " " " " " Water Gas | .4889 | .4746 | .4095 | .4195 | .3951 | .3577 | .3398 | .3148 | .3039 | .3288 |
| " " " " " " Coal & Water Gas | .5172 | .5119 | .4088 | .4663 | .4757 | .4089 | .3498 | .3148 | .3039 | $.3288 |
| Total Cost Manufacturing Gas Purchased | | | | | | | | | | |
| " " All Gas Manufacturing Dept. | $.5172 | $.5119 | $.4088 | $.4663 | $.4757 | $.4089 | $.3498 | $.3148 | $.3039 | .3288 |
| Output Cost Gas Lost & Unaccounted For | $.0333 | $.0362 | $.0479 | $.0662 | $.0491 | .0358 | .0212 | .0185 | .0156 | $.0241 |
| " " " Used by Co. | .0030 | .0024 | .0016 | .0009 | .0012 | .0007 | .0010 | .0006 | .0005 | .0005 |
| Total Deductions from Manufacturing Costs | $.0363 | $.0386 | $.0495 | $.0671 | $.0503 | $.0365 | $.0222 | $.0191 | $.0161 | $.0246 |
| Net Cost in Holder of Gas Charged Stock Acc't. | $.4809 | $.4733 | $.3593 | $.3992 | $.4254 | $.3724 | $.3276 | $.2957 | $.2878 | $.3042 |
| Difference Stock on Hand First & Last of Year | .0007 | .0007 | .0001 | .0034 | | .0007 | | .0002 | .0003 | .0001 |
| Net Cost in Holder of Gas Sold | $.4802 | $.3740 | $.3594 | $.3958 | $.4254 | $.3717 | $.3276 | $.2955 | $.2881 | .3041 |

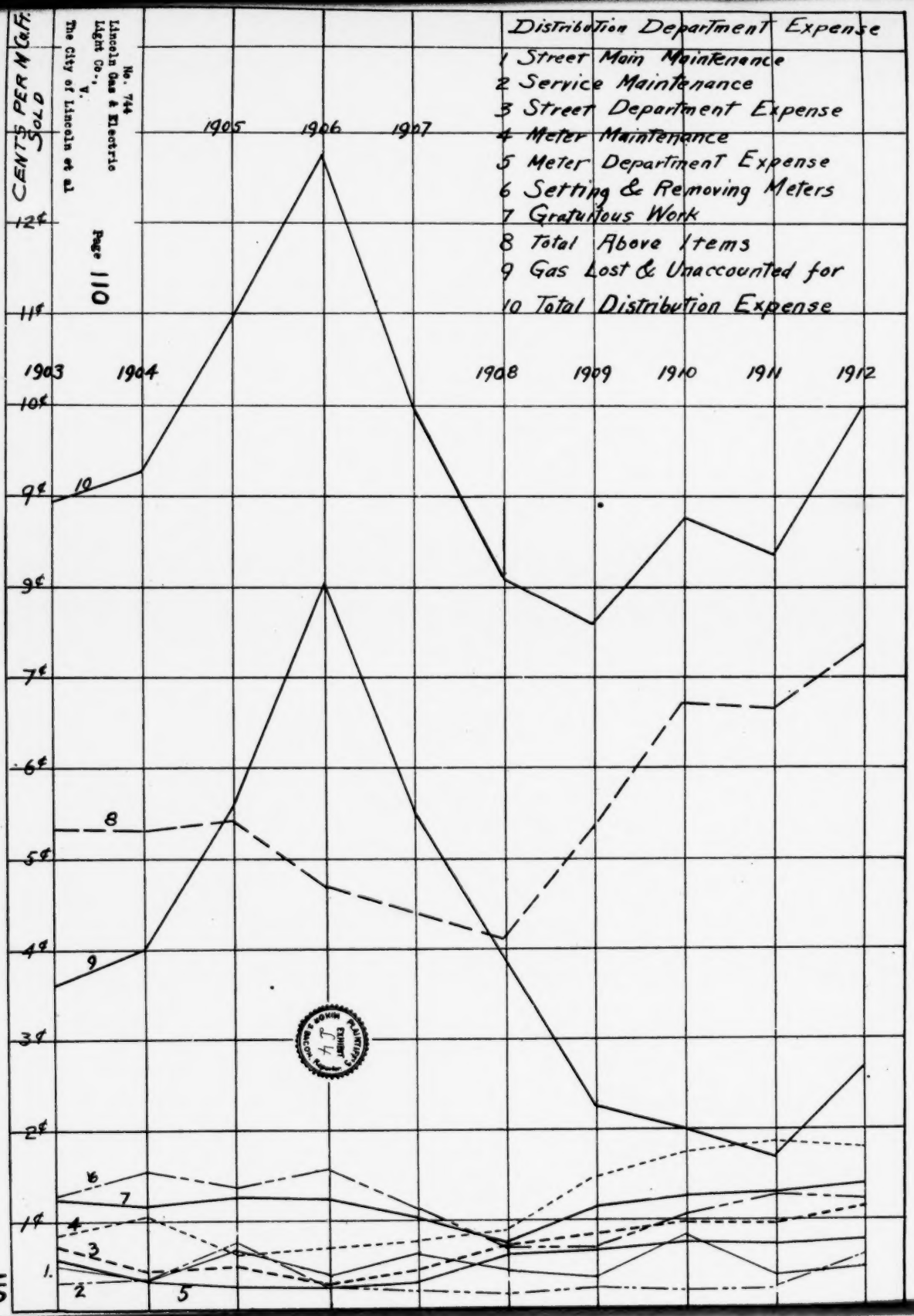

Manufacturing Department Expense - Mixed Gas
KEY
1 Total Cost Manufacturing Coal Gas
2 Total Cost Manufacturing Water Gas
3 Total Cost Manufacturing Coal & Water Gas
4 Total Deductions from Manufacturing Costs
5 Net Cost in Holder of Gas Charged Stock Account
6 Net Cost in Holder Gas Sold
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
80
70
60
50
40
30
20
10
IN CENTS PER M. CU. FT. MADE
No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al
Page 108
PLAINTIFF'S EXHIBIT 2

## DISRIBUTION DEPARTMENT EXPENSE

(Per M.Cu.Ft. Sold)

| Year Ending December 31st | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Street Main Maintenance | $.0048 | $.0044 | $.0066 | $.0042 | $.0064 | $.0041 | $.0039 | $.0082 | $.0040 | $.0048 |
| Service | .0030 | .0038 | .0074 | .0025 | .0022 | .0015 | .0025 | .0020 | .0025 | .0060 |
| Street Department Expense | .0070 | .0042 | .0050 | .0029 | .0044 | .0072 | .0082 | .0097 | .0095 | .0111 |
| Meter Maintenance | .0081 | .0103 | .0060 | .0068 | .0075 | .0088 | .0145 | .0173 | .0184 | .0180 |
| Meter Department Expense | .0055 | .0031 | .0028 | .0023 | .0026 | .0060 | .0063 | .0074 | .0070 | .0075 |
| Setting & Removing Meters | .0125 | .0155 | .0135 | .0156 | .0112 | .0068 | .0066 | .0104 | .0126 | .0122 |
| Gratuitous Work | .0124 | .0118 | .0127 | .0124 | .0103 | .0070 | .0113 | .0126 | .0128 | .0139 |
| Total Above Items | .0533 | .0531 | .0540 | .0477 | .0448 | .0414 | .0533 | .0678 | .0668 | .0735 |
| Gas Lost & Unaccounted for | .0360 | .0396 | .0557 | .0801 | .0554 | .0398 | .0228 | .0200 | .0167 | .0266 |
| Total Distribution Expense | $.0893 | $.0927 | $.1097 | $.1278 | $.1002 | $.0812 | $.0761 | $.0876 | .0835 | .1001 |

PLAINTIFF'S EXHIBIT 210 MINOR & BACON


No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al
Page 110
CENTS PER M Cu.Ft. SOLD
Distribution Department Expense
1 Street Main Maintenance
2 Service Maintenance
3 Street Department Expense
4 Meter Maintenance
5 Meter Department Expense
6 Setting & Removing Meters
7 Gratuitous Work
8 Total Above Items
9 Gas Lost & Unaccounted for
10 Total Distribution Expense
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
12¢
11¢
10¢
9¢
8¢
7¢
6¢
5¢
4¢
3¢
2¢
1¢
10
9
8
6
7
4
3
1
2
5
EXHIBIT 14
011

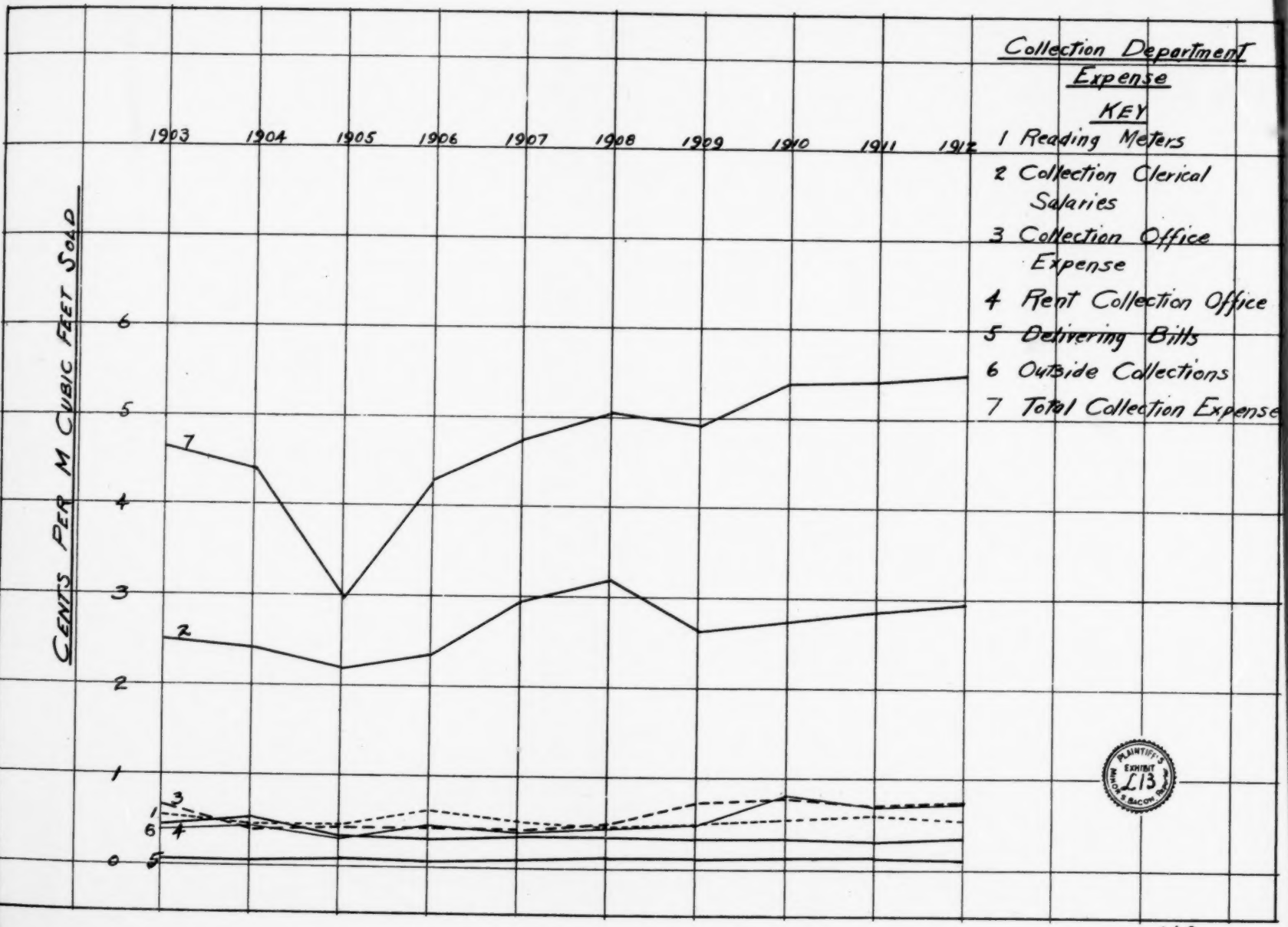
## COLLECTION DEPARTMENT EXPENSE

(Per M. Cu. Ft. Sold)

| Year Ending December 31st - | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Reading Meters | $ .0053 | $ .0048 | $ .0049 | $ .0064 | $ .0053 | $ .0047 | $ .0051 | $ .0059 | $ .0061 | $ .0059 |
| Collection Clerical Salaries | .0252 | .0243 | .0220 | .0239 | .0299 | .0323 | .0269 | .0274 | .0287 | .0298 |
| Collection Office Expense | .0065 | .0047 | .0048 | .0046 | .0043 | .0049 | .0078 | .0084 | .0077 | .0079 |
| Rent of Collection Office | .0046 | .0053 | .0038 | .0034 | .0035 | .0034 | .0037 | .0037 | .0032 | .0038 |
| Delivering Bills | .0012 | .0009 | .0010 | .0009 | .0010 | .0011 | .0011 | .0013 | .0012 | .0013 |
| Outside Collections | .0038 | .0044 | .0032 | .0043 | .0039 | .0044 | .0049 | .0076 | .0072 | .0063 |
| Total Collection Expenses | $ .0466 | $ .0444 | $ .0297 | $ .0435 | $ .0479 | $ .0508 | $ .0495 | $.0543 | $.0541 | $.0550 |



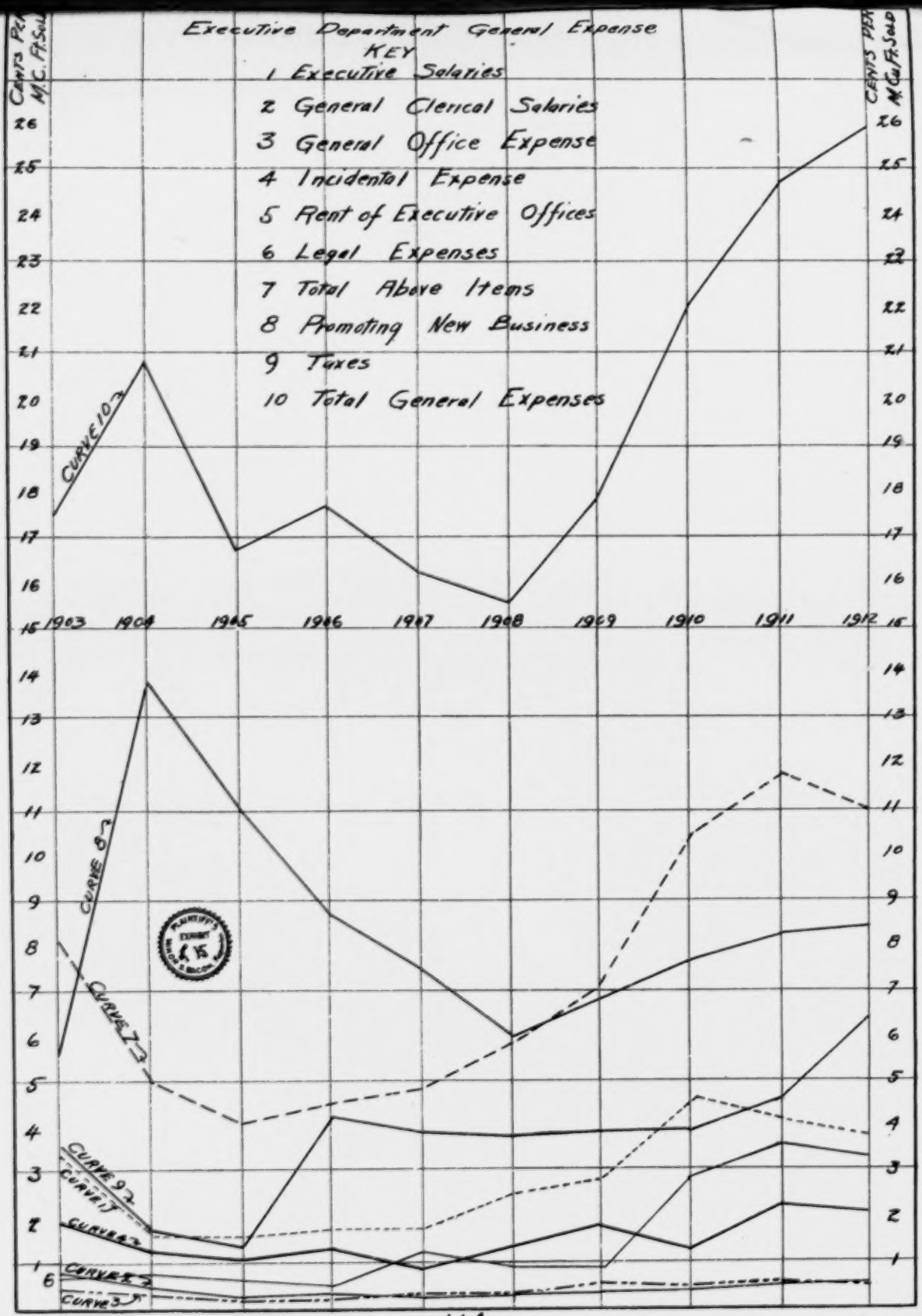
PLAINTIFF'S EXHIBIT 112


Collection Department Expense
KEY
1 Reading Meters
2 Collection Clerical Salaries
3 Collection Office Expense
4 Rent Collection Office
5 Delivering Bills
6 Outside Collections
7 Total Collection Expense
CENTS PER M CUBIC FEET SOLD
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912
0
1
2
3
4
5
6
7
PLAINTIFF'S EXHIBIT L13

## EXECUTIVE DEPARTMENT, GENERAL EXPENSES

(Per M.Cu.Ft. Sold)

| Year Ending December 31st | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Executive Salaries | $.0353 | $.0176 | $.0170 | $.0182 | $.0179 | $.0256 | $.0299 | $.0467 | $.0416 | $.0380 |
| General clerical salaries | .0091 | .0052 | .0034 | .0032 | .0022 | .0026 | .0037 | .0038 | .0047 | .0053 |
| General office expense | .0050 | .0038 | .0023 | .0022 | .0027 | .0034 | .0048 | .0046 | .0053 | .0050 |
| Indidental expense | .0213 | .0136 | .0113 | .0139 | .0096 | .0137 | .0182 | .0137 | .0227 | .0204 |
| Rent of Executive offices | .0031 | .0033 | .0025 | .0032 | .0037 | .0037 | .0054 | .0071 | .0069 | .0074 |
| Legal expenses | .0074 | .0071 | .0045 | .0049 | .0120 | .0092 | .0091 | .0281 | .0364 | .0339 |
| Total above items | $.0812 | .0506 | .0410 | .0456 | .0481 | .0582 | .0711 | .1040 | .1176 | .1099 |
| Promoting new business | .0567 | .1396 | .1108 | .0874 | .0747 | .0596 | .0686 | .0769 | .0835 | .0840 |
| Taxes | .0371 | .0180 | .0147 | .0436 | .0395 | .0380 | .0391 | .0397 | .0466 | .0651 |
| Total General Expenses - | $.1750 | $.2082 | $.1665 | $.1766 | $.1623 | $.1558 | $.1788 | $.2206 | $.2477 | $.2590 |


Executive Department General Expense
KEY
1 Executive Salaries
2 General Clerical Salaries
3 General Office Expense
4 Incidental Expense
5 Rent of Executive Offices
6 Legal Expenses
7 Total Above Items
8 Promoting New Business
9 Taxes
10 Total General Expenses
CURVE 10
CURVE 9
CURVE 7
CURVE 2
CURVE 3
1903
1904
1905
1906
1907
1908
1909
1910
1911
1912

115 ## EXHIBIT M.

116 *Analysis of Gas Consumption.*

(For year ending Dec. 31st, 1912.)

| Group Number. | Average monthly consumption per consumer throughout year (cu.) ft.). | No. of consumers in each group. | Percentage of total number of consumers represented by each group. |
|---|---|---|---|
| 1.... | 0 to 500 | 455 | 5.9% |
| 2.... | 500 " 1,000 | 975 | 12.5 |
| 3.... | 1,000 " 1,500 | 1,365 | 17.6 |
| 4.... | 1,500 " 2,000 | 1,394 | 17.9 |
| 5.... | 2,000 " 2,500 | 1,150 | 14.8 |
| 6.... | 2,500 " 3,000 | 803 | 10.3 |
| 7.... | 3,000 " 3,600 | 542 | 7.0 |
| 8.... | 3,500 " 4,000 | 312 | 4.0 |
| 9.... | 4,000 " 4,500 | 210 | 2.7 |
| 10.... | 4,500 " 5,000 | 128 | 1.6 |
| 11.... | 5,000 " 5,500 | 97 | 1.3 |
| 12.... | 5,500 " 6,000 | 53 | .7 |
| 13.... | 6,000 " 6,500 | 52 | .7 |
| 14.... | 6,500 " 7,000 | 41 | .5 |
| 15.... | 7,000 " 7,500 | 26 | .3 |
| 16.... | 7,500 " 8,000 | 19 | .2 |
| 17.... | 8,000 " 9,000 | 36 | .5 |
| 18.... | 9,000 " 10,000 | 19 | .2 |
| 19.... | 10,000 " 12,500 | 39 | .5 |
| 20.... | 12,500 " 15,000 | 13 | .2 |
| 21.... | 15,000 " 17,500 | 9 | .1 |
| 22.... | 17,500 " 20,000 | 7 | .1 |
| 23.... | 20,000 " 25,000 | 6 | .1 |
| 24.... | 25,000 " 50,000 | 15 | .2 |
| 25.... | 50,000 " 100,000 | 5 | .1 |
| 26.... | 100,000 " 200,000 | 2 | .0 |
| Total ..... | | 7,372 | 100.% |

117 ## EXHIBIT N.

118 *Gas Sales Outside City of Lincoln, by Lincoln Gas & E. L. Co.*

| | Cu. ft. | Receipts. |
|---|---|---|
| 1905—State Farm & residences..... | 49,000 | $58.80 |
| 1906— " " " " ..... | 398,800 | 478.56 |
| 1907— " " " " ..... | 740,000 | 888.00 |
| 1908— " " " " ..... | 1,295,400 | 1,554.58 |
| 1909— " " " " ..... | 1,040,400 | 1,249.18 |
| 1910— " " " " ..... | 1,032,400 | 1,238.88 |
| Havelock ..... | 175,765 | 567.64 |
| University Place ..... | 937,700 | 1,178.14 |
| | 2,145,865 | $2,984.66 |

| | | |
|---|---|---|
| 1911—State Farm & residences..... | 1,280,600 | $1,537.3 |
| Havelock ..... | 1,384,400 | 1,736.31 |
| University Place ..... | 2,374,900 | 2,997.35 |
| | 5,039,900 | $6,270.98 |
| 1912—State Farm & residences..... | 1,477,100 | $1,961.60 |
| Havelock ..... | 2,281,400 | 2,856.68 |
| University Place ..... | 3,330,500 | 4,167.70 |
| | 7,089,000 | $8,986.18 |
| Totals to 1/1/13..... | 17,798,365 | $22,470.94 |

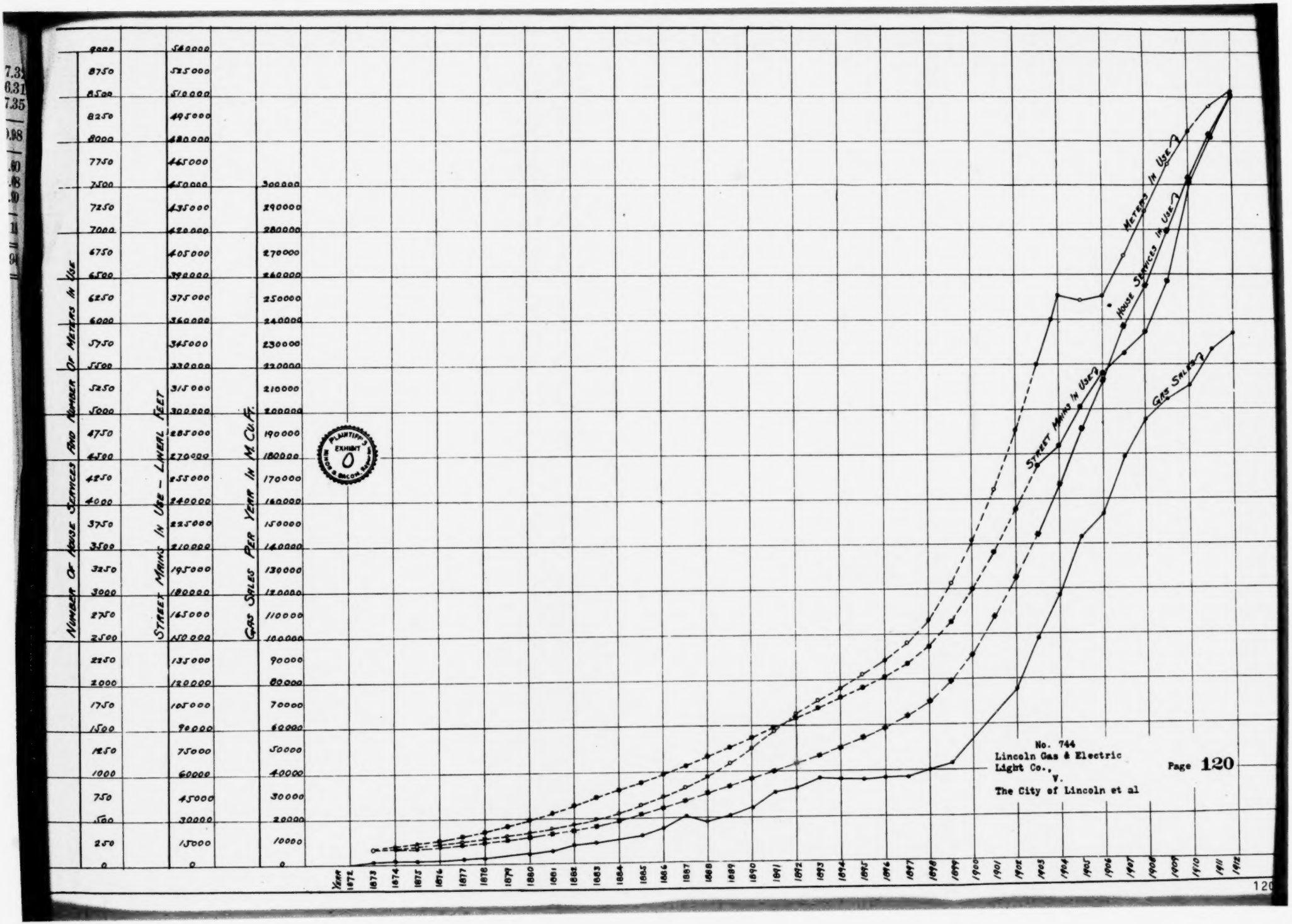
119 EXHIBIT O.

(Here follows diagram marked p. 120.)

121 EXHIBIT P.

(Here follows table, marked page 122.)

NUMBER OF HOUSE SERVICES AND NUMBER OF METERS IN USE


Number Of House Services And Number Of Meters In Use
Street Mains In Use - Lineal Feet
Gas Sales Per Year In M. Cu. Ft.
Year
Meters In Use
House Services In Use
Street Mains In Use
Gas Sales
PLAINTIFF'S EXHIBIT O
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## CORRECTED NET EARNINGS, ETC.

| Year Ending December 31st | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| Gross Earnings Gas Dept. As reported | -$ 215776.20 | $ 234347.51 | $ 245124.74 | $ 251942.37 | $274292.95 | $ 282162.11 |
| Deduct Receipts From Gas Sales Outside of Lincoln | - 888.00 | 1554.58 | 1249.18 | 2984.66 | 6270.98 | 8986.18 |
| Corrected Gross Earnings Gas Dept. | -$ 214888.20 | $ 232792.93 | $ 243875.56 | $ 248957.71 | $268081.97 | $ 273175.93 |
| Total Operating Expenses as reported | -$ 141924.37 | $ 137090.35 | $ 134708.24 | $ 143670.45 | $158374.11 | $ 175573.49 |
| Deduct Output Cost Gas Sold Outside of Lincoln | - 302.88 | 464.27 | 321.17 | 586.73 | 1184.38 | 1873.62 |
| | $ 141621.49 | $ 136626.08 | $ 134387.07 | $ 143103.72 | $157189.73 | $ 173689.87 |
| Add For Excessive Residual Credits reported | 0. | 0. | 0. | 0. | 2859.86 | 2722.23 |
| Add For Depreciation (minimum as shown by Sinking Fund Calculation) | - 14955.00 | 15588.00 | 17780.00 | 19111.00 | 20183.00 | 20865.03 |
| Corrected Operating Expenses Gas Dept. | -$ 156766.49 | $ 152114.08 | $ 152167.07 | $ 162214.72 | $180232.59 | $ 197277.13 |
| Corrected Net Earnings Gas Dept. | -$ 58121.71 | $ 80678.85 | $ 91708.49 | $ 86742.99 | $ 87789.38 | $ 75898.80 |
| Corrected Net Earnings Gas Dept. In % Of Reproduction Cost | - 6.093 | 8.029 | 8.189 | 7.288 | 6.942 | 5.810 |
| Corrected Net Earnings Gas Dept. In % Of Then Present Value | - 7.029 | 9.247 | 9.464 | 8.437 | 8.029 | 6.698 |
| Total Reproduction Cost Real Estate, Buildings, Works Equipment & Distribution System | -$ 699790.00 | $ 729450.00 | $ 831994.00 | $ 894304.00 | $944468.00 | $ 976037.00 |
| Real Estate Added | 0. | 0. | 7750.00 | 0. | 0. | 0. |
| Buildings " | 7372.00 | 0. | 906.00 | 0. | 0. | 0. |
| Works Equipment Added | 54016.00 | 4964.00 | 49779.00 | 116.00 | 9932.00 | 0. |
| Distribution System Added | 28659.00 | 24696.00 | 44109.00 | 62194.00 | 40232.00 | 31569.00 |
| Going Value, Wkg. Cap.& Org.& L.- | 37591.00 | 21155.00 | 12640.00 | 8152.00 | 24225.00 | 9901.00 |
| Total Added - | $ 127638.00 | $ 50815.00 | $ 115184.00 | $ 70462.00 | $ 74389.00 | $ 41470.00 |
| The Then Reproduction Cost of Entire Property - | $ 953755.00 | $1004570.00 | $1119754.00 | $1190216.00 | $1264605.00 | $1306075.00 |
| The Then Present Value of Entire Property | $ 826883.00 | $ 872321.00 | $ 968913.00 | $1028079.00 | $1093373.00 | $1133114.00 |

123

## EXHIBIT Q.

124

*Gas Sales.*

| Year ending Dec. 31. | M. cu. ft. | % of 1912 sales. | Gain for year in % of 1912 sales. |
|---|---|---|---|
| 1873..... | 1,421 | .60 | .60 |
| 74..... | 1,934 | .82 | .22 |
| 75..... | 1,674 | ..... | |
| 76..... | ..... | ..... | |
| 77..... | 2,285 | .97 | .15 |
| 78..... | 2,415 | 1.03 | .06 |
| 79..... | ..... | ..... | |
| 1880..... | 4,458 | 1.90 | .87 |
| 81..... | 5,893 | 2.50 | .60 |
| 82..... | 8,551 | 3.64 | 1.14 |
| 83..... | 9,202 | 3.92 | .28 |
| 84..... | 10,469 | 4.46 | .54 |
| 85..... | 12,016 | 5.12 | .66 |
| 86..... | 15,668 | 6.68 | 1.56 |
| 87..... | 20,393 | 8.74 | 2.06 |
| 88..... | 18,031 | ..... | |
| 89..... | 20,278 | ..... | |
| 1890..... | 24,103 | ..... | 1.54 |
| 91..... | 30,776 | ..... | 2.85 |
| 92..... | 32,614 | 13.91 | .78 |
| 93..... | 36,766 | 15.68 | 1.77 |
| 94..... | 36 390 | ..... | |
| 95..... | 36,204 | ..... | |
| 96..... | 36,411 | ..... | |
| 97..... | 37,657 | 16.06 | .38 |
| 98..... | 40,738 | 17.41 | 1.35 |
| 99..... | 42,773 | 18.24 | .83 |
| 1900..... | ..... | ..... | |
| 01..... | ..... | ..... | |
| 02..... | 75,691 | 32.29 | 14.05 |
| 03..... | 98,343 | 41.95 | 9.66 |
| 04..... | 117,430 | 50.01 | 8.06 |
| 05..... | 143,691 | 61.35 | 11.34 |
| 06..... | 153,664 | 65.56 | 4.21 |
| 07..... | 179,366 | 70.95 | 11.39 |
| 08..... | 195,392 | 83.36 | 6.41 |
| 09..... | 204,284 | 87.19 | 3.83 |
| 1910..... | 210.169 | 89.66 | 2.47 |
| 11..... | 227,268 | 97.00 | 7.34 |
| 12..... | 234,386 | 100.00 | 3.00 |
| | | | 100.00 |

125 *Composite Age of Street Mains.*

| Year. | Mains in use December 31st. | Gain for year. | Present age of yearly gain (yrs.). | Foot-years. |
|---|---|---|---|---|
| 1873.... | * 9,000' | 9,000' | 39 | 351,000 |
| 74.... | * 12,000 | 3,000 | 38 | 114.000 |
| 75.... | * 13,500 | 1,500 | 37 | 55,500 |
| 76.... | * 15,000 | 1,500 | 36 | 54,000 |
| 77.... | * 18,000 | 3,000 | 35 | 105,000 |
| 78.... | * 21,000 | 3,000 | 34 | 102.000 |
| 79.... | * 25,000 | 4,000 | 33 | 132,000 |
| 1880.... | * 30,000 | 5,000 | 32 | 160,000 |
| 81.... | * 33,000 | 3,000 | 31 | 93,000 |
| 82.... | * 39,000 | 6,000 | 30 | 180.000 |
| 83.... | * 43,000 | 4,000 | 29 | 116,000 |
| 84.... | * 48,000 | 5,000 | 28 | 140,000 |
| 85.... | * 54,000 | 6,000 | 27 | 162,000 |
| 86.... | * 58,000 | 4,000 | 26 | 104,000 |
| 87.... | * 63,000 | 5,000 | 25 | 125,000 |
| 88.... | * 69,000 | 6,000 | 24 | 144,000 |
| 89.... | * 75,000 | 6,000 | 23 | 138 000 |
| 1890.... | * 81,000 | 6,000 | 22 | 132,000 |
| 91.... | * 90,000 | 9,000 | 21 | 189,000 |
| 92.... | * 96,000 | 6,000 | 20 | 120.000 |
| 93.... | *102,000 | 6,000 | 19 | 114,000 |
| 94.... | *108,000 | 6,000 | 18 | 108,000 |
| 95.... | *114,000 | 6,000 | 17 | 102,000 |
| 96.... | *120,000 | 6,000 | 16 | 96 000 |
| 97.... | *129,000 | 9,000 | 15 | 135,000 |
| 98.... | *141,000 | 12,000 | 14 | 168,000 |
| 99.... | *159,000 | 18,000 | 13 | 234,000 |
| 1900.... | *180,000 | 21,000 | 12 | 252,000 |
| 01.... | *204,000 | 24,000 | 11 | 264,000 |
| 02.... | *234,000 | 30,000 | 10 | 300,000 |
| 03.... | 263,523 | 29,523 | 9 | 265.707 |
| 04.... | 274,615 | 11,092 | 8 | 88,736 |
| 05.... | 300,939 | 26,324 | 7 | 184,268 |
| 06.... | 323,191 | 22,252 | 6 | 133.518 |
| 07.... | 338,594 | 15,403 | 5 | 77,015 |
| 08.... | 351,841 | 13,247 | 4 | 52,988 |
| 09.... | 386,594 | 34,753 | 3 | 104,259 |
| 1910.... | 450,495 | 63,901 | 2 | 127.802 |
| 11.... | 485,892 | 35,397 | 1 | 35,397 |
| 12.... | 511,538 | 25,646 | 0 | ..... |
| | | 511,538 | | 5,559,184 |

$$\frac{5,559.184}{511,538} = 10.86 \text{ Years} = \text{Present Composite Age of Street Mains in Use.}$$

* Estimated.

POOR C

*Composite Age of House Services in Use.*

| Year ending Dec. 31st. | House services in use 12/31. | Net gain during year. | House services replaced during year. | Total new house services added. | Present age of yearly gain. | Service-years. |
|---|---|---|---|---|---|---|
| 1873.... | • 150 | 150 | | | | |
| 74.... | • 165 | 15 | | | | |
| 75.... | • 180 | 15 | | | | |
| 76.... | • 200 | 20 | | | | |
| 77.... | • 225 | 25 | | | | |
| 78.... | • 250 | 25 | | | | |
| 79.... | • 275 | 25 | | | | |
| 1880.... | • 300 | 25 | | | | |
| 81.... | • 340 | 40 | | | | |
| 82.... | • 370 | 30 | | | | |
| 83.... | • 425 | 55 | | | | |
| 84.... | • 475 | 50 | | | | |
| 85.... | • 550 | 75 | | | | |
| 86.... | • 600 | 50 | | | | |
| 87.... | • 700 | 100 | ... | 100 | 25 | 2,500 |
| 88.... | • 765 | 65 | ... | 65 | 24 | 1,560 |
| 89.... | • 850 | 85 | ... | 85 | 23 | 1,955 |
| 1890.... | • 925 | 75 | ... | 75 | 22 | 1,650 |
| 91.... | •1,000 | 75 | ... | 75 | 21 | 1,575 |
| 92.... | •1,100 | 100 | ... | 100 | 20 | 2,000 |
| 93.... | •1,180 | 80 | ... | 80 | 19 | 1,520 |
| 94.... | •1,250 | 70 | ... | 70 | 18 | 1,260 |
| 95.... | •1,350 | 100 | ... | 100 | 17 | 1,700 |
| 96.... | •1,450 | 100 | ... | 100 | 16 | 1,600 |
| 97.... | •1,600 | 150 | ... | 150 | 15 | 2,250 |
| 98.... | •1,750 | 150 | ... | 150 | 14 | 2,100 |
| 99.... | •2,000 | 250 | 150 | 400 | 13 | 5,200 |
| 1900.... | •2,250 | 250 | 15 | 265 | 12 | 3,180 |
| 01.... | •2,700 | 450 | 15 | 465 | 11 | 5,115 |
| 02.... | •3,150 | 450 | 20 | 470 | 10 | 4,700 |
| 03.... | 3,602 | 452 | 25 | 477 | 9 | 4,293 |
| 04.... | 4,178 | 576 | 25 | 601 | 8 | 4,808 |
| 05.... | 4,788 | 610 | 25 | 635 | 7 | 4,445 |
| 06.... | 5,342 | 554 | 25 | 579 | 6 | 3,474 |
| 07.... | 5,911 | 569 | 40 | 609 | 5 | 3,045 |
| 08.... | 6,379 | 468 | 30 | 498 | 4 | 1,992 |
| 09.... | 6,995 | 616 | 55 | 671 | 3 | 2,013 |
| 1910.... | 7,579 | 584 | 50 | 634 | 2 | 1,268 |
| 11.... | 8,059 | 480 | 75 | 555 | 1 | 555 |
| 12.... | 8,539 | 480 | 50 | 530 | 0 | ..... |
| | | 8,539 | | 8,539 | | 65,758 |

$$\frac{65,758}{8,539} = 7.70 \text{ Years} = \text{Present Composite Age of House Services in Use.}$$

• Estimated.

R COPY

127 & 128 *Composite Age of Meters in Use.*

| Year ending Dec. 31st. | Meters in use 12/31. | Net gain during year. | Meters replaced during year. | Total new meters added. | Present age of yearly gain. | Meter-years. |
|---|---|---|---|---|---|---|
| 1873.... | * 150 | 150 | | | | |
| 74.... | * 175 | 25 | | | | |
| 75.... | * 200 | 25 | | | | |
| 76.... | * 215 | 15 | | | | |
| 77.... | * 250 | 35 | | | | |
| 78.... | * 285 | 35 | | | | |
| 79.... | * 310 | 25 | | | | |
| 1880.... | * 350 | 40 | | | | |
| 81.... | * 400 | 50 | | | | |
| 82.... | * 435 | 35 | | | | |
| 83.... | * 500 | 65 | | | | |
| 84.... | * 550 | 50 | | | | |
| 85.... | * 650 | 100 | | | | |
| 86.... | * 735 | 85 | | | | |
| 87.... | * 825 | 90 | ... | 90 | 25 | 2.25 |
| 88.... | * 950 | 125 | ... | 125 | 24 | 3.00 |
| 89.... | *1,100 | 150 | ... | 150 | 23 | 3.45 |
| 1890.... | *1,250 | 150 | ... | 150 | 22 | 3.30 |
| 91.... | *1,450 | 200 | ... | 200 | 21 | 4.20 |
| 92.... | *1,650 | 200 | ... | 200 | 20 | 4.000 |
| 93.... | *1,750 | 100 | ... | 100 | 19 | 1,900 |
| 94.... | *1,900 | 150 | ... | 150 | 18 | 2,700 |
| 95.... | *2,050 | 150 | ... | 150 | 17 | 2,550 |
| 96.... | *2 200 | 150 | ... | 150 | 16 | 2,400 |
| 97.... | *2,400 | 200 | ... | 200 | 15 | 3,000 |
| 98.... | *2,650 | 250 | ... | 250 | 14 | 3,500 |
| 99.... | *3,050 | 400 | 150 | 550 | 13 | 7,150 |
| 1900.... | *3,500 | 450 | 25 | 475 | 12 | 5,700 |
| 01.... | *4,100 | 600 | 25 | 625 | 11 | 6,875 |
| 02.... | *4,750 | 650 | 15 | 665 | 10 | 6,650 |
| 03.... | 5 512 | 762 | 35 | 797 | 9 | 7,173 |
| 04.... | 6,257 | 745 | 35 | 780 | 8 | 6,240 |
| 05.... | 6,236 | ... | 25 | 25 | 7 | 175 |
| 06.... | 6,266 | 9 | 40 | 49 | 6 | 294 |
| 07.... | 6,741 | 475 | 50 | 525 | 5 | 2,625 |
| 08.... | 7,226 | 485 | 55 | 520 | 4 | 2,080 |
| 09.... | 7,753 | 527 | 65 | 592 | 3 | 1,776 |
| 1910.... | 8,131 | 378 | 50 | 428 | 2 | 856 |
| 11.... | 8,420 | 289 | 100 | 389 | 1 | 389 |
| 12.... | 8,576 | 156 | 85 | 241 | 0 | ..... |
| | | 8,576 | | 8,576 | | 84,233 |

$$\frac{84,233}{8,576} = 9.82 \text{ Years} = \text{Present Composite Age of Meters in Use.}$$

* Estimated.

(Here follow diagrams marked pp. 129 to 156, inclusive.)

(Pages 156½ to 388 of original copy omitted here.)

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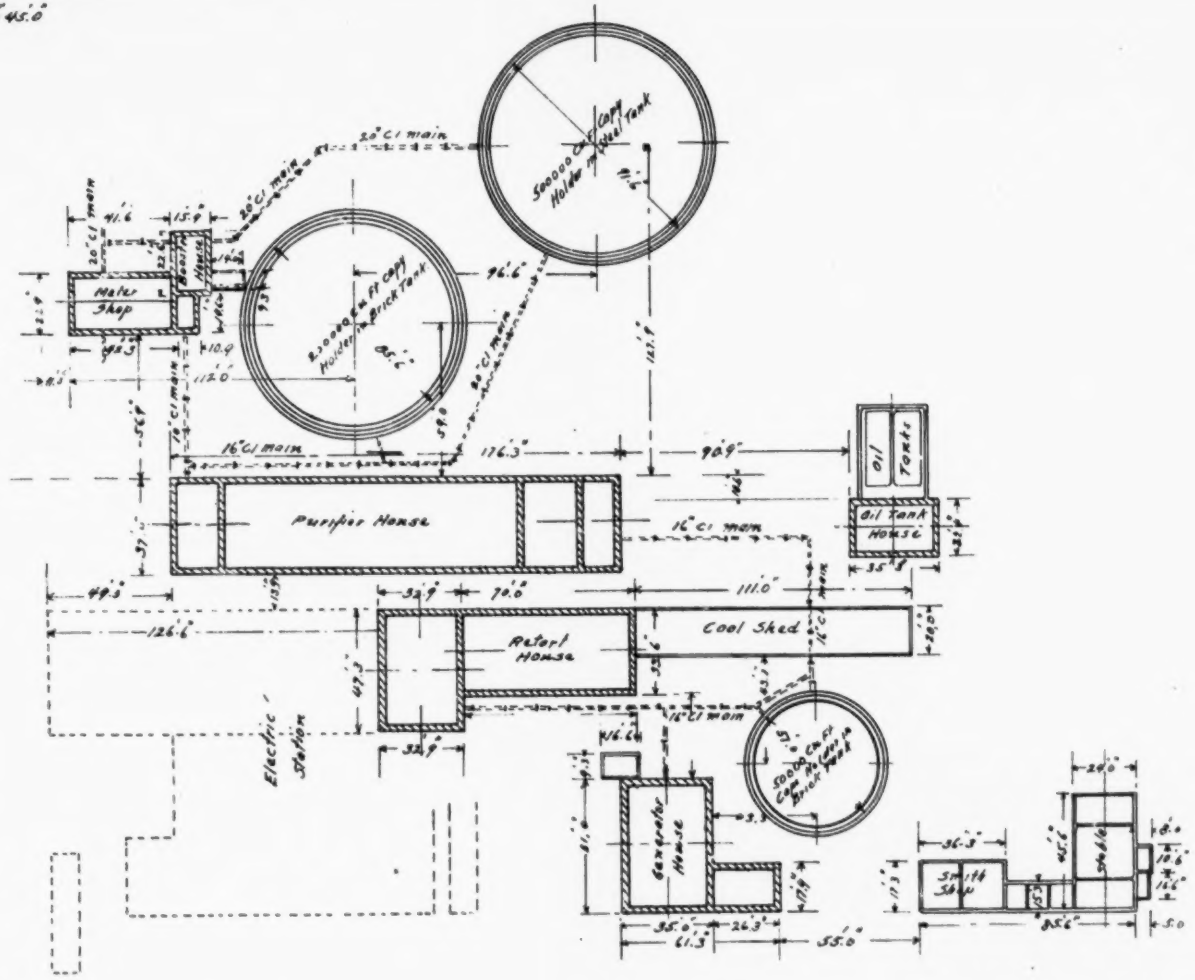
Lincoln Gas and Electric Light Co.

Property Plan  Gas Department  Jan 1st 1913

Meter-years.

2,220
3,000
3,450
3,300
4,200
4,000
1,900
2,700
2,550
2,400
3,000
3,500
7,150
5,700
6,875
6,650
7,175
6,240
175
294
2,625
2,080
1,776
856
389
.....
84,233

scale 1"-45.0"



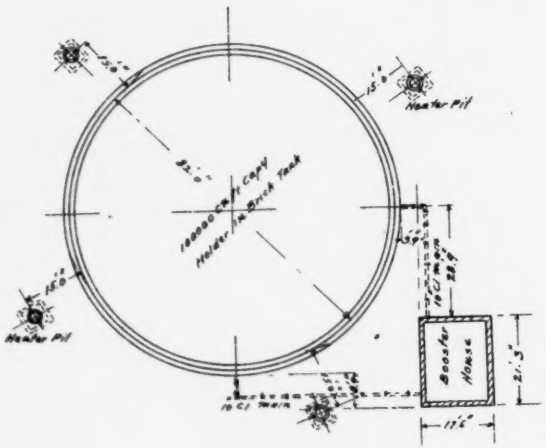

No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

Page 129

Lincoln Gas and Electric Light Co.

Property Plan — Gas Department — Jan. 1st 1913.

Scale 1" = 32'-6"

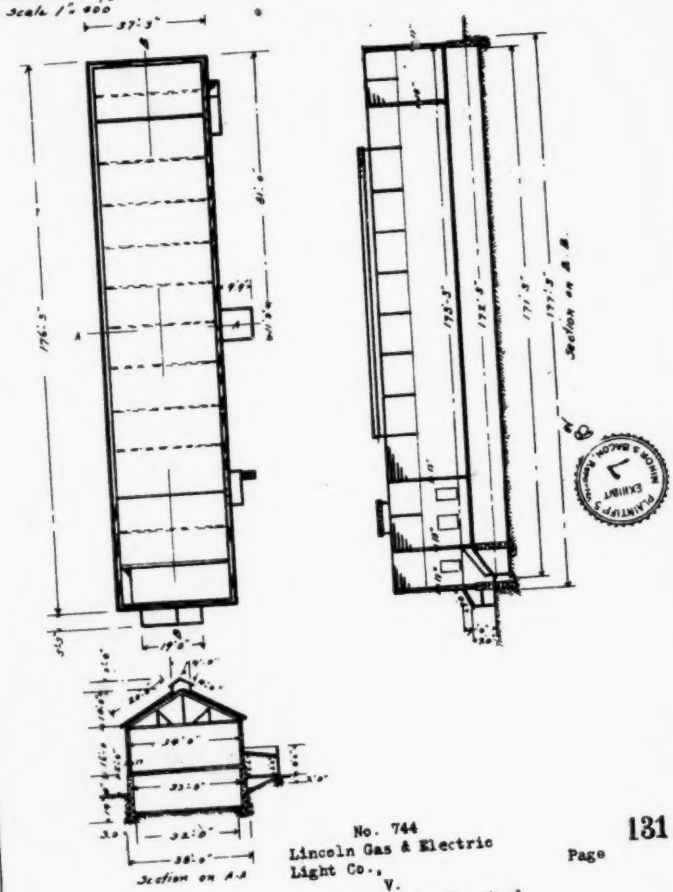



Storage Holder Yard.

No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

Lincoln Gas and Electric Light Co.

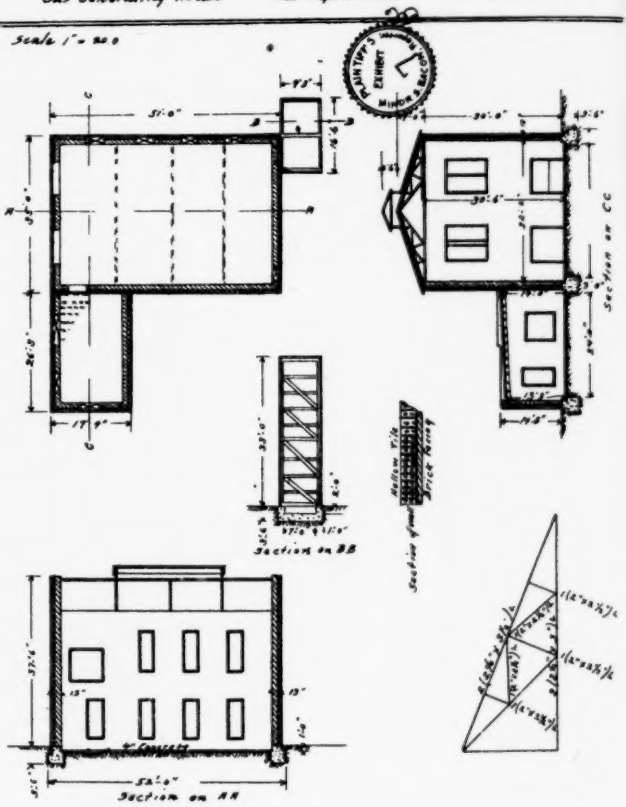
Pfeiffer House — Gas Department — Jan. 1st 1913




PLAINTIFF'S EXHIBIT 7 MINOR & BACON

Lincoln Gas and Electric Light Co

Gas Generating House  Gas Department  Jan. 1st 1913



Lincoln Gas and Electric Light Co

Relief House — Gas Department — Jan. 1st 1913

scale 1/8"=1'-0"

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Lincoln Gas & Electric Light Co., v. The City of Lincoln et al

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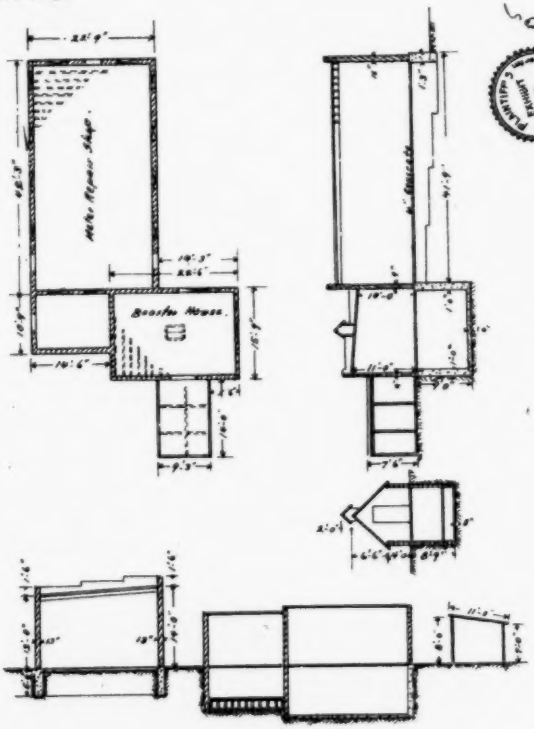
Lincoln Gas and Electric Light Co.

Meter Repair Shop &c  Gas Department  Jan 1st 1913.

Scale 1-16.0

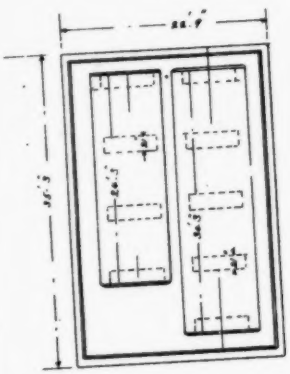


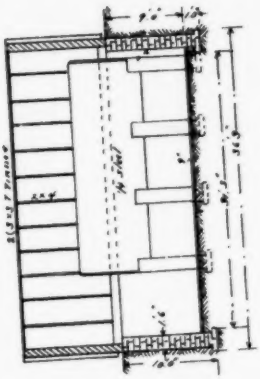

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

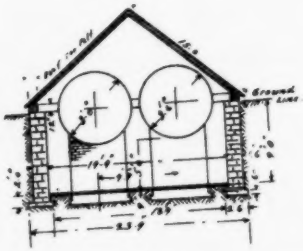
Lincoln Gas and Electric Light Co.

Oil Tank House  Gas Department  Jan. 1st 1913

Scale 1"-10'







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V.
The City of Lincoln et al



Page

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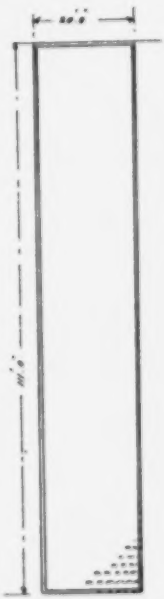
Lincoln Gas and Electric Light Co.

Coal Shed  Gas Department  Jan. 1st 1913

Scale 1"-10'

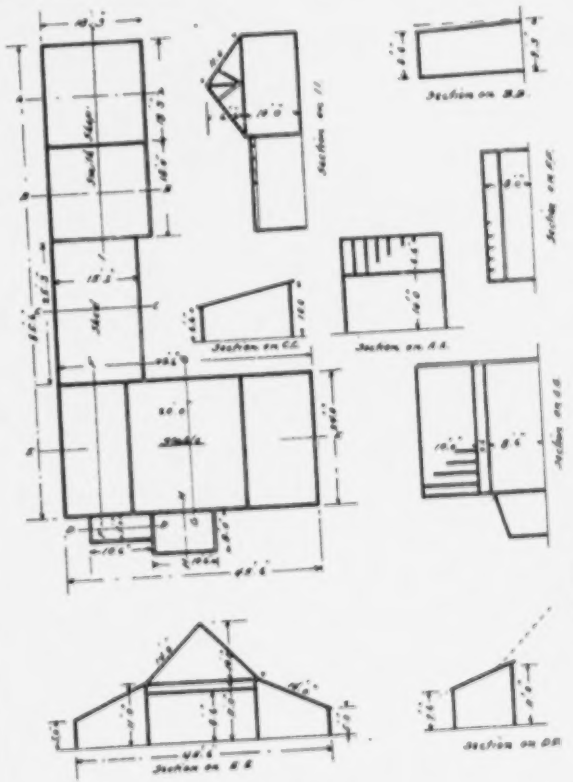


No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

Lincoln Gas and Electric Light Co

Stable and Smith Shop  Gas and Electric  Jan 1st 1913

Scale 1-16"

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Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

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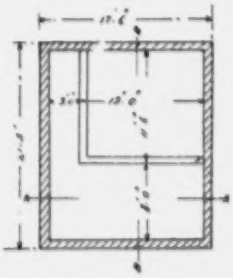
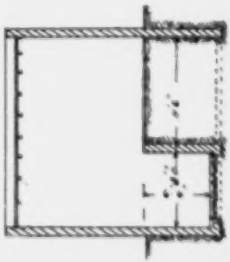
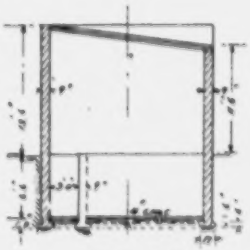
Lincoln Gas and Electric Light Co.

Booster House. Gas Department. Jan. 1st 1913.

Scale 1"=4'







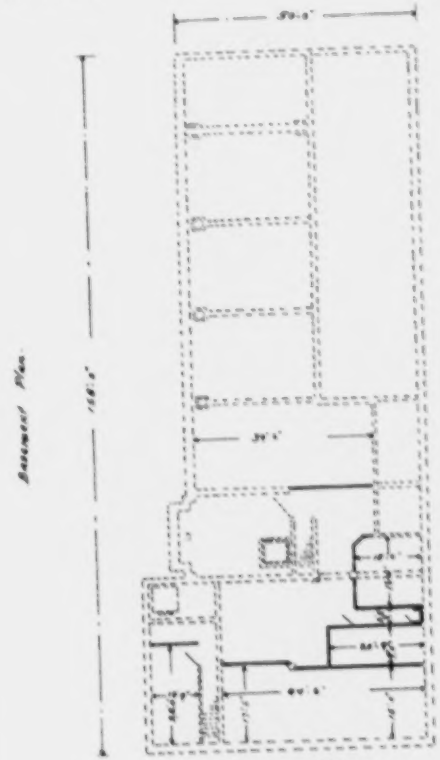
Section on A.A

Storage Holder yard

No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

Lincoln Gas and Electric Light Co.

General Offices Gas and Electric. Jan 19th 1913

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No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

Page

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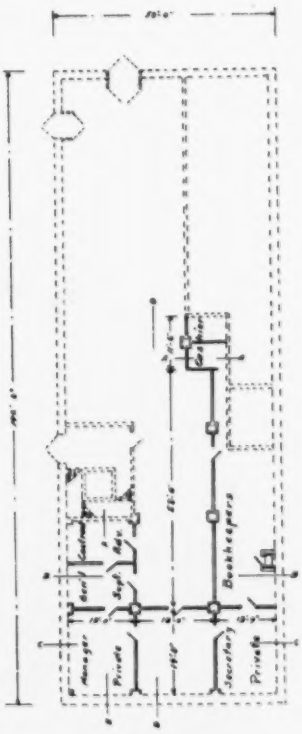
Lincoln Gas and Electric Light Co.

General Offices. Gas and Electric. Jan 1st 1918

Scale 1" = 10'-0"




1st Floor Plan.

No. 744

Lincoln Gas & Electric Light Co.,

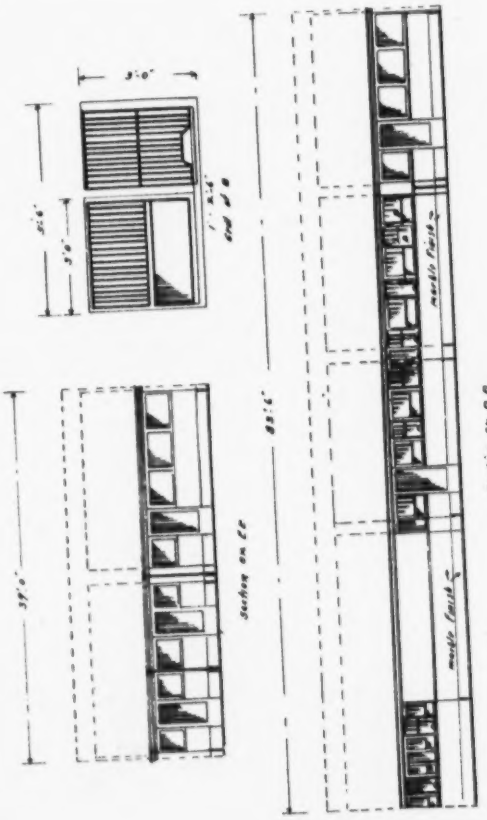
V.

The City of Lincoln et al

Lincoln Gas and Electric Light Co.

General Offices — Gas and Electric — Jan 1st 1913.

Scale 1"-10'0"

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No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

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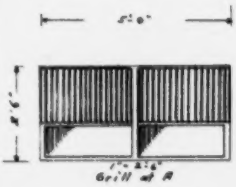
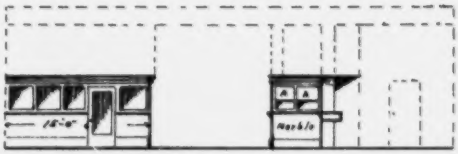
Lincoln Gas and Electric Light Co

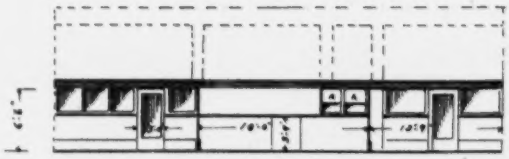
General Offices  Gas and Electric  Jan 1st 1913.

Scale 1" = 10'-0"




Section on BB




Section on CC

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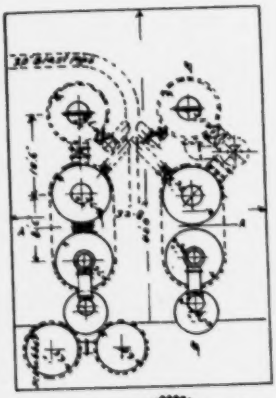
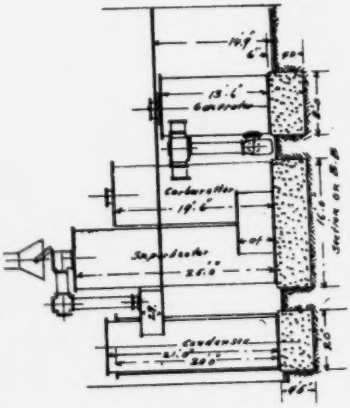
No. 744
Lincoln Gas & Electric
Light Co.,  Page
V.
The City of Lincoln et al

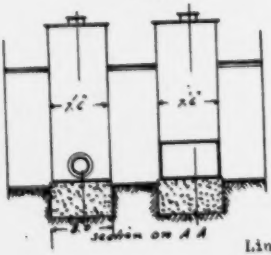
Lincoln Gas & Electric Light Co

Gas Generating Sub Gas Department Jan 1st 1910.

Scale 1"=1'0" —









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Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al



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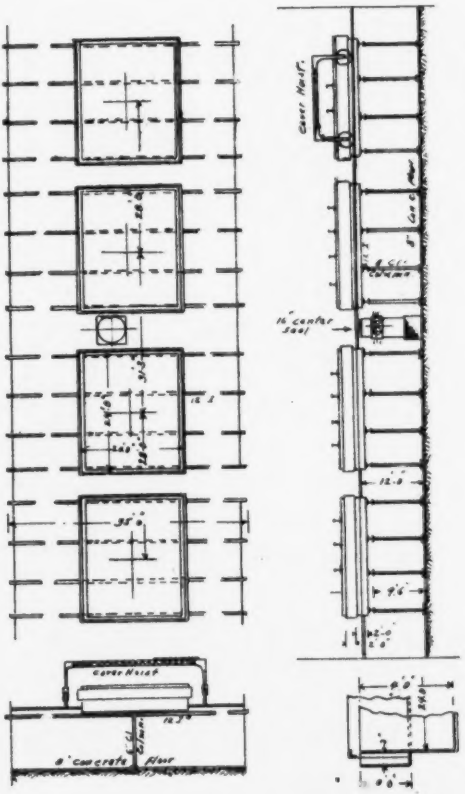
Lincoln Gas and Electric Light Co

Purifying Boxes. Gas Department Jan 1st 1913.

Scale 1" 10'0"



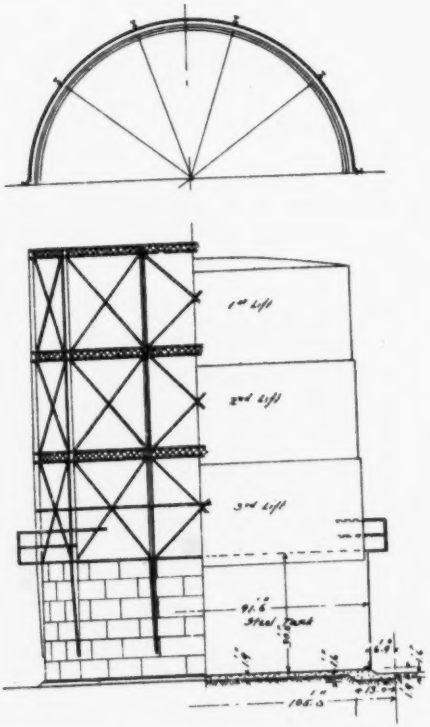

PLAINTIFF'S EXHIBIT
MINOR S. BACON, Ref.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

Lincoln Gas and Electric Light Co.

Storage Holder — Gas Department — Jan. 1st 1913

Scale 1"=50'




300000 Cu. Ft. Capy Holder in Steel Tank

EXHIBIT 31
MINER & BACON

No. 744
Lincoln Gas & Electric Light Co., v.
The City of Lincoln et al

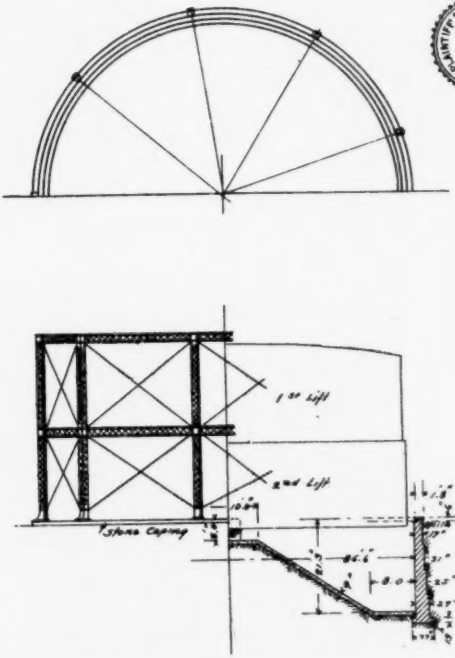


POOR COPY

Lincoln Gas and Electric Light Co.

Storage Holder. Gas Department Jan. 1st 1913.

Scale 1"=20.0"




2,000,000 Cu. Ft. Capy. Holder
Mr. Brick Tank.

No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

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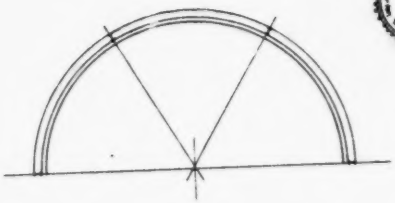
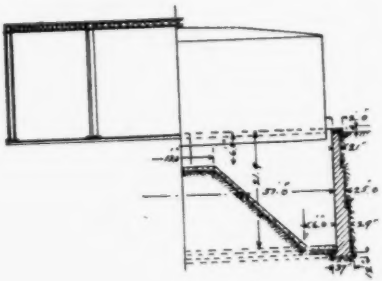
Lincoln Gas and Electric Light Co.

Relief Holder — Gas Department — Jan. 1st 1913.

Scale 1"-16'



50,000 Cu. Ft Copy Simple Lift Holder in Brick Tank.





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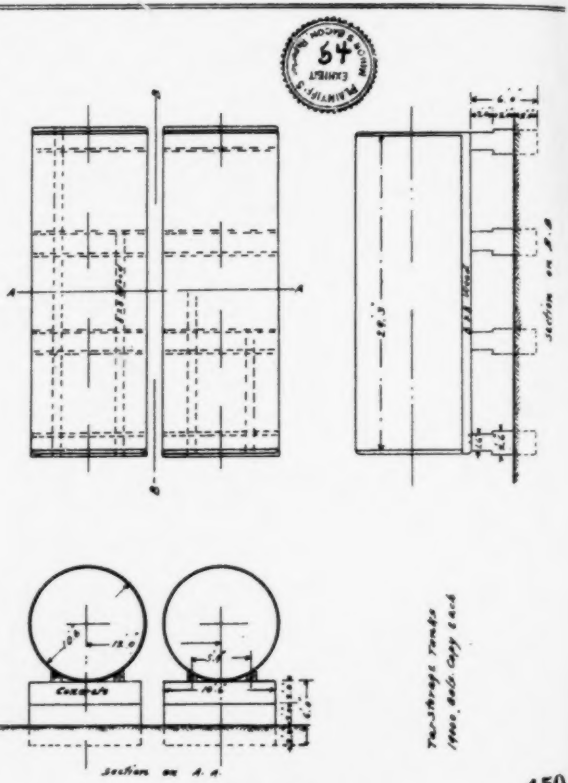
Lincoln Gas and Electric Light Co.

Tar Tanks  Gas Department  Jan. 1st 1913.



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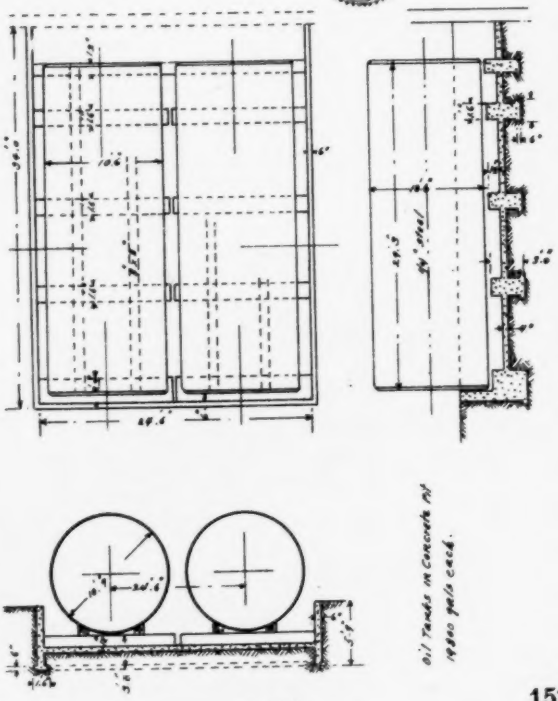
Lincoln Gas and Electric Light Co.

Oil Tanks — Gas Department — Jan 1st 1913

Scale 1/ 8.0"



Oil Tanks in Concrete Pit
10000 gals each.

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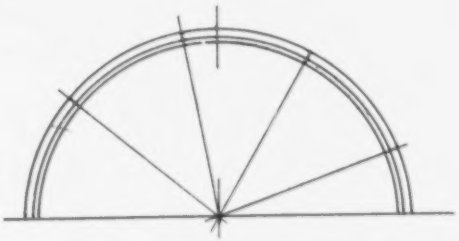
Lincoln Gas and Electric Light Co.

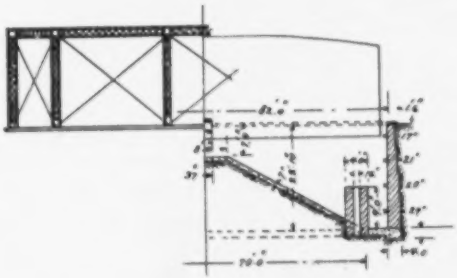
Storage Holder  Gas Department  Jan. 1st 1913

Scale 1"=20'



100000 Cu. Ft. Copy. Simple Lift Holder in Brick Tank.

Storage Holder Yard



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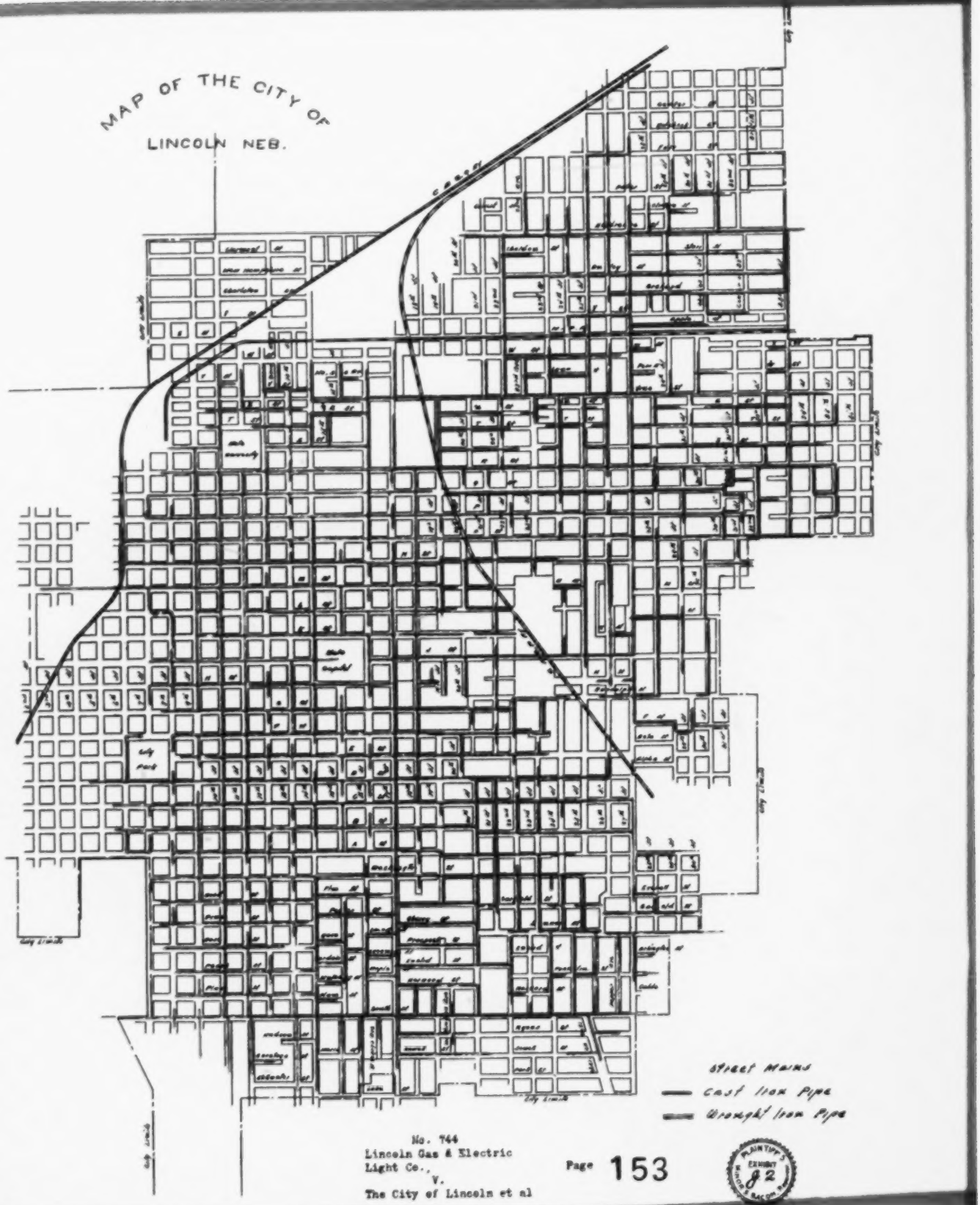
Page

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v.
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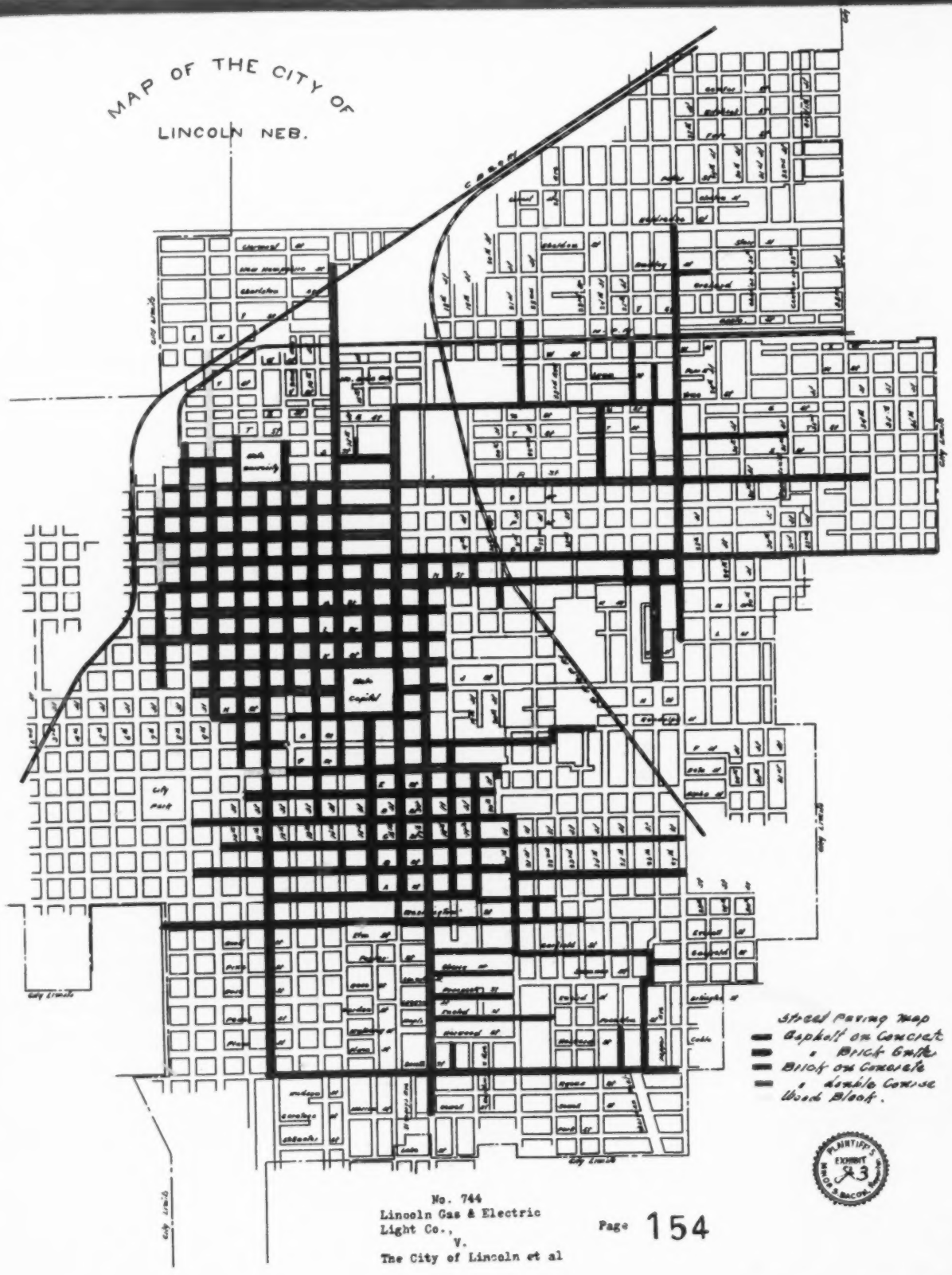
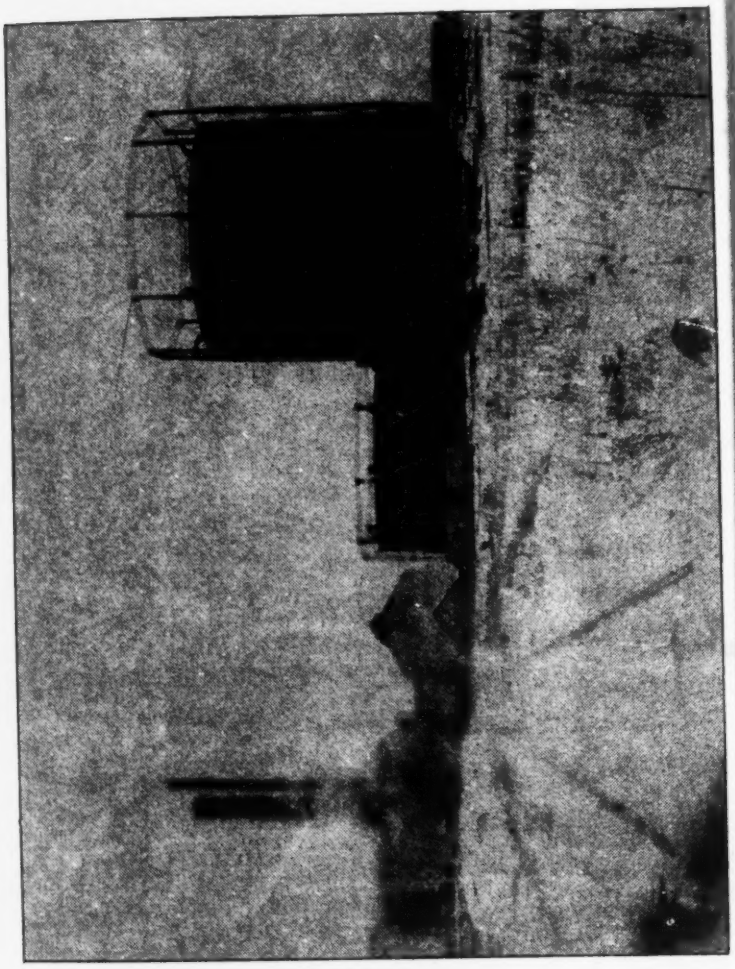
EXHIBIT 82


MAP OF THE CITY OF
LINCOLN NEB.
City Limits
City Limits
City Limits



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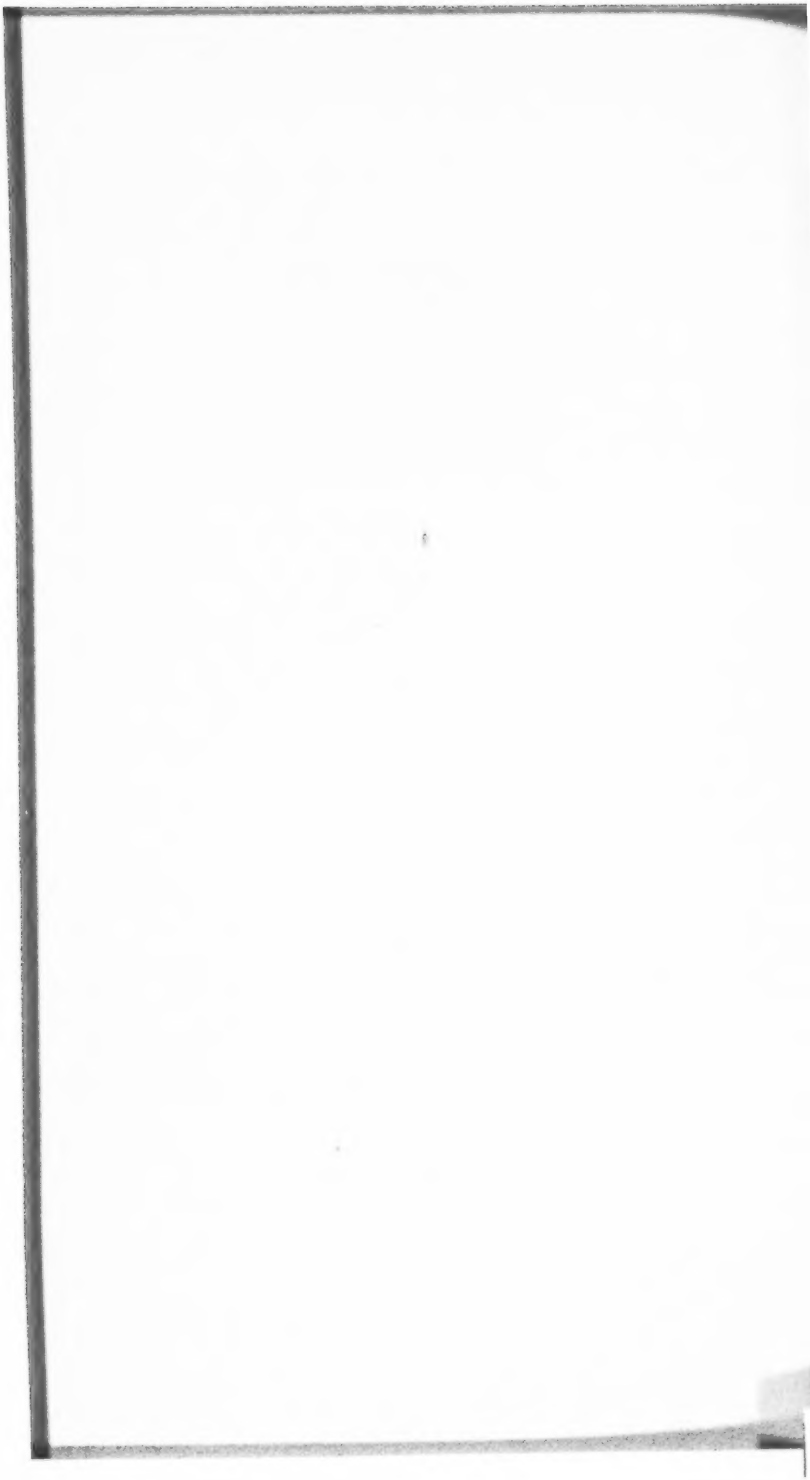

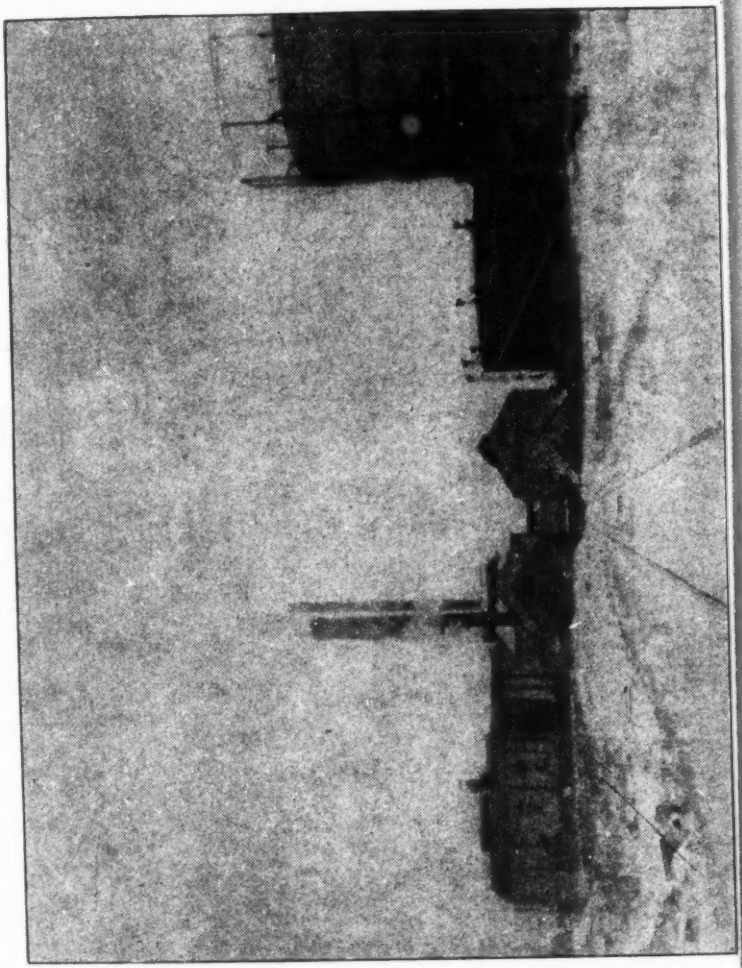

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389 *Proposed Occupation Tax.*

| | | |
|---|---|---|
| /1/07 to 1/1/08 | $215,776.20@2½%= | $5,394.40 |
| /1/08 to 1/1/09 | 234,347.51@2½%= | 5,858.69 |
| /1/09 to 1/1/10 | 245,124.74 | |

12/ 1/09 to 1/1/10=$23,503.80
12/13/09 to 1/1/10= 19/31

19/31 x $23,503.80 ..... 14,405.56

1/1/07 to 12/13/09 ..... $230,719.18@2½%=$5,767.98

1/1/10 to 1/1/11 ..... $251,942.37

1/1/10 to 2/ 1/10=$21,880.73
1/1/10 to 1/13/10= 12/31

12/31 x $21,880.73 ..... $8,469.96

1/13/10 to 1/1/11 ..... $243,472.41@3%= $7,304.17

| | | |
|---|---|---|
| 1/1/11 to 1/1/12 | $274,292.95@3%= | 8,228.79 |
| 1/1/12 to 1/1/13 | $282,162.11@3%= | 8,464.86 |
| 1/1/13 to 7/1/13 | $138,059.91@3%= | 4,141.80 |
| Total 1/1/07 to 7/1/13= | | $45,160.69 |



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390 *Corrected Net Earnings Gas Department.*

(As affected by occupation tax with gas @ $1.20 per M.)

| Year ending 12/31. | 1907 | 1908. | 1909. | 1910. | 1911. | 1912. |
|---|---|---|---|---|---|---|
| As shown in exhibit P. Lea's report..... | $58,121.71 | 80,678.85 | 91,708.49 | 86,742.99 | 88,789.38 | 75,898.80 |
| Deduct occupation tax..... | 5,394.40 | 5,858.69 | 5,767.98 | 7,304.17 | 8,228.79 | 8,464.86 |
| Net earnings corrected for occupation tax..... | $52,727.31 | 74,820.16 | 85,940.51 | 79,438.82 | 80,560.59 | 67,433.94 |
| Corrected net earnings Gas Dept. in % of reproduction cost ..... | 5.528 | 7.447 | 7.674 | 6.674 | 6.370 | 5.163 |
| Corrected net earnings Gas Dept. in % of then present value ..... | 6.376 | 8.575 | 8.869 | 7.726 | 7.368 | 5.952 |

391 *Corrected Net Earnings Gas Department.*

(As affected by occupation tax with gas @ $1.00 per M.)

| | 1907 | 1908. | 1909. | 1910. | 1911. | 1912. |
|---|---|---|---|---|---|---|
| Corrected net earnings as per exhibit P in Lea's report ..... | $58,121.71 | 80,678.85 | 91,708.49 | 86,742.99 | 87,789.38 | 75,898.80 |
| Deduct 1/6 gross earnings to equal reduction in income a/c $1.00 gas..... | 35,962.70 | 39,057.92 | 40,854.12 | 41,990.39 | 45,715.49 | 47,027.02 |
| | 22,159.01 | 41,620.93 | 50,854.37 | 44,752.60 | 42,073.89 | 28,871.78 |
| Occupation tax on $1.00 basis..... | 4,495.34 | 4,882.24 | 4,905.47 | 6,084.41 | 6,857.32 | 7,054.05 |
| Corrected net earnings on above basis..... | 17,663.67 | 36,738.69 | 45,948.90 | 38,668.19 | 35,216.57 | 21,817.73 |
| Corrected net earnings in % of reproduction cost ..... | 1.852 | 3.657 | 4.103 | 3.249 | 2.785 | 1.674 |
| Corrected net earnings in % of present value... | 2.136 | 4.211 | 4.742 | 3.761 | 3.220 | 1.925 |

(Here follows table, marked page 392.)

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Operation of Gas Dept for first six

| 1913 | Jan. | Feb. | Mar. | Apr. |
|---|---|---|---|---|
| Total from gas sales | 25345.29 | 23799.55 | 19204.41 | 23488.62 |
| Meter charge on minimum bills | 72.75 | 89.25 | 89.25 | 86.50 |
| Forfeited discount | 308.64 | 325.20 | 247.81 | 268.41 |
| Total earnings from gas | 25726.68 | 24214.00 | 19541.47 | 23843.53 |
| Bad Debts | 250.00 | 250.00 | 250.00 | 250.00 |
| Gross earnings Gas | 25476.68 | 23964.00 | 19291.47 | 23593.53 |
| Operating expenses* | 18124.51 | 14627.26 | 14826.14 | 15351.67 |
| Net earnings Gas | 7352.17 | 9336.74 | 4465.33 | 8241.86 |

Exclusive of depreciation

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six months of 1913.

| | May | June | Total 6 Mo. | Outside Lincoln | Lincoln |
|---|---|---|---|---|---|
| 62 | 22319.20 | 23274.11 | 137431.18 | 4697.94 | 132733.24 |
| .50 | 84.75 | 72.75 | 495.25 | 18.00 | 477.25 |
| .41 | 223.90 | 259.52 | 1633.48 | 9.48 | 1624.00 |
| 53 | 22627.85 | 3606.38 | 139559.91 | 4725.42 | 134834.49 |
| 00 | 250.00 | 250.00 | 1500.00 | | 1500.00 |
| 53 | 22377.85 | 23356.38 | 138059.91 | | 133334.49 |
| 7 | 15626.76 | 15547.5 | 94103.86 | | |
| | 6751.09 | 7808.86 | 43956.05 | | |



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393 *Corrected Gross Earnings, etc., for Period* 1/1/13–7/1/13.

| | Six months, 1/1/13–7/1/13. |
|---|---|
| Gross earnings Gas Dept. as reported | $133,334.49 |
| Deduct receipts from gas sales outside of Lincoln | 4,725.42 |
| Corrected gross earnings Gas Department | $128,609.07 |
| Operating expenses as reported | $94,103.86 |
| Output cost gas sold outside Lincoln | 1,136.13 |
| | $92,967.73 |
| Add for depreciation on S. F. basis | 10,432.52 |
| Corrected operating expenses Gas Department | $103,400.25 |
| Corrected net earnings as above | $25,208.82 |
| Corrected net earnings Gas Dept. in % of reproduction cost | 3.860 |
| Corrected net earnings Gas Dept. in % of present value. | 4.448 |

394 *Corrected Net Earnings for Period* 1/1/13 *to* 7/1/13.

(As affected by occupation tax with gas @ $1.20 per M.)

| | |
|---|---|
| Corrected net earnings | $25,208.82 |
| Deduct occupation tax@3% on $128,609.07= | 3,858.27 |
| Net earnings corrected a/c occupation tax | $21,350.55 |
| Corrected net earnings Gas Dept. in % of reproduction cost | 3.268 |
| Corrected net earnings Gas Dept. in % of present value. | 3.768 |

*Corrected Net Earnings for Period* 1/1/13–7/1/13.

(As affected by occupation tax with gas @ 1.00 per M.)

| | |
|---|---|
| Corrected net earnings | $25,208.82 |
| Deduct 1/6 gross earnings a/c $1.00 gas | 21,434.84 |
| | $3,773.98 |
| Deduct occupation tax @ 3% ($128,609.07—21,434.84) | 3,215.23 |
| Net earnings (@$1.00) corrected for occupation tax | $558.75 |
| Corrected net earnings Gas Department in % of reproduction cost | .085 |
| Corrected net earnings Gas department in % of present value | .098 |

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395 *Comparison of Valuation Data, Operating Statistics, etc.*

Lincoln Gas & Electric Light Co., Lincoln, Neb.

396 Henry I. Lea, Consulting Gas Engineer, Peoples' Gas Building, Chicago.
Member American Gas Institute, American Society of Mechanical Engineers.

February 14th, 1914.

George Montgomery, Manager, Lincoln Gas & Electric Light Co., Lincoln, Neb.

DEAR SIR: Herewith you will please find a comparison of the data contained in the reports of Alton D. Adams, covering valuation, operating expenses, etc., of the gas department of your property with corresponding data from my report.

The valuation figures are as of January 1st, 1913.

Periods covered by operating statistics are shown in the several tabulations.

The figures of Mr. Assenmacher, where comparable, are also to be found.

You will remember that after may report had been compiled a few errors were discovered in the street main figures as shown by the inventory.

These corrections were made clear in the testimony of Mr. Brodnax, and in my figures herewith adjustment is made for these differences.

In my original report the real estate figures given by me were on property which I believed was exclusively used by the gas department, but I found later that portions of this property were used by the electric department.

You will, therefore, find in the accompanying figures a revision of my real estate valuations to agree with my testimony on this matter.

For purposes of valuation comparison, I have taken the Net Construction Costs as shown by Adams and have added his 7% in arriving at his Reproduction Costs.

To the Present Values as shown in Adams' report, I have added his 7% to parallel it with my Present Values.

This has also been done with the Depreciation Annuities shown by Adams.

397 Such other steps as were necessary in making the valuation figures shown by Adams strictly comparable with those of my report have been taken, and all figures shown have been checked and may be accepted as showing accurately the differences on points indicated.

In a number of cases I have taken the minor differences found in Adams' figures as being due to typographical errors, and have used the figures obviously meant to be shown.

I believe you will find the headings of the various tables fairly ex-

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planatory, but believe that if this comparison is submitted to the Court, it should be accompanied by a verbal explanation of the relation of each of the tables to the whole matter, as it seems almost impossible to do this fully with only the brief headings.

Respectfully submitted,

HENRY I. LEA.

H. I. L.—P.

398 *Index.*

399 *Index.*

COMPARISON OF VALUATIONS.

*Reproduction Costs, Present Value and Depreciation Annuities.*


| | Section. |
|---|---|
| Summary | A |
| Real Estate Details | B |
| Building Details | C |
| Works Equipment Details | D |
| Distribution System Details | E |


*Net Construction Costs.*


| | |
|---|---|
| Real Estate Details | F |
| Building Details | G |
| Works Equipment Details | D |
| Distribution System Details | H |


*Comparison of Operating Statistics, etc.*


| | |
|---|---|
| Gross and Net Earnings, etc., as shown and as Estimated With Gas at $1.20 Per M. and With Gas at $1.00 | I |
| Comparison of Costs and Estimated Costs as Per A. D. Adams' Arrangement of Accounts | J |
| Table Showing Excessive Expense as Claimed by Adams | K |


*Details Entering Into Above Comparisons.*


| | |
|---|---|
| Gas Making Material and Labor | L |
| Salaries, Office, Distribution and General Expense | M |
| Repairs and Renewals | N |


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*Comparison of Operating Statistics, etc.*—(Cont'd).

Section.

Table Showing Trend of "Labor & Material" Costs and So-Called "Overhead" Costs, Per M. Cu. Ft. Sold Per Year.... O
Details Entering into Correct Arrangement of Expenses as Shown in Preceding Table..... P

*Comparison of Massachusetts Data.*

Gas Sold in Six Cities Referred to by A. D. Adams..... Q
Street Mains in Six Cities Referred to by A. D. Adams..... R
Miscellaneous Data from Twenty Cities..... S
Detail of Expenses (Exclusive of "Depreciation and Other Reserves" and "Other Expense") as Shown by Massachusetts Records for Six Cities Refered to by A. D. Adams. T
Comparison of Total Salaries, Office, Distribution and General Expense in Six Cities Referred to by A. D. Adams..... U
Detail of Total Expenses in Twenty Massachusetts Cities, According to Arrangement of Accounts Used by A. D. Adams V
Comparison of Lincoln Figures With Those of Twenty Cities. W
Net Earnings of Twenty Massachusetts Companies Compared With Lincoln Net Earnings..... X

401 SECTION A.

(Here follows table, marked page 402.)

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SUMMARY OF PHYSICAL EQUIPMENT:-

| | Net Construction Cost | | Reproduction Cost | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams |
| Real Estate - | $19320.00 | $ 2825.00 | $ 19320.00 | $ 2809.00 | $ 19320.00 | $ 2809.00 | | |
| Buildings - | 35614.00 | 27617.00 | 41312.00 | 29550.00 | 30967.00 | 20759.00 | $ 481.53 | $ 484.47 |
| Works Equipment - | 218358.00 | 160069.00 | 253298.00 | 171274.00 | 196759.00 | 130544.00 | 5166.65 | 3830.27 |
| Distribution System - | *529736.00 | *324659.00 | 614493.00 | 347385.00 | 513829.00 | 261096.00 | 12405.43 | 6591.20 |
| *TOTAL PHYSICAL EQUIPMENT - | $803028.00 | $514970.00 | $928423.00 | $551018.00 | $760875.00 | $415208.00 | $18053.61 | $10905.94 |

* Corrected to agree with revised street main figures as per testimony of Brodnax and with revised real estate figures as per testimony of Lea.



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REAL ESTATE:-

| | Net Construction Cost | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | L | A | L | A | L | A | Lea | Adams | Lea | Adams |
| Lots #1 to #15 (Incl.) Block #2 - | $ 4500.00 | $ 0 | $ 4500.00 | $ 0 | 0 | 0 | 0 | 0 | 100 | 0 | $ 4500.00 | $ 0 | 0 | 0 |
| Lots #1 to #15 (Incl.) Block #7 - | 4500.00 | 0 | 4500.00 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 4500.00 | 0 | 0 | 0 |
| South 92' of E 1/2 of Lot #11, Block #77 - | * 240.00 | 0 | 240.00 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 240.00 | 0 | 0 | 0 |
| West 1/2 of Lot #11, Block #77 - | * 240.00 | 0 | 240.00 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 240.00 | 0 | 0 | 0 |
| South 92' of Lot #12, Block #77 - | * 240.00 | 0 | 240.00 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 240.00 | 0 | 0 | 0 |
| Lots #1 to #12, (Incl.) Block #79 - | *8800.00 | 2825.00 | 8800.00 | 2809.00 | 0 | 0 | 0 | 0 | 100 | 100 | 8800.00 | 2809.00 | 0 | 0 |
| South 20', West 16' Lot #2, Block #32 - | 200.00 | 0 | 200.00 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 200.00 | 0 | 0 | 0 |
| Lots #18 & #19, Block #17 - | 600.00 | 0 | 600.00 | 0 | 0 | 0 | 0 | 0 | 100 | 0 | 600.00 | 0 | 0 | 0 |
| TOTAL REAL ESTATE - | *$19320.00 | $2825.00 | $19320.00 | $2809.00 | 0 | 0 | 0 | 0 | 100 | 100 | $19320.00 | $2809.00 | 0 | 0 |

* Revised to eliminate portions of real estate occupied by Electric Dep't. and included in inventory by mistake.



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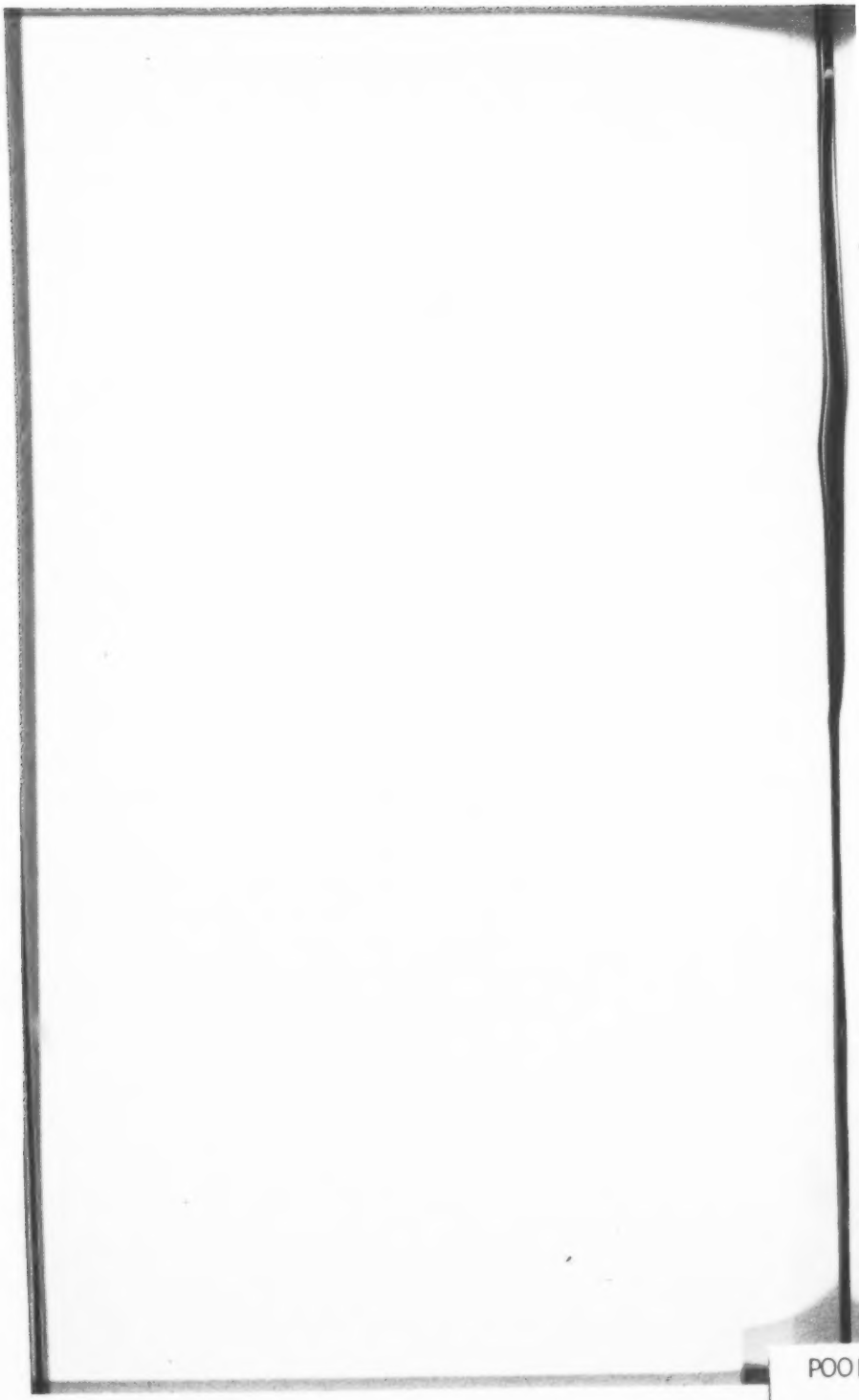
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403 SECTION B.

(Here follows table, marked page 404.)

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405 SECTION C.

(Here follows table, marked page 406.)

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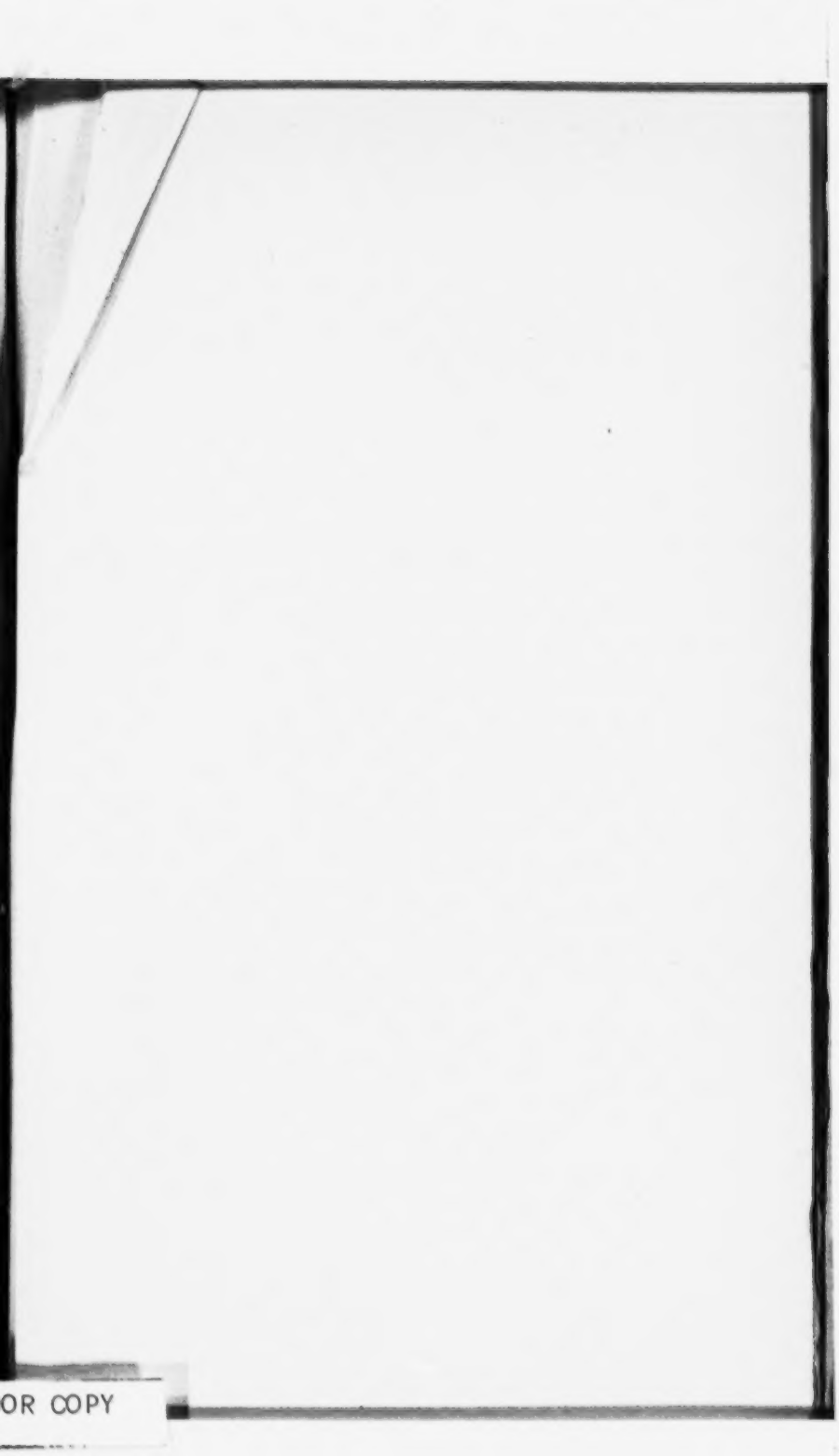
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BUILDINGS:-

| | Net Construction Cost | | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Assenmacher | Lea | Adams | L | A | L | A | L | A | Lea | Adams | Lea | Adams |
| Purifying House - | $16620.00 | $12577.00 | $12482.95 | $19279.00 | $13457.00 | 22 | 22 | 50 | 66.6 | 73. | 67. | $14074.00 | $ 9016.00 | $197.80 | $201.87 |
| Generator House - | 3739.00 | 3261.00 | 3308.50 | 4337.00 | 3489.00 | 5 | 5 | 50 | 66.6 | 95. | 92.5 | 4120.00 | 3227.00 | 44.49 | 52.34 |
| Retort House - | 7689.00 | 6088.00 | 6080.00 | 8919.00 | 6515.00 | 22 | 22 | 50 | 66.6 | 73. | 67. | 6511.00 | 4335.00 | 91.50 | 97.71 |
| Meter Shop & Booster House - | 2616.00 | 2049.00 | 2559.63 | 3035.00 | 2192.00 | 5 | 5 | 50 | 66.6 | 95. | 92.5 | 2883.00 | 2028.00 | 31.13 | 32.87 |
| Coal Shed - | 1795.00 | 1657.00 | 1892.00 | 2080.00 | 1773.00 | 22 | 22 | 25 | 40. | 25. | 45. | 520.00 | 798.00 | 37.05 | 44.33 |
| Oil Tank House - | 1558.00 | 1107.00 | 1276.66 | 1807.00 | 1185.00 | 15 | 15 | 50 | 66.6 | 85. | 77.5 | 1500.00 | 918.00 | 18.53 | 17.77 |
| Oxide Shed - | 60.00 | 60.00 | 0 | 70.00 | 64.00 | 3 | 3 | 20 | 25. | 90. | 88. | 63.00 | 57.00 | 2.60 | 2.57 |
| Stable & Blacksmith Shop - | 819.00 | 819.00 | 907.50 | 949.00 | 875.00 | 15 | 15 | 25 | 25. | 52. | 40. | 493.00 | 350.00 | 26.03 | 35.01 |
| District Holder Booster House - | 721.00 | 0 | 471.25 | 836.00 | 0 | 3 | 2 | 40 | 66.6 | 96. | 97. | 803.00 | 0 | 12.40 | 0 |
| TOTAL BUILDINGS - | $35614.00 | $27617.00 | $28978.49 | $41312.00 | $29550.00 | | | 46.25 | 62.5 | 74.95 | 71.8 | $30967.00 | $20759.00 | $461.53 | $484.47 |



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WORKS EQUIPMENT:-

| | Net Construction Cost | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | L | A | L | A | L | A | Lea | Adams | Lea | Adams |
| 7'-6" Water Gas Set - 1 | $ 8477.00 | $ 7506.00 | $ 9833.00 | $ 8031.00 | 1 | 4 | 30 | 33.3 | 98. | 88. | $ 9636.00 | $ 7067.00 | $ 223.99 | $ 240.94 |
| 7'-6" Water Gas Set - 2 | 8477.00 | 7506.00 | 9833.00 | 8031.00 | 3 | 0 | 30 | 33.3 | 95. | 100. | 9341.00 | 8031.00 | 223.99 | 240.94 |
| Water Gas Condenser & Scrubber - 3 | 1219.00 | 1206.00 | 1414.00 | 1290.00 | 3 | 4 | 30 | 33.3 | 95. | 88. | 1345.00 | 1135.00 | 32.21 | 38.71 |
| Operating Floor - 4 | 2052.00 | 1319.00 | 2380.00 | 1411.00 | 3 | 2 | 30 | 66.6 | 98. | 97. | 2332.00 | 1369.00 | 24.41 | 21.18 |
| 6'-6" Water Gas Set - 5 | 8072.00 | 5808.00 | 9364.00 | 6215.00 | 12 | 10 | 30. | 33.3 | 71. | 70. | 6648.00 | 4351.00 | 213.31 | 186.44 |
| 6'-6" Water Gas Set - (Springer) - 6 | 4991.00 | 2904.00 | 5790.00 | 3107.00 | 22 | 24 | 30 | 33.3 | 38. | 28. | 2200.00 | 870.00 | 131.89 | 93.22 |
| Operating Floor - 7 | 1871.00 | 1184.00 | 2170.00 | 1267.00 | 12 | 10 | 30 | 66.6 | 73. | 85. | 1584.00 | 1078.00 | 22.26 | 19.00 |
| #7 Sturtevant Blower - 8 | 272.00 | 254.00 | 316.00 | 272.00 | '8 | 5 | 25 | 40.0 | 87. | 92.5 | 275.00 | 251.00 | 8.66 | 6.79 |
| #7 Sturtevant Blower - 9 | 279.00 | 256.00 | 324.00 | 276.00 | 4 | 5 | 25 | 40.0 | 89. | 92.5 | 288.00 | 256.00 | 8.88 | 6.90 |
| #1 Roots' Blower - 10 | 273.00 | 142.00 | 317.00 | 152.00 | 12 | 11 | 25 | 40.0 | 63. | 72.5 | 200.00 | 110.00 | 8.69 | 3.80 |
| #8 Sturtevant Turbo-Blower 11 | 1435.00 | 1336.00 | 1665.00 | 1430.00 | 4 | 4 | 20 | 33.3 | 86. | 88. | 1432.00 | 1258.00 | 61.97 | 42.89 |
| #8 Sturtevant Blower - 12 | 455.00 | 559.00 | 525.00 | 598.00 | 4 | 3 | 25 | 40.0 | 89. | 92.5 | 467.00 | 553.00 | 14.40 | 14.96 |
| #6 Roots Exhauster - 13 | 791.00 | 824.00 | 918.00 | 882.00 | 21 | 22 | 30 | 40.0 | 41. | 45. | 376.00 | 397.00 | 20.91 | 22.04 |
| #6 Sturtevant Blower - 14 | 346.00 | 590.00 | 401.00 | 631.00 | 5 | 4 | 30 | 40.0 | 90. | 90. | 361.00 | 568.00 | 9.15 | 15.78 |
| 10"McKensie Exhauster - 15 | 440.00 | 425.00 | 510.00 | 455.00 | 21 | 20 | 30 | 40.0 | 41. | 50. | 209.00 | 227.00 | 11.61 | 11.37 |
| 4" x 8" Greenfield Engine - 16 | 240.00 | 265.00 | 278.00 | 284.00 | 15 | 15 | 20 | 40.0 | 35. | 62.5 | 97.00 | 178.00 | 10.34 | 7.09 |
| 8" x 8" Sturtevant Engine - 17 | 270.00 | * | 313.00 | * | 5 | * | 20 | * | 82. | * | 257.00 | * | 11.64 | * |
| 7" x 8" Sturtevant Engine - 18 | 367.00 | 357.00 | 426.00 | 382.00 | 4 | 3 | 20 | 40.0 | 86. | 92.5 | 366.00 | 353.00 | 15.88 | 9.56 |
| 40 H. P. Motor - 19 | 655.00 | 250.00 | 760.00 | 268.00 | 7 | 8 | 20 | 33.3 | 75. | 76. | 570.00 | 203.00 | 28.28 | 8.03 |
| 35 H. P. Motor - 20 | 566.00 | 535.00 | 657.00 | 572.00 | 10 | 8 | 20 | 33.3 | 61. | 76. | 401.00 | 435.00 | 24.45 | 17.17 |
| Countershafting, etc. - 21 | 77.00 | 77.00 | 89.00 | 82.00 | 21 | 21 | 25 | 33.3 | 25. | 37. | 22.00 | 30.00 | 2.44 | 2.47 |
| 6 Benches 6'- 22 | 17993.00 | 14668.00 | 20872.00 | 15695.00 | 8 | 13.5 | 25 | 33.3 | 78. | 53.5 | 16280.00 | 8484.00 | 572.51 | 470.84 |

*(Included with #6 Sturtevant Blower)

WORKS EQUIPMENT (CONTINUED):-

| | Net Construction Cost | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | L | A | L | A | L | A | Lea | Adams | Lea | Adams |
| Charging Floor - 33 | £ 2440.00 | £ 1605.00 | £ 2830.00 | £ 1717.00 | 15 | 15 | 50 | 66.6 | 83. | 77.5 | £ 2349.00 | £ 1331.00 | £ 29.03 | £ 25.77 |
| 4'-8" x 25'-0" Condenser - 34 | 761.00 | 583.00 | 883.00 | 624.00 | 22 | 22 | 30 | 40.0 | 38. | 45. | 336.00 | 280.00 | 20.11 | 15.60 |
| 5'-6" x 31'-0" Scrubber - 35 | 411.00 | 319.00 | 477.00 | 341.00 | 22 | 22 | 30 | 40.0 | 38. | 45. | 181.00 | 154.00 | 10.86 | 8.54 |
| 4'-6" x 5'-0" Rotary Scrubber - 36 | 2121.00 | 2138.00 | 2460.00 | 2288.00 | 22 | 25 | 30 | 40.0 | 38. | 37.5 | 935.00 | 858.00 | 56.05 | 57.19 |
| 4 - 20' x 24' x 4' Purifying Boxes - 37 | 13088.00 | 7680.00 | 15182.00 | 8218.00 | 11 | 18 | 30 | 50.0 | 74. | 64. | 11235.00 | 5259.00 | 345.84 | 164.35 |
| 10' Station Meter - 38 | 3901.00 | 3940.00 | 4525.00 | 4216.00 | 11 | 15 | 40 | 40.0 | 83. | 67.5 | 3756.00 | 2845.00 | 67.15 | 105.40 |
| 6' Station Meter - 39 | 1358.00 | 1250.00 | 1575.00 | 1338.00 | 30 | 30 | 40 | 40.0 | 28. | 25. | 441.00 | 334.00 | 23.37 | 33.44 |
| 800000 Cu. Ft. Gas Holder - 30 | 43985.00 | 41537.00 | 51023.00 | 44445.00 | 5 | 4 | 40 | 66.6 | 93. | 94. | 47451.00 | 41779.00 | 757.18 | 666.67 |
| 200000 Cu. Ft. Gas Holder - 31 | 25119.00 | 18000.00 | 29138.00 | 19260.00 | 23 | 22 | 40 | 66.6 | 55. | 67. | 16026.00 | 12904.00 | 432.40 | 288.90 |
| 80000 Cu. Ft. Gas Holder - 32 | 10409.00 | 8000.00 | 12074.00 | 8560.00 | 31 | 30 | 40 | 66.6 | 34. | 55. | 4105.00 | 4708.00 | 179.17 | 128.40 |
| 20" Connelly Governor - 33 | 840.00 | 860.00 | 974.00 | 920.00 | 21 | 22 | 50 | 50.0 | 74. | 56. | 721.00 | 404.00 | 9.99 | 18.40 |
| 12" Reynolds Governor - 34 | 415.00 | 380.00 | 481.00 | 407.00 | 4 | 3 | 30 | 50. | 92. | 94. | 443.00 | 382.00 | 10.95 | 8.15 |
| 6" x 10" x 5" x 10" Knowles Pump - 35 | 360.00 | 418.00 | 418.00 | 447.00 | 10 | 10 | 20 | 25. | 61. | 60. | 255.00 | 269.00 | 15.55 | 17.89 |
| 5" x 4" Vertical Pump - 36 | 160.00 | 186.00 | 186.00 | 199.00 | 20 | 20 | 20 | 25. | 25. | 20. | 47.00 | 40.00 | 6.92 | 7.96 |
| 3 1/2" x 4" x 6" Gardner Pump - 37 | 90.00 | 104.00 | 104.00 | 111.00 | 6 | 6 | 20 | 25. | 78. | 76. | 81.00 | 85.00 | 3.87 | 4.45 |
| 4 1/2" x 3 3/4" x 4" Worthington Pump - 38 | 100.00 | 116.00 | 116.00 | 124.00 | 2 | 2 | 20 | 25. | 93. | 92. | 108.00 | 114.00 | 4.31 | 4.96 |
| 4 1/2" x 2 3/4" x 4" Gardner Pump - 39 | 95.00 | 110.00 | 110.00 | 118.00 | 4 | 4 | 20 | 25. | 86.5 | 84. | 95.00 | 98.00 | 4.09 | 4.71 |
| 4 1/2"x 2 3/4" x 4" Worthington Pump - 40 | 95.00 | 110.00 | 110.00 | 118.00 | 4 | 4 | 20 | 25. | 86. | 84. | 95.00 | 98.00 | 4.09 | 4.71 |
| 8" x 8" x 8" Worthington Pump - 41 | 85.00 | 99.00 | 99.00 | 106.00 | 1 | 1 | 20 | 25. | 97. | 96. | 96.00 | 102.00 | 3.68 | 4.84 |
| 6" x 4" x 6" Warren Pump - 42 | 160.00 | 186.00 | 186.00 | 199.00 | 20 | 20 | 20 | 25. | 25. | 20. | 47.00 | 40.00 | 6.92 | 7.96 |

WORKS EQUIPMENT (CONTINUED):-

| | | Net Construction Cost | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lee | Adams | Lee | Adams | L | A | L | A | L | A | Lee | Adams | L.e | Adams |
| 2 1/2" x 3" x 4" Marsh Pump - | 43 | £ 80.00 | £ 93.00 | £ 93.00 | £ 100.00 | 4 | 4 | 20 | 25. | 86. | 84. | £ 80.00 | £ 85.00 | £ 3.46 | £ 3.98 |
| Otis Platform Elevator | 44 | 1060.00 | 965.00 | 1230.00 | 1033.00 | 4 | 4 | 20 | 33.3 | 86. | 88. | 1056.00 | 906.00 | 45.78 | 30.96 |
| Fairbanks Scale - | 45 | 60.00 | 60.00 | 70.00 | 64.00 | 5 | 5 | 15 | 33.3 | 72. | 85. | 50.00 | 55.00 | 3.76 | 1.95 |
| Photometer - | 46 | 450.00 | 300.00 | 522.00 | 321.00 | 7 | 19 | 10 | 33.3 | 35. | 45. | 183.00 | 158.00 | 45.55 | 9.65 |
| Calorimeter - | 47 | 210.00 | 200.00 | 244.00 | 214.00 | 3 | 3 | 10 | 25. | 75. | 88. | 178.00 | 188.00 | 21.28 | 8.56 |
| #90 Drill Press - | 48 | 45.00 | 0 | 52.00 | 0 | 5 | 0 | 15 | 0 | 72. | 0 | 37.00 | 0 | 2.79 | 0 |
| Shop Tools & Misc. - | 49 | 462.00 | 462.00 | 536.00 | 494.00 | 8 | 7 | 15 | 25. | 56. | 72. | 300.00 | 356.00 | 28.83 | 19.77 |
| 4 - Steel Tar Tanks - | 50 | 760.00 | 395.00 | 882.00 | 421.00 | 7 | 20 | 40 | 40. | 88. | 50. | 776.00 | 210.00 | 15.08 | 10.52 |
| Tar Separator - | 51 | 179.00 | 179.00 | 208.00 | 192.00 | 7 | 7 | 40 | 40. | 88. | 82.5 | 185.00 | 158.00 | 5.08 | 4.79 |
| 3'-3" x 3'-3" x 10'-0" Tar Well - | 52 | 104.00 | 104.00 | 121.00 | 111.00 | 21 | 20 | 40 | 66.6 | 61. | 70. | 74.00 | 78.00 | 1.79 | 1.67 |
| 6'-0" x 20'-0" x 12'-0" Tar Well - | 53 | 472.00 | 472.00 | 548.00 | 505.00 | 15 | 14 | 40 | 66.6 | 75. | 79. | 411.00 | 399.00 | 8.15 | 7.58 |
| 2 - Steel Tar Tanks - | 54 | 1587.00 | 1056.00 | 1841.00 | 1130.00 | 5 | 2 | 30 | 66.6 | 90. | 97. | 1657.00 | 1096.00 | 41.93 | 16.96 |
| 2 - Steel Oil Tanks - | 55 | 1855.00 | 1160.00 | 2152.00 | 1241.00 | 7 | 3 | 30 | 66.6 | 85. | 95.5 | 1829.00 | 1186.00 | 49.02 | 18.62 |
| 2 - Steel Oil Tanks - | 56 | 1220.00 | 624.00 | 1416.00 | 668.00 | 10 | 9 | 30 | 66.6 | 77. | 86.5 | 1090.00 | 578.00 | 32.25 | 10.02 |
| Brick Oil Tank - | 57 | 228.00 | 228.00 | 264.00 | 244.00 | 15 | 14 | 40 | 66.6 | 75. | 79. | 198.00 | 193.00 | 3.91 | 3.66 |
| Drain Piping - | 58 | 1683.00 | 1683.00 | 1952.00 | 1801.00 | 10 | 10 | 30 | 40.0 | 77. | 75. | 1503.00 | 1350.00 | 44.46 | 45.03 |
| Water Piping - | 59 | 821.00 | 821.00 | 952.00 | 878.00 | 9 | 9 | 20 | 33.3 | 67. | 73. | 638.00 | 641.00 | 35.45 | 26.35 |
| Oil Piping - | 60 | 443.00 | 443.00 | 514.00 | 474.00 | 6 | 6 | 20 | 33.3 | 79. | 82. | 406.00 | 388.00 | 19.15 | 14.22 |
| Gas Yard Mains - | 61 | 6750.00 | 5006.00 | 7830.00 | 5358.00 | 12 | 12 | 40 | 66.6 | 81. | 82. | 6342.00 | 4395.00 | 116.19 | 80.38 |
| Steam Piping - | 62 | 2657.00 | 2657.00 | 3082.00 | 2843.00 | 8 | 8 | 20 | 25.0 | 71. | 68. | 2188.00 | 1935.00 | 114.71 | 115.72 |
| Tar Piping - | 63 | 586.00 | 586.00 | 680.00 | 627.00 | 12 | 12 | 20 | 40.0 | 51. | 70. | 347.00 | 439.00 | 25.50 | 15.68 |
| Works Tools - | 64 | 600.00 | 462.00 | 696.00 | 494.00 | 3 | 3 | 10 | 10.0 | 73. | 70. | 508.00 | 346.00 | 60.71 | 49.45 |
| Main Office Furniture & Fixtures - | 65 | 8606.00 | 8519.00 | 9985.00 | 8274.00 | 3 | 3 | 20 | 25.0 | 90. | 88. | 8985.00 | 6140.00 | 371.56 | |

WORKS EQUIPMENT (CONTINUED):-

| | Net Construction Cost | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | L | A | L | A | L | A | Lea | Adams | Lea | Adams |
| 100000 Cu. Ft. Gas Holder (District Station) | $ 18685.00 | $ 0 | $ 21675.00 | $ 0 | 3 | 2 | 40 | 66.6 | 96. | 97. | $ 20808.00 | $ 0 | $ 321.65 | $ 0 |
| Water Piping (District Station) - | 177.00 | 0 | 205.00 | 0 | 3 | 2 | 20 | 33.3 | 90. | 94. | 185.00 | 0 | 7.65 | 0 |
| Gas Yards Mains (District Station) - | 463.00 | 0 | 537.00 | 0 | 3 | 2 | 40 | 66.6 | 96. | 97. | 516.00 | 0 | 7.96 | 0 |
| Manholes (District Station) - | 1533.00 | 0 | 1778.00 | 0 | 3 | 2 | 40 | 66.6 | 96. | 97. | 1707.00 | 0 | 27.38 | 0 |
| 25 H. P. Motor (District Station) - | 425.00 | 0 | 491.00 | 0 | 3 | 2 | 20 | 33.3 | 90. | 94. | 442.00 | 0 | 18.27 | 0 |
| 5 H.P. Motor (District Station) - | 160.00 | 0 | 186.00 | 0 | 3 | 2 | 20 | 33.3 | 90. | 94. | 167.00 | 0 | 6.92 | 0 |
| #6 Sturtevant Blower (District Station) - | 180.00 | 0 | 209.00 | 0 | 3 | 2 | 25 | 40. | 94. | 95. | 196.00 | 0 | 5.73 | 0 |
| #5 Sturtevant Blower (District Station) - | 210.00 | 0 | 244.00 | 0 | 3 | 2 | 25 | 40. | 94. | 95. | 229.00 | 0 | 6.69 | 0 |
| TOTAL WORKS EQUIPMENT - | $218358.00 | $160089.00 | $253298.00 | $171274.00 | | | 32.15 | 45.45 | 77.67 | 76.2 | $196759.00 | $130544.00 | $5166.65 | $3830.27 |

407 SECTION D.

(Here follow tables, marked pages 408-411.)

412 SECTION E.

(Here follow tables, marked pages 413-415.)

412 SECTION E.

(Here follow tables, marked pages 413-415.)

DISTRIBUTION SYSTEM:-

| | Net Construction Cost | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | L | A | L | A | L | A | Lea | Adams | Lea | Adams |
| Cast Iron Mains - | $106182.00 | $ 71892.00 | $123170.00 | $ 76924.00 | 10.86 | 19.3 | 62.3 | 100 | 91.9 | 80.8 | $113272.00 | $ 62089.00 | $ 1447.35 | $ 768.86 |
| Wrot Iron Mains - | *73632.00 | * 59021.00 | 85413.00 | 63152.00 | 10.86 | 12.1 | 25. | 50 | 70. | 75.7 | 59789.00 | 47778.09 | 2342.87 | 1262.60 |
| Paving Over C. I. Mains | 53917.00 | 25254.00 | 62544.00 | 27022.00 | 0 | 19.3 | 0 | 100 | 0 | 80.8 | 62544.00 | 21834.00 | 0 | 270.22 |
| Paving over W. I. Mains | 57448.00 | 9264.00 | 66640.00 | 9912.00 | 0 | 12.1 | 0 | 50 | 0 | 75.7 | 66640.00 | 7504.00 | 0 | 198.25 |
| Total Services - | 111689.00 | 69939.00 | 129559.00 | 74835.00 | 7.6 | 10.8 | 25. | 40 | 77.12 | 72.9 | 99851.00 | 54491.00 | 4017.31 | 1870.56 |
| Paving over Services - | 14567.00 | 10850.00 | 16898.00 | 11596.00 | | 10.8 | | 40 | | 72.9 | 13107.00 | 8308.00 | 0 | 284.89 |
| Service Boxes & Cocks - | 11068.00 | 2472.00 | 12839.00 | 2645.00 | 7.7 | | 25. | | 77. | | 9886.00 | 1984.00 | 352.17 | 66.12 |
| Total Service Governors | 19902.00 | 13565.00 | 23086.00 | 14301.00 | 4.8 | | 25. | | 87.31 | | 20157.00 | 13564.00 | 633.24 | 357.52 |
| Total Meters - | 63444.00 | 56592.00 | 73595.00 | 60553.00 | 9.58 | 14.4 | 25. | 40 | 72.71 | 63.9 | 53515.00 | 38694.00 | 2018.70 | 1512.98 |
| Distribution Tools - | 6210.00 | 6210.00 | 7204.00 | 6645.00 | 3 | | 10. | | 73. | | 5259.00 | 4850.00 | 614.06 | 0 |
| Street Main Drips - | 1113.00 | 0 | 1291.00 | 0 | 10.86 | | 35. | | 81. | | 1046.00 | 0 | 23.50 | 0 |
| Street Main Valves - | 328.00 | 0 | 380.00 | 0 | 10.86 | | 35. | | 81. | | 308.00 | 0 | 6.91 | 0 |
| District Governor - | 225.00 | 0 | 261.00 | 0 | 5 | | 30. | | 90. | | 235.00 | 0 | 5.94 | 0 |
| Railway Crossings - | 6220.00 | 0 | 7215.00 | 0 | 10.86 | | 35. | | 81. | | 5844.00 | 0 | 131.38 | 0 |
| Gas Appliances Loaned - | 3791.00 | 0 | 4398.00 | 0 | 2 | | 5. | | 54. | | 2375.00 | 0 | 812.00 | 0 |
| TOTAL DISTRIBUTION SYSTEM - | $529738.00 | $324659.00 | $614493.00 | $347385.00 | | | | | 83.92 | 75.2 | $513829.00 | $261096.00 | $12405.43 | $ 6591.20 |

* Corrected to agree with revised street main figures as per testimony of Brodnax.

STREET MAINS EXCLUSIVE OF PAVING:-

| Size (Inches) | Length (Feet) | | Net Construction Cost | | Reproduction Cost | | Age (Yrs) | | Life (Yrs) | | Pres. % Condition | | Present Value | | Depreciation Annuity | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | Lea | Adams | L | A | L | A | L | A | Lea | Adams | Lea | Adams |
| 1 1/2" | 2258 | 2258 | $ 420.00 | $ 305.00 | $ 487.00 | $ 326.00 | 10.86 | 23. | 25. | 50. | 70. | 54. | $ 341.00 | $ 176.00 | $ 48.45 | $ 6.52 |
| 2" | *315708 | *315708 | * 73212.00 | * 58716.00 | * 84926.00 | * 62826.00 | 10.86 | 12.1 | 25. | 50. | 70. | 75.8 | * 59448.00 | * 47621.00 | *2529.52 | *1256.52 |
| 3" | 406 | 406 | 189.00 | 122.00 | 219.00 | 150.00 | 10.86 | 23. | 40. | 100. | 81. | 77. | 177.00 | 100.00 | 6.64 | 1.00 |
| 4" | 94274 | 94274 | 53444.00 | 34594.00 | 61995.00 | 37016.00 | 10.86 | 17.9 | 50. | 100. | 90. | 82.1 | 55796.00 | 30388.00 | 1060.90 | 370.00 |
| 6" | 25873 | 25873 | 20096.00 | 14537.00 | 23311.00 | 15555.00 | 10.86 | 19.1 | 75. | 100. | 94. | 80.9 | 21912.00 | 12582.00 | 171.29 | 155.55 |
| 8" | 4568 | 4568 | 4779.00 | 3381.00 | 5544.00 | 3618.00 | 10.86 | 10.3 | 75. | 100. | 94. | 89.7 | 5211.00 | 3245.00 | 37.55 | 36.00 |
| 10" | 9810 | 9810 | 13353.00 | 8888.00 | 15490.00 | 9510.00 | 10.86 | 23. | 75. | 100. | 94. | 77. | 14561.00 | 7322.00 | 83.45 | 95.00 |
| 12" | 3613 | 3613 | 6189.00 | 4462.00 | 7179.00 | 4774.00 | 10.86 | 23. | 75. | 100. | 94. | 77. | 6748.00 | 3675.00 | 40.14 | 47.74 |
| 16" | 1269 | 1269 | 3154.00 | 2185.00 | 3659.00 | 2338.00 | 10.86 | 23. | 75. | 100. | 94. | 77. | 3439.00 | 1799.00 | 20.59 | 23.00 |
| 20" | 1472 | 1472 | 4978.00 | 3725.00 | 5774.00 | 3964.00 | 10.86 | 23. | 75. | 100. | 94. | 77. | 5428.00 | 3066.00 | 26.79 | 39.67 |
| * | 459251 | 459251 | $179814.00 | $150913.00 | $208584.00 | $140077.00 | 10.86 | 16. | 56. | 57.17 | 82.97 | 78.5 | $173061.00 | $109974.00 | $3819.30 | $2031.00 |

* Corrected to agree with revised street main figures as per testimony of Brodnax.

Sizes 3" and larger are C. I.

COMPARISON OF PAVING DATA (THIS COVERS TEARING UP AND REPLACING STREET MAIN PAVEMENT ONLY):-

| Street Mains Size (Inches) | Kind | Lengths Under Paving (Feet) Lea | Adams | Net Construction Cost (Paving Only) Lea | Adams | Reproduction Cost (Paving Only) Lea | Adams | Present Value (Paving Only) Lea | Adams |
|---|---|---|---|---|---|---|---|---|---|
| 1 1/2" | W. I. | 1740 | 348 | $ 914.00 | $ 156.00 | $ 1060.00 | $ 167.00 | $ 1060.00 | $ 126.00 |
| 2" | W. I. | 97519 | 19176 | 56534.00 | 9108.00 | 65579.00 | 9745.00 | 65579.00 | 7377.00 |
| 3" | C. I. | 406 | 81 | 197.00 | 38.00 | 229.00 | 41.00 | 229.00 | 33.00 |
| 4" | C. I. | 61023 | 19848 | 35698.00 | 9427.00 | 41407.00 | 10087.00 | 41407.00 | 8150.00 |
| 6" | C. I. | 19275 | 19275 | 11729.00 | 9637.00 | 13606.00 | 10312.00 | 13606.00 | 8332.00 |
| 8" | C. I. | 3817 | 3993 | 2198.00 | 2196.00 | 2550.00 | 2350.00 | 2550.00 | 1899.00 |
| 10 | C. I. | 3268 | 3265 | 2155.00 | 1957.00 | 2500.00 | 2094.00 | 2500.00 | 1692.00 |
| 12" | C. I. | 2131 | 2131 | 1269.00 | 1385.00 | 1472.00 | 1482.00 | 1472.00 | 1197.00 |
| 16" | C. I. | 863 | 863 | 675.00 | 604.00 | 781.00 | 646.00 | 781.00 | 522.00 |
| 20" | C. I. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS - | | 190037 | 68978 | $111565.00 | $35508.00 | $129184.00 | $36924.00 | $129184.00 | $29328.00 |

REAL ESTATE - (Net Construction Costs):-

| | County | F. B. Cornell | A. W. Miller | H. I. Lea | A. D. Adams |
|---|---|---|---|---|---|
| Lots #1 to #15 (Inclusive) Block #2 - | $ 665.00 | ** $ 8500.00 | $ 3500.00 | $ 4500.00 | * |
| Lots #1 to #15 (Inclusive) Block #7 - | 375.00 | 7500.00 | 3500.00 | 4500.00 | * |
| South 92' of E 1/2 of Lot #11, Block #77- | 20.00 | | | 300.00 | * |
| West 1/2 of Lot #11, Block #77 - | 35.00 | 12000.00 | 625.00 | 300.00 | * |
| South 92' of Lot #12, Block #77 - | 145.00 | | | 300.00 | * |
| Lots #1 to #12 (Inclusive) Block #79 - | 15520.00 | | 9000.00 (?) | 11000.00 | $2625.00 |
| South 20', West 16' Lot #2, Block #32- | 120.00 | * | * | 200.00 | * |
| Lots #18 & #19. Block #17 - | 180.00 | * | * | 600.00 | * |
| TOTAL REAL ESTATE - | $17060.00 | $28000.00 | $16625.00 | $21700.00 *** | $2625.00 |

* No Value Given.

** Includes $1500.00 House.

*** Figures originally given by Lea are here shown, as they are comparable with figures in first three columns. For Lea's revised real estate figures, see "Reproduction" sheets.

416 SECTION F.

(Here follows table, marked page 417.)

418 SECTION G.

419 *Summary of Buildings.*

| | Net construction cost. | | |
|---|---|---|---|
| | Lea. | Assenmacher. | Adams. |
| Purifying House | $16,620.00 | $12,482.95 | $12,577.00 |
| Generator House | 3,739.00 | 3,308.50 | 3,261.00 |
| Retort House | 7,689.00 | 6,080.00 | 6,088.00 |
| Meter Shop & Booster House | 2,616.00 | 2,559.63 | 2,049.00 |
| Coal Shed | 1,793.00 | 1,892.00 | 1,657.00 |
| Oil Tank House | 1,558.00 | 1,276.66 | 1,107.00 |
| Oxide Shed | 60.00 | 0 | 60.00 |
| Stable & Blacksmith Shop | 818.00 | 907.50 | 818.00 |
| District Holder Booster House | 721.00 | 471.25 | 0 |
| Totals | $35,614.00 | $28,978.00 | $27,617.00 |

(Here follow tables, marked pages 420-427.)

PURIFYING HOUSE:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 37'-3" x 176'-3" x 21'-0" | 36'-0" x 176'-0" x 18'-0" | * | | | |
| Thickness of brick walls - | 17" | 13" | * | | | |
| Thickness of stone walls - | 23" to 29" | 13" | * | | | |
| Excavation - | 4536 Cu. Yds. | 1000 Cu. Yds. | * | $3402.00 | $ 400.00 | $1814.40 |
| Foundation - stone - | 505.9 " " | 383.7 " " | * | 3288.00 | 1969.50 | 3541.50 |
| Backfilling & removing surp. mat'l. - | 4536 " " | 0 | 0 | 2268.00 | 0 | 0 |
| Brick - | 198155 | 242580 | * | 3415.00 | 3692.25 | 2972.33 |
| Framing - | 186' B. M. | 0 | * | 8.00 | 0 | * |
| Covering - | 259' B. M. | 0 | * | 11.00 | 0 | * |
| Roof - wood framing - | 8171' B. M. | 24000' B. M. | * | 343.00 | 720.00 | * |
| " - steel - | 834# | 0 | * | 42.00 | 0 | * |
| " - wood covering - | 8547 Sq. Ft. | 0 | * | 359.00 | 0 | * |
| " - corrugated iron - | 97.16 Sq. | 80.0 Sq. | * | 729.00 | 800.00 | * |
| " - tar felt - | 9.75 Sq. | 0 | * | 44.00 | 0 | * |
| Floors - concrete - | 3465. Sq. Ft. | 6000. Sq. Ft. | * | 485.00 | 720.00 | * |
| " - wood - | 7738' B. M. | 12500. " " | * | 325.00 | 375.00 | * |
| " - cast iron - | 805# | 0 | * | 32.00 | 0 | * |
| " - steel - | 3009# | 0 | * | 150.00 | 0 | * |
| " - wood covering - | 3590 Sq. Ft. | 0 | * | 151.00 | 0 | * |

PURIFYING HOUSE (CONTINUED):-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| Stairways - wood | 1185' B. M. | 0 | * | $ 49.00 | $ 0 | $ * |
| Doors - | 1610 Sq. Ft. | 0 | * | 379.00 | 0 | * |
| Windows - | 1041 " " | 0 | * | 755.00 | 0 | * |
| Openings & Carpenter work on same - | 0 | 50 | * | 0 | 750.00 | * |
| Gutters - | 50' | 0 | * | 19.00 | 0 | * |
| Down-spouts | 30' | 0 | * | 5.00 | 0 | * |
| Plaster - | 1940 Sq. Ft. | 0 | * | 19.00 | 0 | * |
| Painting - | | | * | 154.00 | 500.00 | * |
| Electric Wiring - | 1376' | 0 | * | 87.00 | 0 | * |
| Misc. Wood Framing & Covering - | 2708' B. M. | 0 | * | 114.00 | 0 | * |
| *** Total lumber & carpenter work - | (32584' B. M.) | (36500' B. M.) | * | ($1360.00) | ($1551.25 | * |
| Hardware & nails - | ** | | * | ** | 200.00 | * |
| Bond & insurance - | ** | | * | ** | 200.00 | * |
| Carpenter work (exclusive of doors & windows) - | ** | | * | ** | 456.20 | * |
| Total above items - | | | | $16620.00 | $10782.95 | $12577.03 |
| Incidental & Contractor's per cent - | ** | 15.7% | | ** | 1700.00 | * |
| TOTALS - | | | | $16620.00 | $12482.95 | $12577.03 |

* Quantities & costs given by Lea, accepted by Adams.

** Included by Lea in unit prices.

*** Exclusive of doors & windows.

GENERATOR HOUSE:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 55'-0" x 51'-0" x 30'-6" | ? | * | | | |
| | 17'-9" x 26'-3" x 13'-6" | ? | * | | | |
| | 9'-3" x 16'-6" x 33'-0" | ? | * | | | |
| Thickness of brick walls - | 9"-13"-17" | ? | * | | | |
| Excavation - | 247.9 Cu. Yds. | 200.0 Cu. Yds. | * | $ 248.00 | $ 80.00 | $ 99.16 |
| Foundation - concrete - | 82.5 Cu. Yds. | 12.0 " " | * | 660.00 | 90.00 | 577.50 |
| Backfilling & remov. surplus mat'l. - | 247.9 Cu. Yds. | 0 | 0 | 124.00 | 0 | 0 |
| Walls:- | | | | | | |
| tile & brick - | 55248 | 80. M | * | 951.00 | 1200.00 | 828.72 |
| wood - | 1583' B. M. | 0 | * | 66.00 | 0 | * |
| corrug. iron - | 16.41 Sq. | 0 | * | 123.00 | 0 | * |
| Roof:- | | | | | | |
| steel - | 9479# | | * | 474.00 | 250.00 | * |
| wood - | 8114 B. M. | 0 | * | 34.00 | 0 | * |
| corrug. iron - | 22.54 Sq. | 20. Sq. | * | 169.00 | 200.00 | * |
| wood - | 616' B. M. | 0 | * | 26.00 | 0 | * |
| tar felt - | 6.16 Sq. | 5 | * | 28.00 | 22.50 | * |
| wood louvre - | 130 Sq. Ft. | 0 | * | 5.00 | 0 | * |
| Floors - concrete - | 1942 Sq. Ft. | 1500 Sq. Ft. | * | 136.00 | 180.00 | * |
| Doors - | 231 Sq. Ft. | 0 | * | 48.00 | 0 | * |
| Windows - | 599 Sq. Ft. | 0 | * | 466.00 | 0 | * |
| Openings & carpenter work on same - | ** | 28. | * | ** | 480.00 | * |
| Gutters - | 51. Ft. | 0 | * | 9.00 | 0 | * |
| Downspouts - | 30. Ft. | 0 | * | 5.00 | 0 | * |
| Plaster - | 1136 Sq. Ft. | 0 | * | 11.00 | 0 | * |
| Platform - wood - | 1615' B. M. | 0 | * | 68.00 | 0 | * |

GENERATOR HOUSE (CONTINUED):-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| Electric wiring - | 460 Ft. | 0 | * | $ 31.00 | $ 0 | $ * |
| Misc. wood - | 141. Sq. Ft. | 0 | * | 7.00 | 0 | * |
| Painting - | | | * | 50.00 | 100.00 | * |
| ** Total lumber & carpenter work - | (4796' B. M.) | (7000' B. M.) | * | (206.00) | (256.00) | * |
| Lumber & carpenter work - | ** | 7000' B. M. | * | ** | 256.00 | * |
| Hardware & nails - | ** | | * | ** | 50.00 | * |
| Total above items - | | | | $3739.00 | $2908.50 | $3261.38 |
| Incidentals & per cent - | ** | 13.7% | * | ** | 400.00 | * |
| TOTALS - | | | | $3739.00 | $3308.50 | $3261.38 |

* Quantities & costs given by Lea, accepted by Adams.

** Included by Lea in unit prices.

*** Exclusive of doors & windows.

RETORT HOUSE:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 32'-9" x 47'-3" x 26'-9" | 33'-0" x 48'-0" x 28'-0" | * | | | |
| | 33'-6" x 70'-0" x 19'-0" | 34'-0" x 70'-6" x | * | | | |
| Excavation - | 1244.5 Cu. Yds. | 1000.0 Cu. Yds. | * | $1245.00 | $ 400.00 | $ 497.80 |
| Foundation - stone - | 206.4 Cu. Yds. | 190.0 Cu. Yds. | * | 1342.00 | 945.00 | 1444.80 |
| Backfilling & remov. surp. mat'l. - | 1244.5 Cu. Yds. | 0 | 0 | 622.00 | 0 | 0 |
| Walls:- | | | | | | |
| Brick - | 160540 | 165000 | * | 2742.00 | 2475.00 | 2408.10 |
| Wood - | 92' B. M. | 0 | * | 4.00 | 0 | * |
| Roof:- | | | | | | |
| Steel - | 14523# | | * | 726.00 | 660.00 | * |
| Wood - | 74. Sq. Ft. | 0 | * | 3.00 | 0 | * |
| Corrug. iron - | 51.87 Sq. | 55. Sq. | * | 389.00 | 550.00 | * |
| Tar felt - | 52 Sq. | 0 | * | 2.00 | 0 | * |
| Floors:- | | | | | | |
| Concrete - | 3390. Sq. Ft. | 0 | * | 475.00 | 0 | * |
| Wood - | 92' B, M. | 0 | * | 4.00 | 0 | * |
| Doors - | 128. Sq. Ft. | 0 | * | 28.00 | 0 | * |
| Electric wiring - | 810. Ft. | 0 | * | 54.00 | 0 | * |
| Misc. wood - | 125. Sq. Ft. | 0 | * | 5.00 | 0 | * |
| Painting & hardware - | | | * | 50.00 | 250.00 | * |
| Bond & insurance - | | | * | ** | 100.00 | * |
| Total above items - | | | | $7689.00 | $5380.00 | $6088.70 |
| Incidentals & per cent - | | 13% | | ** | 700.00 | * |
| TOTALS - | | | | $7689.00 | $6080.00 | $6088.70 |

* Quantities & costs given by Lea, accepted by Adams.

** Included by Lea in unit prices.

METER SHOP & BOOSTER HOUSE:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 22'-9" x 42'-3" x 13'-6" | 22'-9" x 42'-0" x 14'-0" | * | | | |
| | 15'-9" x 22'-0" x 10'-6" | 15'-8" x 22'-6" x 14'-0" | * | | | |
| | 10'-9" x 14'-6" x 4'-0" | 11'-4" x 14'-3" x ? | * | | | |
| | 9'-3" x 14'-0" x 7'-6" | 9'-0" x 14'-3" x 8'-0" | * | | | |
| Excavation - | 386. Cu. Yds. | 835. Cu. Yds. | * | $ 386.00 | $ 94.00 | $ 154.40 |
| Foundation - concrete - | 38. " " | 20. " " | * | 304.00 | 150.00 | 266.00 |
| Foundation - brick - | 6439 | 0 | * | 109.00 | 0 | * |
| Backfilling & remov. surp. mat'l. - | 386. Cu. Yds. | 0 | 0 | 193.00 | 0 | 0 |
| Walls - brick - | 44689 | 67000 | * | 762.00 | 1005.00 | 766.92 |
| " - wood - | 434' B. M. | 0 | * | 19.00 | 0 | * |
| " - building paper - | 279. Sq. Ft. | 0 | * | 3.00 | 0 | * |
| Roof - wood - | 3883' B. M. | 0 | * | 165.00 | 0 | * |
| " - tarred felt & gravel - | 11.5 Sq. | 13.5 Sq. | * | 58.00 | 80.75 | * |
| " - tarred felt - | 1.57 " | 0 | * | 7.00 | 0 | * |
| " - wood shingles - | 2.79 " | 0 | * | 13.00 | 0 | * |
| Floor - concrete - | 1366. Sq. Ft. | 924. Sq. Ft. | * | 142.00 | 110.88 | * |
| " - wood - | 1775' B. M. | 0 | * | 74.00 | 0 | * |
| Doors - | 96. Sq. Ft. | 0 | * | 22.00 | 0 | * |
| Windows | 338. " " | 0 | * | 245.00 | 0 | * |
| Openings & Carpenter work on doors & windows - | ** | 19. | * | ** | 259.00 | * |
| Gutter - | 42' | 0 | * | 8.00 | 0 | * |
| Downspouts - | 15' | 0 | * | 2.00 | 0 | * |
| Ventilators - | 1. | 0 | * | 9.00 | 0 | * |
| Plaster - | 132. Sq. Ft. | 0 | * | 1.00 | 0 | * |

METER SHOP & BOOSTER HOUSE (CONTINUED):-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| Painting - | | | * | $ 45.00 | $ 100.00 | $ * |
| Platform - wood - | 195' B. M. | 0 | * | 8.00 | 0 | * |
| Electric wiring - | 382 Ft. | 0 | * | 22.00 | 0 | * |
| Wrot iron pipe - | 49 Ft. | 0 | * | 7.00 | 0 | * |
| Covering - wood - | 325' B. M. | 0 | * | 14.00 | 0 | * |
| Lumber & Shingles - | 0 | 6500' B. M. | * | 0 | 232.00 | * |
| Carpenter work - | ** | | * | ** | 155.00 | * |
| Hardware & nails - | ** | | * | ** | 100.00 | * |
| Total above items - | | | | $2616.00 | $2259.63 | $2049.32 |
| Incidentals & per cent - | ** | 13.2% | * | ** | 300.00 | * |
| TOTALS - | | | | $2616.00 | $2559.63 | $2049.32 |

* Quantities & costs given by Lea, accepted by Adams.

** Included by Lea in unit prices.

COAL SHED:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenbacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 20'-0" x 111'-0" x 16'-0" | 23'-0" x 110'-0" x 11'-0" | * | | | |
| Excavation - | 148.4 Cu. Yds. | 0 | * | $ 146.00 | $ 0 | $ 58.56 |
| Foundation - stone - | 62.1 Cu. Yds. | 44.4 Cu. Yds. | * | 410.00 | 212.00 | 441.70 |
| brick - | 3593 | 0 | * | 61.00 | 0 | 53 90 |
| Backfilling & remov. surp. mat'l. - | 146.4 Cu. Yds. | 0 | * | 73.00 | 0 | 0 |
| Walls - wood - | 6020' B. M. | 0 | * | 252.00 | 0 | * |
| Roof - wood - | 6738' B. M. | 0 | * | 285.00 | 0 | * |
| Floor - wood - | 11608' B. M. | 0 | * | 496.00 | 0 | * |
| Runway - wood - | 1221' B. M. | 0 | * | 51.00 | 0 | * |
| Tar Felt - | .48 Sq. | 0 | * | 2.00 | 0 | * |
| Electric wiring - | 300 Ft. | 0 | * | 17.00 | 0 | * |
| Lumber - | 0 | 30000' B. M. | * | 0 | 840.00 | * |
| Carpenter work - | ** | | * | ** | 300.00 | * |
| Rubberoid roofing - | 0 | 30. Sq. | * | 0 | 90.00 | * |
| Painting - | ** | | * | ** | 50.00 | * |
| Nails & hardware - | ** | | * | ** | 100.00 | * |
| Total above items - | | | | $1793.00 | $1592.00 | $1657.16 |
| Incidentals & per cent - | ** | 18.8% | * | ** | 300.00 | * |
| TOTALS - | | | | $1793.00 | $1892.00 | $1657.16 |

* Quantities & costs given by Lea, accepted by Adams.

** Included by Lea in unit prices.

OIL TANK HOUSE:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 35'-3" x 22'-9" x 10'-0" | 35'-0" x 24'-0" x 12'-0" | * | | | |
| Thickness of walls - | 18" | 17" | * | | | |
| Excavation - | 428.9 Cu. Yds. | 45. CU. Yds. | * | $ 429.00 | $ 22.50 | $ 171.66 |
| Foundations - stone - | 65.5 " " | 0 | * | 426.00 | 0 | 456.50 |
| Backfilling & remov. surp. mat'l. - | 428.9 " " | 0 | * | 214.00 | 0 | 0 |
| Walls - brick - | 5851 | 46000 | * | 99.00 | 690.00 | 67.77 |
| Roof:- | | | | | | |
| Steel - | 1514# | | * | 76.00 | 150.00 | * |
| Wood - | 1304. Sq. Ft. | 0 | * | 55.00 | 0 | * |
| Corrugated iron - | 12.93 Sq. | 0 | * | 97.00 | 0 | * |
| Floor:- | | | | | | |
| Concrete - | 642. Sq. Ft. | 118. Sq. Ft. | * | 109.00 | 14.16 | * |
| Wood - | 546' B. M. | 0 | * | 23.00 | 0 | * |
| Doors - | 21. Sq. Ft. | 0 | * | 5.00 | 0 | * |
| Windows - | 5. " " | 0 | * | 4.00 | 0 | * |
| Electric wiring - | 10. Ft. | 0 | * | 21.00 | 0 | * |
| Lumber & Shingles - | 0 | | * | 0 | 100.00 | * |
| Carpenter work & paint - | ** | | ** | ** | 150.00 | * |
| Total above items - | | | | $1558.00 | $1126.26 | $1107.83 |
| Incidentals & per cent - | ** | 13.3% | * | ** | 150.00 | * |
| TOTALS - | | | | $1558.00 | $1276.66 | $1107.83 |

* Quantities & costs given by Lea, accepted by Adams.

** Included by Lea in unit prices.

STABLE & BLACKSMITH SHOP:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 18'-3" x 36'-3" x 10'-0" | 18'-0" x 24'-0" x 11'-0" | * | | | |
| | 15'-3" x 25'-3" x 8'-3" | ? | * | | | |
| | 5'-0" x 10'-6" x 9'-3" | ? | * | | | |
| | 24'-0" x 45'-6" x 11'-0" | ? | * | | | |
| | 8'-0" x 10'-6" x 7'-6" | ? | * | | | |
| Walls - wood - | 6605' B. M. | 0 | * | $277.00 | $ 0 | $ * |
| Roof - wood - | 4546' B. M. | 0 | * | 191.00 | 0 | * |
| " - shingles - | 4.02 Sq. | 5. M | * | 19.00 | 17.50 | * |
| " - tar felt - | 22.64 Sq. | 0 | * | 101.00 | 0 | * |
| " - rubber roofing - | 0 | 21. Sq. | * | 0 | 65.00 | * |
| Floor - wood - | 3025' B. M. | 0 | * | 127.00 | 0 | * |
| Doors - | 109. Sq. Ft. | 0 | * | 22.00 | 0 | * |
| Windows - | 81. Sq. Ft. | 0 | * | 57.00 | 0 | * |
| Electric wiring - | 409.Ft. | 0 | * | 24.00 | 0 | * |
| Lumber - | ** | 15000' B. M. | * | 0 | 420.00 | * |
| Carpenter work - | ** | | * | ** | 205.00 | * |
| Foundation - stone - | 0 | Few | * | 0 | 10.00 | * |
| Hardware & nails - | ** | | * | ** | 75.00 | * |
| Painting - | 0 | | * | 0 | 30.00 | * |
| Brick flue - | 0 | | * | 0 | 10.00 | * |
| Total above items - | | | | $818.00 | $832.50 | $ * |
| Incidentals & per cent - | ** | 9.0% | | ** | 75.00 | |
| TOTALS - | | | | $818.00 | $907.50 | $ * |

* Quantities & costs given by Lea, accepted by Adams. ** Included by Lea in unit prices.

BOOSTER HOUSE AT DISTRICT HOLDER:-

| | Dimensions & Quantities | | | Net Construction Cost | | |
|---|---|---|---|---|---|---|
| | Lea | Assenmacher | Adams | Lea | Assenmacher | Adams |
| General dimensions - | 17'-6" x 21'-3" x 12'-6" | 17'-4" x 21'-4" x 13'-0" | * | * | * | * |
| Excavation - | 155.4 Cu. Yds. | 40. Cu. Yds. | * | 155.00 | 16.00 | 62.16 |
| Foundation - brick - | 5829 | 0 | * | 99.00 | 0 | 87.435 |
| Foundation - concrete - | 0 | 7. Cu. Yds. | * | 0 | 52.50 | * |
| Backfilling & remov. surp. mat'l. - | 155.4 Cu. Yds. | 0 | 0 | 78.00 | 0 | 0 |
| Walls - brick - | 10307 | 0 | * | 175.00 | 0 | 154.605 |
| Brick - | 0 | 14000 | * | 0 | 210.00 | * |
| Roof:- | | | | | | |
| wood - | 767' B. M. | 0 | * | 32.00 | 0 | * |
| tar felt & gravel - | 3.16 Sq. | 3.5 Sq. | * | 16.00 | 15.75 | * |
| Floors:- | | | | | | |
| concrete - | 165. Sq. Ft. | 0 | * | 11.00 | 0 | * |
| wood - | 430' B. M. | 0 | * | 18.00 | 0 | * |
| Doors - | 26. Sq. Ft. | 0 | * | 5.00 | 0 | * |
| Windows - | 100. Sq. Ft. | 0 | * | 125.00 | 0 | * |
| Openings (only) - | 0 | 5 | * | 0 | 50.00 | * |
| Electric wiring - | 70. Ft. | 0 | * | 5.00 | 0 | * |
| Misc. wood framing - | 48' B. M. | 0 | * | 2.00 | 0 | * |
| Lumber - | 0 | 1500' B. | * | 0 | 42.00 | * |
| Carpenter work - | ** | | * | ** | 35.00 | * |
| Total above items - | | | | $721.00 | $421.25 | $518.20 |
| Incidentals & per cent - | ** | 11.1% | * | ** | 50.00 | ** |
| TOTALS - | | | | $721.00 | $471.25 | $518.20 |

* Quantities & costs given by Lea, accepted by Adams. ** Included by Lea in unit prices.

427½

Oxide Shed:

| | Net construction cost. | | |
|---|---|---|---|
| | Lea. | Assenmacher. | Adams. |
| Totals ..... | $60.00 | 0 | * |

* Quantities & costs given by Lea, accepted by Adams.

(Here follow tables, marked pages 428-429.)

429½ SECTION H.

(Here follow tables, marked pages 430-434.)

COMPARISON OF STREET MAIN DATA

| Size Pipe | Kind | Excavation | | | | Cu. Yds. Per Lin. Ft. | | Cost of Excavation & Refill Per Foot | |
|---|---|---|---|---|---|---|---|---|---|
| | | Width | | Depth | | | | @ 45¢ per Cu.Yd. | @ 40 1/2¢ per Cu.Yd. |
| | | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams |
| 1 1/4" | W. I. | 22" | 16 51/64" | 3'-2" | 3'-0" | .215 | .155 | $.0968 | $.0630 |
| 2" | W. I. | 22" | 18" | 3'-2" | 3'-2 25/64" | .215 | .177 | .0968 | .0720 |
| 3" | C. I. | 22" | 18" | 3'-10" | 3'-3 39/64" | .259 | .185 | .117 | .0742 |
| 4" | C. I. | 22" | 18" | 3'-10" | 3'-6" | .259 | .194 | .117 | .0787 |
| 6" | C. I. | 22" | 19 13/64" | 4'-0" | 3'-8 25/64" | .271 | .219 | .122 | .0888 |
| 8" | C. I. | 24" | 22 51/64" | 4'-2" | 3'-10 51/64" | .308 | .274 | .139 | .1111 |
| 10" | C. I. | 26" | 24" | 4'-4" | 4'-0" | .346 | .296 | .156 | .1200 |
| 12" | C. I. | 26" | 26 25/64" | 4'-6" | 4'-2 25/64" | .360 | .342 | .162 | .1386 |
| 16" | C. I. | 30" | 28 51/64" | 4'-10" | 4'-4 51/64" | .447 | .391 | .201 | .1584 |
| 20" | C. I. | 32" | 32 25/64" | 5'-2" | 4'-8 25/64" | .508 | .470 | .230 | .1903 |

COMPARISON OF STREET MAIN DATA (CONTINUED)

| Size Pipe | Kind | Weight of Pipe Per Lineal Foot(lbs) | | Cost of Pipe Per 2000# Ton f.o.b. Lincoln | | Cost of Pipe Per Lin. Ft. f.o.b. Lincoln | | Add For Specials % | | Cost of Pipe & Specials f.o.b. Lincoln Per Foot of Pipe | | Store-room Cost Per Lineal Foot | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lea | Adams | Lea | Adams | Lea | Adams | L | A | Lea | Adams | Lea | Adams |
| 1 1/4" | W. I. | 2.24 | | | | $ .0575 | $ | 4 1/2 | 3 | $ .0601 | $ .0583 | $.0015 | $ 0 |
| 2" | W. I. | 3.61 | | | | .0925 | | 4 1/2 | 3 | .0967 | .0906 | .0024 | 0 |
| 3" | C. I. | 14.54 | 12.5 | $32.00 | $30.00 | .2326 | .1875 | 4 1/2 | 3 | .2431 | .1931 | .0061 | 0 |
| 4" | C. I. | 19.38 | 17. | 32.00 | 28.00 | .3101 | .2380 | 4 1/2 | 3 | .3241 | .2451 | .0081 | 0 |
| 6" | C. I. | 30.6 | 30. | 31.00 | 26.00 | .4743 | .3900 | 4 1/2 | 3 | .4956 | .4017 | .0124 | 0 |
| 8" | C. I. | 42.84 | 40. | 31.00 | 26.00 | .6640 | .5200 | 4 1/2 | 3 | .6939 | .5556 | .0173 | 0 |
| 10" | C. I. | 56.92 | 50. | 31.00 | 26.00 | .8822 | .6500 | 4 1/2 | 3 | .9219 | .6695 | .0230 | 0 |
| 12" | C. I. | 73.95 | 70. | 31.00 | 26.00 | 1.1462 | .9100 | 4 1/2 | 3 | 1.1978 | .9373 | .0299 | 0 |
| 16" | C. I. | 110.47 | 100. | 31.00 | 26.00 | 1.7122 | 1.3000 | 4 1/2 | 3 | 1.7892 | 1.3390 | .0447 | 0 |
| 20" | C. I. | 153.0 | 150. | 31.00 | 26.00 | 2.3715 | 1.9500 | 4 1/2 | 3 | 2.4782 | 2.0085 | .0619 | 0 |

COMPARISON OF STREET MAIN DATA (CONTINUED)

| Size Pipe | Kind | Handling & Hauling Per Foot | Laying & Caulking Per Foot | Carting & Laying Per Foot | | Lead Per Ft. | Hemp Per Ft. | Total Lead & Hemp Per Foot | | Miscellaneous Per Foot | | Total Cost Of Pipe Laid In Unpaved St. Per Lineal Foot | | Used by Adams |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Lea | | Lea | Adams | Lea | | Lea | Adams | Lea | Adams | Lea | Adams | |
| 1 1/4" | W. I. | $.0034 | $.0078 | $.0109 | $.0112 | $ 0 | $ 0 | $ 0 | $.0050 | $.0164 | $ 0 | $ .1857 | $ .1355 | $ .1350 |
| 2" | W. I. | .0054 | .0130 | .0184 | .0190 | 0 | 0 | 0 | .0050 | .0178 | 0 | .2319 | .1856 | .1860 |
| 3" | C. I. | .0075 | .0350 | .0425 | .0250 | .0210 | .00075 | .02175 | .0088 | .0291 | 0 | .4663 | .3011 | .3010 |
| 4" | C. I. | .0100 | .0380 | .0480 | .0340 | .0370 | .0010 | .0380 | .0068 | .0317 | 0 | .5669 | .3666 | .3670 |
| 6" | C. I. | .0150 | .0420 | .0570 | .0600 | .0510 | .0020 | .0530 | .0115 | .0367 | 0 | .776 | .5618 | .5620 |
| 8" | C. I. | .0210 | .0600 | .0810 | .0800 | .0660 | .0030 | .0690 | .0135 | .0469 | 0 | 1.0461 | .7402 | .7400 |
| 10" | C. I. | .0290 | .0900 | .1190 | .1000 | .0800 | .0040 | .0840 | .0160 | .0573 | 0 | 1.3612 | .9055 | .9060 |
| 12" | C. I. | .0370 | .1200 | .1570 | .1400 | .0940 | .0050 | .0990 | .0190 | .0672 | 0 | 1.7129 | 1.2349 | 1.2350 |
| 16" | C. I. | .0550 | .1500 | .2050 | .2000 | .1490 | .0060 | .1550 | .0250 | .0909 | 0 | 2.4858 | 1.7224 | 1.7220 |
| 20" | C. I. | .0770 | .2250 | .3020 | .3000 | .1840 | .0090 | .1920 | .0300 | .1179 | 0 | 3.3820 | 2.5288 | 2.5290 |

COMPARISON OF STREET MAINS IN USE (Linear feet).

| Year | 1 1/2" W. I. | | 2" W. I. | | 3" C. I. | | 4" C. I. | | 6" C. I. | | 8" C. I. | | 10" C. I. | | 12" C. I. | | 16" C. I. | | 20" C. I. | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams |
| Before 1905 | | 2258 | | 131580 | | 406 | | 69260 | | 20451 | | 896 | | 9810 | | 3615 | | 1269 | | 1472 | 181715 | 240815 |
| Dec. 31, 1905 | | | | 23558 | | | | 1237 | | | | | | | | | | | | | 29523 | 24795 |
| Dec. 31, 1904 | | | | 7055 | | | | 2005 | | 1094 | | 938 | | | | | | | | | 11092 | 11092 |
| Dec. 31, 1905 | | | | 16787 | | | | 8514 | | | | 2754 | | | | | | | | | 26324 | 28035 |
| Dec. 31, 1906 | | | | 20128 | | | | 1909 | | 1605 | | | | | | | | | | | 22252 | 23640 |
| Dec. 31, 1907 | | | | 15403 | | | | | | | | | | | | | | | | | 15403 | 15403 |
| Dec. 31, 1908 | | | | 12853 | | | | 494 | | | | | | | | | | | | | 13347 | 13347 |
| Dec. 31, 1909 | | | | 34555 | | | | 80 | | 240 | | | | | | | | | | | 34755 | 34855 |
| Dec. 31, 1910 | | | | 22870 | | | | 8288 | | 2455 | | | | | | | | | | | 33901 | 33593 |
| Dec. 31, 1911 | | | | 15377 | | | | 2454 | | | | | | | | | | | | | 35597 | 17811 |
| Dec. 31, 1912 | | | | 15966 | | | | 55 | | 48 | | | | | | | | | | | 25646 | 16067 |
| TOTALS IN USE 1/1/13 | 2258 | 2258 | *315708 | *315708 | 406 | 406 | 94274 | 94274 | 25873 | 25873 | 4568 | 4568 | 9810 | 9810 | 3615 | 3615 | 1269 | 1269 | 1472 | 1472 | *459251 | *459251 |

* Corrected to agree with revised testimony of Brodnax.

SERVICES:-

| | Number | | Number of Services Under Paving | | Net Construction Cost of Services Laid in Unpaved Street | | Per Cent of Services Under Paving | |
|---|---|---|---|---|---|---|---|---|
| | Lea | Adams | Lea | Adams | Lea | Adams | Lea | Adams |
| House Services - | 8201 | 8546 | 3069 | | $111203.00 | $69453.00 | | |
| Stub Services - | 114 | 124 | 114 | | 486.00 | 486.00 | | |
| Total Services - | 8315 | 8670 | 3183 | 3550 | $111689.00 | $69939.00 | 38.2 | 41. |

434a *House Services.*

| | Lea. | Adams. |
|---|---|---|
| Length of Average Service | 73′ | 50′ |
| Average Size of Service | 1¼″ | 1¼″ |
| Average Cost per Foot of Service Pipe Laid in Unpaved Street | $.1875 | $.1350 |
| Total Cost Service Pipe Laid in Unpaved Street | $13.56 | $6.75 |
| Cost of one Street Tee Added | 0 | .09 |
| Cost of two Street Elbows Added | 0 | .13 |
| Cost of two Common Elbows Added | 0 | .09 |
| Cost of one Plug Added | 0 | .028 |
| Cost of one Meter Cock Added | 0 | .55 |
| Cost of Connecting to Main Added | 0 | .50 |
| Total Cost of Average House Service Laid in Unpaved Street | $13.56 | $8.138 |

434b *Stub Services.*

| | Lea. | Adams. |
|---|---|---|
| Length of Average Service | 23′ | 23′ |
| Average Size of Service | 1¼″ | 1¼″ |
| Total Cost per Foot of Service Pipe Laid in Unpaved Street | $.1875 | $.1350 |
| Total Cost of Service Pipe Laid in Unpaved Street | $4.27 | $3.105 |
| Cost of one Street Tee Added | 0 | .09 |
| Cost of two Street Elbows Added | 0 | .13 |
| Cost of two Plugs Added | 0 | .056 |
| Cost of Connecting to Main Added | 0 | .50 |
| Total Cost of Average Stub Service Laid in Unpaved Street | $4.27 | $3.926 |

434c *Paving Over Services.*

| | Lea. | Adams. |
|---|---|---|
| Average Number of Holes to be cut in Pavement per Service | 1½ | ? |
| Dimensions of Unit Cut | 5'x2' | ? |
| Area of Pavement to be Cut and Relaid per Service | 17.5 sq. ft. | 12 sq. ft. |

| Kind of pavement. | Cost per sq. yd. of tearing up & replacing paving. | | Total cost of tearing up & replacing paving per service. | |
|---|---|---|---|---|
| | Lea. | Adams. | Lea. | Adams. |
| Brick on 6" Concrete | $2.45 | $0 | $4.75 | $0 |
| Two Course Brick | 1.69 | 0 | 3.28 | 0 |
| Asphalt on 6" Concrete | 2.85 | 0 | 5.53 | 0 |
| Cedar Block | 2.25 | 0 | 4.37 | 0 |
| Asphalt with Brick Gutters | 1.95 | 0 | 4.52 | 0 |
| Average Paving | 0 | 2.25 | 0 | 3.00 |

434d *Comparison of Valuation Figures.*

| Year ending Dec. 31st. | Services. Net gain during year. | | Meters. Net gain during year. | |
|---|---|---|---|---|
| | Lea. | Adams. | Lea. | Adams. |
| Before 1903 | 3150 | 2911 | 4750 | 4623 |
| 1903 | 452 | 691 | 762 | 793 |
| 1904 | 576 | 576 | 745 | 745 |
| 1905 | 610 | 610 | .... | 6 |
| 1906 | 554 | 554 | 9 | 50 |
| 1907 | 569 | 569 | 475 | 368 |
| 1908 | 468 | 468 | 485 | 487 |
| 1909 | 616 | 616 | 527 | 582 |
| 1910 | 584 | 584 | 378 | 403 |
| 1911 | 480 | 480 | 289 | 109 |
| 1912 | 480 | 487 | 156 | 160 |
| Total number | 8539 | 8546 | 8576 | 8326 |

(Here follows table, marked page 435.)

METERS:-

| Size & Kind | Cost of Meters F.o.b. Chicago Lea | Cost of Meters Net Adams | Freight to Lincoln Lea | Connections Lea | Setting Lea | Total Freight, Connections & Setting Lea | Total Freight, Connections & Setting Adams | Testing Lea | Testing Adams | Incidentals Lea | Incidentals Adams | Net Construction Cost of Meters Set in Lincoln Lea | Net Construction Cost of Meters Set in Lincoln Adams | Net Construction Cost of Meters In Stock In Lincoln Lea | Net Construction Cost of Meters In Stock In Lincoln Adams |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| #1A | $ | $ 7.50 | $ | $ | $ | $ | $ 1.40 | $ | $ | $ | $ | $ 7.00 | $ 8.90 | $ 6.45 | $ 0 |
| #2 | 5.70 | 7.50 | .161 | 1.41 | .63 | 2.20 | 1.40 | .10 | 0 | .063 | 0 | 8.06 | 8.90 | 7.37 | 0 |
| #2A | 5.70 | 7.50 | .161 | 1.41 | .63 | 2.20 | 1.40 | .10 | 0 | .063 | 0 | 8.06 | 8.90 | 7.37 | 0 |
| 3Lt. Crd. | 4.50 | 4.50 | .161 | 1.20 | .50 | 1.86 | 1.40 | .10 | 0 | .05 | 0 | 6.51 | 5.90 | 5.96 | 0 |
| 5Lt. " | 5.70 | 5.70 | .161 | 1.41 | .63 | 2.20 | 1.40 | .10 | 0 | .063 | 0 | 8.06 | 7.10 | 7.37 | 0 |
| 10Lt. " | 7.50 | 7.50 | .224 | 2.06 | .75 | 3.03 | 1.40 | .10 | 0 | .075 | 0 | 10.71 | 8.90 | 9.89 | 0 |
| 20Lt. " | 10.80 | 10.80 | .303 | 2.82 | 1.00 | 4.12 | 1.40 | .15 | 0 | .100 | 0 | 15.17 | 12.20 | 14.07 | 0 |
| 30Lt. " | 16.50 | 16.50 | .518 | 3.93 | 1.10 | 5.55 | 1.40 | .15 | 0 | .11 | 0 | 22.31 | 17.90 | | |
| 45Lt. " | 25.20 | 24.90 | .682 | 4.20 | 1.20 | 6.08 | 1.40 | .15 | 0 | .12 | 0 | 31.55 | 26.30 | 30.23 | 0 |
| 60Lt. " | 35.00 | 35.60 | .900 | 5.78 | 1.30 | 7.98 | 1.40 | .20 | 0 | .13 | 0 | 41.31 | 35.00 | 39.88 | 0 |
| 100Lt. " | | 52.50 | | | | | 1.40 | | | | | | 53.90 | | |
| 150Lt. " | 78.00 | 87.00 | 1.800 | 10.50 | 0 | | | .25 | 0 | 0 | 0 | | 88.40 | 90.55 | 0 |

| | Corrected Gross Earnings Gas Department in Lincoln Alone (With Gas @ $1.20 per M.) | | Gas Actually Sold in Lincoln Alone (M. Cu. Ft.) | | Gas Sales in Lincoln Alone as They Would Have Been Had Gas Been Reduced to $1.00 per M. Jan. 1, 1905* | | Increase in Gas Sales in Lincoln Alone due to Reduction of Price (M. Cu. Ft.) | | Increased Operating Expenses (With Established Revenues) Due to Reduction of Price. | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | As Shown By H. I. Lee, From Gas Co. Records. | As Shown By A.D.Adams. ** | As Shown by H.I.Lee, From Gas Co. Records | As Shown By A.D.Adams ** | As Estimated By H. I. Lee (M.Cu.Ft.) | As Estimated By A. D. Adams (M.Cu.Ft.) ** | As Estimated BY H. I. Lee | As Estimated By A.D.Adams ** | As Estimated By H.I.Lee | As Estimated By A.D.Adams ** |
| 1905 | | $173560.23 | 143642. | 143641. | 153128. | 143641. | 9480. | 0.0 | $ 3540.00 | $0.0 |
| 1906 | | 185299.70 | 153265.2 | 153265. | 173649. | 155265. | 20384. | 0.0 | 8502.00 | 0.0 |
| 1907 | $214888.80 | 214888.20 | 178626. | 178626. | 214351. | 178626. | 35725. | 0.0 | 14622.00 | 0.0 |
| 1908 | 232792.95 | 232792.95 | 194096.6 | 194096. | 232915. | 194096. | 38819. | 0.0 | 15915.00 | 0.0 |
| 1909 | 243875.56 | 243875.56 | 203245.6 | 203244. | 243892. | 203244. | 40648. | 0.0 | 16548.00 | 0.0 |
| 1910 | 248957.71 | 248959.71 | 208023.1 | 208024. | 249628. | 208024. | 41605. | 0.0 | 10988.00 | 0.0 |
| 1911 | 266021.97 | 266021.97 | 222228.1 | 222229. | 266674. | 222229. | 44446. | 0.0 | 10445.00 | 0.0 |
| 1912 | 273175.91 | 273175.93 | 227297. | 227297. | 272756. | 227297. | 45459. | 0.0 | 12015.00 | 0.0 |

*With the then existing consumers.

**Exhibit No. 547

| | Total Operating Expenses, Gas Department, On Account Of Sales In Lincoln Alone, With Gas @ $1.20 Per M. | | | Total Operating Expenses Gas Department (Lincoln Alone) With Gas @ $1.00 per M. | | Gross Earnings, Gas Department, (Lincoln Alone) With Gas @ $1.00 per M. | | Net Earnings, Gas Department (Lincoln Alone) With Gas @ $1.00 per M. | | Corrected Net Earnings, Gas Department, (Lincoln Alone) With Gas @ $1.00 per M. |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | As Shown By Gas Company Records | Gas Company Records as Corrected for Residuals and Depreciation, By H.I.Lea. | As Shown By A.D.Adams *** | As Estimated By H.I.Lea | As Estimated By A.D.Adams *** | As Estimated By H.I.Lea | As Estimated By A.D.Adams *** | As Estimated By H.I.Lea | As Estimated By A.D.Adams *** | As Shown By H.I.Lea. |
| 1905 | | | $ 95940.50 | | $ 95940.50 | $155122.00 | $144832.05 | | $ 48891.55 | |
| 1906 | | | 116860.81 | | 116860.81 | 175649.00 | 154646.70 | | 37785.89 | |
| 1907 | $141621.49 | $156766.49 | 127135.18 | $171388.49 | 127135.18 | 214351.00 | 179165.00 | $42962.51 | 52027.82 | $ 58121.71 |
| 1908 | 136626.08 | 152114.08 | 128824.77 | 166027.08 | 128824.77 | 232916.00 | 195975.75 | 66888.92 | 65148.98 | 60678.85 |
| 1909 | 134387.07 | 152167.07 | 120681.40 | 164715.07 | 120681.40 | 243892.00 | 203226.76 | 79176.93 | 82545.36 | 91708.49 |
| 1910 | 143105.72 | 162214.72 | 117845.52 | 173202.72 | 117845.52 | 249626.00 | 207554.91 | 76423.28 | 89511.39 | 86748.99 |
| 1911 | 157189.73 | 180232.59 | 118569.27 | 190677.59 | 118569.27 | 266674.00 | 223576.17 | 75996.41 | 105006.90 | 87789.90 |
| 1912 | 173689.87 | 197277.13 | 136145.01 | 209192.13 | 136145.01 | 272756.00 | 227716.83 | 63463.87 | 91571.82 | 76898.80 |
| | | | | Totals for 1907 to 1912 inclusive ---------- | | | | $404915.92 | $486611.95 | $460940.82 |

*** Exhibit No. 548

| | Corrected Gross Earnings, Gas Department, (In Lincoln Alone) With Gas @ $1.20 Per M. | | Total Operating Expenses Gas Department, (Lincoln Alone) With Gas @ $1.20 Per M | | | Net Earnings, Gas Department, (Lincoln Alone) With Gas @ $1.20 per M. | | | Net Earnings (Total) Gas Department With Gas @ $1.20 Per M. |
|---|---|---|---|---|---|---|---|---|---|
| Year | As Shown By H. I. Lea From Gas Co. Records | As Shown By A. D. Adams * | As Shown By Gas Company Records As Corrected By H.I.Lea | As Estimated By A. D. Adams * | As Proportioned By A.D.Adams From Gas Co. Reports *** | As Shown By Gas Company Records as Corrected By H.I.Lea. | As Estimated By A. D. Adams | Excess Earnings, As Shown By A.D.Adams | As Shown By A. D. Adams From Gas Company Reports ** (A) |
| 1905 | | $173560.23 | | $ 95940.50 | $104601.67 | | $ 77619.73 | | $ 68975.50 |
| 1906 | | 185299.70 | | 116860.81 | 125188.96 | | 68438.89 | | 60262.96 |
| 1907 | $214888.20 | 214888.20 | $156766.49 | 127135.18 | 156871.50 | $ 58121.71 | 87753.02 | $ 29631.31 | 78628.59 |
| 1908 | 252792.93 | 252792.93 | 152114.08 | 128824.77 | 154781.29 | 80678.85 | 105968.16 | 25289.31 | 98687.09 |
| 1909 | 243875.56 | 243875.56 | 152167.07 | 120681.40 | 132640.11 | 91708.49 | 123194.16 | 31485.67 | 111804.69 |
| 1910 | 248957.71 | 248957.71 | 162214.72 | 117843.52 | 142061.37 | 86742.99 | 131114.19 | 44571.20 | 106402.53 |
| 1911 | 268021.97 | 268021.97 | 180232.59 | 118569.27 | 154613.41 | 87789.38 | 149452.70 | 61663.32 | 116169.19 |
| 1912 | 273175.93 | 273175.93 | 197277.13 | 156145.01 | 170507.82 | 75898.80 | 157030.92 | 81132.12 | 106526.47 |
| Totals for 1907 to 1912 inclusive | | | | | | $480940.22 | $732613.15 | $251672.93 | $619988.56 |

*Exhibit No. 339
**Exhibit No. 306
***Exhibit No. 345
(A)-Before correction for error in residuals and without any allowance for depreciation.

436 SECTION I.

(Here follow tables, marked pages 437-439.)

440 SECTION J.

(Here follow tables, marked pages 441-444.)

| Year | Total Operating Expense (As Per A. D. Adams' Arrangement of Accounts) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total Expense | | | | | Expense Per M. Cubic Feet Sold | | | |
| | As Shown By Gas Company Records (B) | As Shown By Gas Company Annual Reports | Gas Company Reports As Corrected By H. I. Lea | As Estimated By A. D. Adams | As Shown By A. D. Adams From Gas Company Reports * | As Shown By Gas Company Annual Reports | Gas Company Reports As Corrected By H. I. Lea | As Estimated By A. D. Adams *** | As Shown By A. D. Adams From Gas Company Reports ** |
| 1905 | $ 105685.76 | | | $ 95978.90 | $ 104643.55 | | | $ .6680 | $ .7283 |
| 1906 | 127867.39 | | | 117165.45 | 125515.30 | | | .7625 | .8168 |
| 1907 | 142165.70 | $ 141924.57 | $ 15c879.57 | 127671.40 | 137147.61 | $ .7912 | $ .8746 | .7119 | .7646 |
| 1908 | 137268.01 | 137090.55 | 152678.55 | 129693.72 | 135690.42 | .7018 | .7814 | .6838 | .6945 |
| 1909 | 134620.94 | 134708.24 | 152488.24 | 121500.04 | 133220.05 | .6594 | .7464 | .5938 | .6526 |
| 1910 | 143565.12 | 143670.45 | 162781.45 | 119069.95 | 145859.84 | .6857 | .7746 | .5665 | .6830 |
| 1911 | 158052.17 | 158374.11 | 181416.97 | 121261.28 | 158125.76 | .6970 | .7985 | .5356 | .6958 |
| 1912 | 175751.71 | 175873.49 | 199160.75 | 140599.11 | 175955.64 | .7491 | .8498 | .5990 | .7502 |
| Totals 1907 to 1912 inclusive | $ 891423.65 | $ 891341.01 | $1005405.13 | $ 759395.50 | $ 883657.32 | $ .7126 | $ .8058 | $ .6071 | $ .7065 |

134.261[illegible]

* Exhibit No. 304
** Exhibit No. 305
*** Exhibit No. 344
(B) These figures are totals of preceding items and differ from final totals shown in annual reports by small amounts, because of carrying adjusted decimals through the many operations necessary in meeting Adams' re-arrangements.

| Year | Total Gas Sold @ $1.20 Per M. (M. Cu. Feet) | | Gas Making Material & Labor Plus Taxes (As Per A.D.Adams' arrangement of Accounts) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total Expense | | | | Expense Per M. Cu. Ft. Sold | | | |
| | As Shown from Gas Company Records By H.I.Lea | As Shown By A.D.Adams * | As Shown By Gas Company Records | Gas Company Records As Corrected By H.I.Lea | As Estimated by A.D.Adams ** | As Shown By A. D. Adams From Gas Company Reports *** | As Shown By Gas Company Records | Gas Company Records As Corrected By H.I.Lea | As Estimated By A.D.Adams **** | As Shown By A. D. Adams From Gas Company Reports ***** |
| 1905 | 143691. | 143690. | $ 62554.55 | $ 62554.55 | $ 61495.30 | $ 61495.30 | $ .4352 | $ .4352 | $ .4280 | $ .4280 |
| 1906 | 153664. | 153663. | 83402.75 | 83402.75 | 81054.64 | 81054.64 | .5428 | .5428 | .5274 | .5274 |
| 1907 | 179366. | 179366. | 92332.14 | 92332.14 | 87314.05 | 87314.05 | .5148 | .5148 | .4868 | .4868 |
| 1908 | 195392. | 195391. | 88286.29 | 88286.29 | 86707.70 | 86707.70 | .4518 | .4518 | .4438 | .4437 |
| 1909 | 204284. | 204284. | 78679.87 | 78679.87 | 77378.98 | 77378.98 | .3851 | .3851 | .3788 | .3788 |
| 1910 | 210169. | 210169. | 73883.60 | 73883.60 | 73883.61 | 73883.61 | .3516 | .3516 | .3516 | .3516 |
| 1911 | 227268. | 227268. | 73465.41 | 76325.27 | 73556.00 | 73556.00 | .3233 | .3359 | .3236 | .3236 |
| 1912 | 234586. | 234586. | 91094.12 | 93816.35 | 91178.05 | 91178.05 | .3887 | .4003 | .3890 | .3890 |
| Totals 1907 to 1912 inclusive | 1250865. | 1250864. | $497739.43 | $503321.52 | $489997.39 | $489997.39 | $ .3979 | $ .4024 | $ .3917 | $ .3917 |

* Exhibit No. 342
** Exhibit No. 341
*** Exhibit No. 304
**** Exhibit No. 344
***** Exhibit No. 305

| Year | Salaries, Office, Distribution & General Expense (As Per Adams' Arrangement of Accounts) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total Expense | | | | Expense Per M. Cubic Feet Sold | | | |
| | As Shown By Gas Company Records | Gas Company Records As Corrected By H. I. Lea | As Estimated By A. D. Adams ** | As Shown By A. D. Adams From Gas Company Reports *** | As Shown By Gas Company Records | Gas Company Records As Corrected By H. I. Lea | As Estimated By A. D. Adams * | As Shown By A. D. Adams From Gas Company Reports **** |
| 1905 | $ 33189.16 | $ 33189.16 | $ 21555.80 | $ 33189.16 | $ .2309 | $ .2309 | $ .1500 | $ .2310 |
| 1906 | 32908.99 | 32908.99 | 22281.14 | 32904.99 | .2142 | .2142 | .1450 | .2141 |
| 1907 | 36912.89 | 36912.89 | 24214.41 | 36912.89 | .2056 | .2056 | .1350 | .2056 |
| 1908 | 40066.75 | 40066.75 | 25400.85 | 40066.75 | .2051 | .2051 | .1300 | .2051 |
| 1909 | 46837.06 | 46837.06 | 25535.50 | 46837.06 | .2293 | .2293 | .1250 | .2293 |
| 1910 | 58960.48 | 58960.48 | 26271.15 | 58935.19 | .2805 | .2805 | .1250 | .2804 |
| 1911 | 69690.62 | 69690.62 | 27272.16 | 69690.62 | .3066 | .3066 | .1200 | .3066 |
| 1912 | 72944.99 | 72944.99 | 28126.32 | 72944.99 | .3112 | .3112 | .1200 | .3112 |
| Totals 1907 to 1912 inclusive | $325412.77 | $325412.77 | $156820.35 | $325387.48 | $ .2602 | $ .2602 | $ .1254 | $ .2601 |

* Exhibit No. 342
** Exhibit No. 341
*** Exhibit No. 302
**** Exhibit No. 303

## Repairs & Renewals
(As Per A. D. Adams' Arrangement of Accounts)

| Year | Total Expense | | | | Expense Per M. Cubic Feet Sold | | | |
|---|---|---|---|---|---|---|---|---|
| | As Shown By Gas Company Records (A) | Gas Company Records As Corrected by H. I. Lee | As Estimated By A. D. Adams ** | As Shown By A. D. Adams From Gas Company Reports * (A) | As Shown By Gas Company Records (A) | Gas Company Records As Corrected By H. I. Lee | As Estimated By A. D. Adams *** | As Shown By A. D. Adams From Gas Company Reports **** |
| 1905 | $ 9962.07 | | $ 12932.10 | $ 9961.07 | $ .0659 | | $ .0900 | $ .0693 |
| 1906 | 11555.67 | | 13829.67 | 11555.67 | .0752 | | .0900 | .0752 |
| 1907 | 12920.67 | $ 27875.67 | 16142.94 | 12920.67 | .0720 | $ .1554 | .0900 | .0720 |
| 1908 | 8914.99 | 24502.99 | 17585.19 | 8915.99 | .0456 | .1254 | .0900 | .0456 |
| 1909 | 9104.01 | 26884.01 | 18585.56 | 9104.01 | .0446 | .1316 | .0900 | .0446 |
| 1910 | 10721.04 | 29832.04 | 18915.21 | 10721.04 | .0510 | .1669 | .0900 | .0510 |
| 1911 | 14898.14 | 35081.14 | 20454.12 | 14898.14 | .0655 | .1544 | .0900 | .0656 |
| 1912 | 11712.60 | 32577.63 | 21094.74 | 11712.60 | .0500 | .1390 | .0900 | .0500 |
| Totals 1907 to 1912 -clusive | $ 68271.45 | $176753.48 | $112577.76 | $ 68272.45 | $ .0546 | $ .1413 | $ .0900 | $ .0546 |

* Exhibit No. 304
** Exhibit No. 341 - This includes Adams' allowance for depreciation.
*** Exhibit No. 343
**** Exhibit No. 305
(A) Nothing included for depreciation.

TOTALS OF EXPENSES CLAIMED EXCESSIVE BY A. D. ADAMS

For Years of 1907 to 1912, Both Inclusive

(As Per A. D. Adams' Arrangement of Accounts)

| | As Shown By Gas Company Records | As Shown By Gas Co. Records Corrected By H. I. Lea |
|---|---|---|
| Total Gas Making Labor & Material Plus Taxes | $ 7742.04 | $ 13324.13 |
| Total Salaries, Office, Distribution and General Expense | 168592.42 | 168592.42 |
| Total Repairs, Renewals & Depreciation | (*) —44306.31 | 64175.72 |
| T O T A L S | $132028.15 | $246092.27 |

(*) Gas Company Records Include Nothing For Depreciation

132028.15
44306.31
$176334.46

168592.42
7742.04
$176334.46

TOTAL GAS MAKING LABOR & MATERIAL PLUS TAXES

(As Per A. D. Adams' Arrangement of Accounts)

| Year | As Shown By Gas Company Records | | Gas Company Records As Corrected By H.I. Lea | | As Estimated By A.D.Adams | | Amounts Claimed Excessive By A. D. Adams | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | As Compared With Gas Co. Records | | As Compared With Gas Co. Records Corrected By N. I. Lea | |
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| 1907 | $ 92332.14 | $.5148 | $ 92332.14 | $.5148 | $ 87314.05 | $.4868 | $ 5018.09 | | $ 5018.09 | |
| 1908 | 88286.29 | .4518 | 88286.29 | .4518 | 86707.70 | .4438 | 1578.59 | | 1578.59 | |
| 1909 | 78679.87 | .3851 | 78679.87 | .3851 | 77378.98 | .3788 | 1300.89 | | 1300.89 | |
| 1910 | 73883.60 | .3516 | 73883.60 | .3516 | 73883.61 | .3515 | — .01 | | — .01 | |
| 1911 | 73463.41 | .3253 | 76325.27 | .3359 | 73535.00 | .3236 | — 71.59 | | 2788.27 | |
| 1912 | 91094.12 | .3887 | 93816.35 | .4003 | 91178.08 | .3890 | — 83.93 | | 2638.20 | |
| | | | Totals for 1907 to | | 1912 inclusive | | $ 7742.04 | | $ 13394.13 | |

TOTAL SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

| Year | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Estimated By A.D.Adams | | Amounts Claimed Excessive By A. D. Adams As Compared With Gas Co. Records | | As Compared With Gas Co. Records Corrected By H. I. Lea | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| 1907 | $ 36912.89 | $.2058 | $ 36912.89 | $.2058 | $ 24214.41 | $.1350 | $ 12698.48 | $. | $ 12698.48 | $. |
| 1908 | 40066.73 | .2051 | 40066.73 | .2051 | 25400.83 | .1300 | 14665.90 | | 14665.90 | |
| 1909 | 46837.06 | .2293 | 46837.06 | .2293 | 25535.50 | .1250 | 21301.56 | | 21301.56 | |
| 1910 | 58960.48 | .2805 | 58960.48 | .2805 | 26271.13 | .1250 | 32689.35 | | 32689.35 | |
| 1911 | 69690.62 | .3066 | 69690.62 | .3066 | 27272.16 | .1200 | 42418.46 | | 42418.46 | |
| 1912 | 72944.99 | .3112 | 72944.99 | .3112 | 28126.32 | .1200 | 44818.67 | | 44818.67 | |
| | | | Totals for 1907 to 1912 inclusive | | | | $168592.42 | | $168592.42 | |



4 4 8

TOTAL REPAIRS, RENEWALS AND DEPRECIATION

(As Per A. D. Adams' Arrangement of Accounts)

| Year | As Shown By Gas Co. Records * | | Gas Company Records As Corrected By H. I. Lea | | As Estimated By A.D.Adams | | Amounts Claimed Excessive By A. D. Adams | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | As Compared With Gas Co. Records | | As Compared With Gas Co. Records Corrected By H. I. Lea | |
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| 1907 | $ 12920.67 | $.0720 | $ 27875.67 | $.1554 | $ 16142.94 | $.0900 | -$ 3222.27 | | $ 11732.73 | |
| 1908 | 8914.99 | .0456 | 24502.99 | .1254 | 17585.19 | .0900 | - 8670.80 | | 6917.80 | |
| 1909 | 9104.01 | .0446 | 26884.01 | .1316 | 18385.56 | .0900 | - 9281.55 | | 8498.45 | |
| 1910 | 10721.04 | .0510 | 29832.04 | .1689 | 18915.21 | .0900 | - 8194.17 | | 10916.83 | |
| 1911 | 14898.14 | .0655 | 33081.14 | .1544 | 20454.12 | .0900 | - 5555.98 | | 14627.02 | |
| 1912 | 11712.60 | .0500 | 32577.63 | .1590 | 21094.74 | .0900 | - 9382.14 | | 11432.89 | |
| | | | Totals for 1907 to 1912 inclusive ------- | | | | -$44508.31 | | $ 64175.72 | |

* Nothing included for Depreciation

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## SECTION K.

(Here follow tables, marked pages 446-449.)

450 SECTION L.

(Here follow tables, marked pages 451-457.)

TOTAL GAS MAKING LABOR & MATERIAL & TAXES.

(As Per A. D. Adams' Arrangement of Accounts)

| Year | As Shown By Gas Company Records | | | | | | Gas Company Records as Corrected By H. I. Lea | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total (Net) Labor and Material | Per M. Cu.Ft. Sold | Total Taxes | Per M. Cu.Ft. Sold | Total (Net) Labor, Material & Taxes | Per M. Cu.Ft Sold | Total (Net) Labor and Material | Per M. Cu.Ft. Sold | Total Taxes | Per M. Cu.Ft. Sold | Total (Net) Labor and Material & Taxes | Per M. Cu.Ft. Sold |
| 1905 | $ 60422.53 | $.4205 | $ 2112.00 | $.0147 | $ 62534.53 | $.4352 | $ 60422.53 | $.4205 | $ 2112.00 | $.0147 | $ 62534.53 | $.4352 |
| 1906 | 76712.25 | .4992 | 6690.48 | .0436 | 83402.73 | .5428 | 76712.25 | .4992 | 6690.48 | .0436 | 83402.73 | .5428 |
| 1907 | 85247.10 | .4753 | 7085.04 | .0395 | 92332.14 | .5148 | 85247.10 | .4753 | 7085.04 | .0395 | 92332.14 | .5148 |
| 1908 | 80857.33 | .4138 | 7428.96 | .0380 | 88286.29 | .4518 | 80857.33 | .4138 | 7428.96 | .0380 | 88286.29 | .4518 |
| 1909 | 70693.63 | .3460 | 7986.24 | .0391 | 78679.87 | .3851 | 70693.63 | .3460 | 7986.24 | .0391 | 78679.87 | .3851 |
| 1910 | 65548.40 | .3119 | 8335.20 | .0397 | 73883.60 | .3516 | 65548.40 | .3119 | 8335.20 | .0397 | 73883.60 | .3516 |
| 1911 | 62883.41 | .2767 | 10580.00 | .0466 | 73463.41 | .3233 | 65743.27 | .2893 | 10580.00 | .0466 | 76323.27 | .3359 |
| 1912 | 75834.12 | .3236 | 15260.00 | .0651 | 91094.12 | .3887 | 78556.35 | .3352 | 15260.00 | .0651 | 93816.35 | .4003 |

GAS MAKING MATERIAL AND LABOR
(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1905

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown by A.D.Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. CU.FT. Sold | Total Expense | Expense Per M. CU.FT. Sold | Total Expense * | Expense Per M. CU.FT. Sold |
| Coal Carbonized | $ 31091.85 | | | | $ 31091.85 | |
| Enricher - Royalty | 171.53 | | | | 171.53 | |
| Bench Fuel | 3499.31 | | | | 1475.19 | |
| Steam for Coal Gas | 1500.00 | | | | 1500.00 | |
| Steam for Water Gas Gen. | 3794.56 | | | | 3794.56 | |
| Steam for Water Gas | 480.00 | | | | 480.00 | |
| Purifying Material - C.G. | 90.00 | | | | 90.00 | |
| " " - W.G. | 210.00 | | | | 210.00 | |
| Generator Fuel - W.G. | 12663.95 | | | | 0.00 | |
| Enricher for Water Gas | 17455.65 | | | | 17455.65 | |
| Works Exp. & Supplies-C.G. | 874.68 | | | | 874.68 | |
| " " " " -W.G. | 1483.60 | | | | 1483.60 | |
| Retort House Expense | 331.46 | | | | 331.46 | |
| Water Gas House Expense | 39.99 | | | | 39.99 | |
| Gross Cost Gas Making Material | $73686.58 | $.5128 | $73686.58 | $.5128 | $58998.51 (A) | $.4106 |
| Coke Residual | $18516.53 | | | | $ 5454.18 | |
| Breeze Residual | 0.00 | | | | 48.25 | |
| Coal Gas Tar Residual | 2221.65 | | | | 1517.18 | |
| Water " " | 214.97 | | | | 286.70 | |
| Total Residuals | $20953.15 | $.1458 | $20953.15 | $.1458 | $ 7306.31 | $.0508 |
| Net Cost Gas Making Mat'l. | $52733.43 | $.3670 | $52733.43 | $.3670 | $51692.20 | $.3598 |
| Purifying Labor - C.G. | $ 160.94 | | | | $ 160.94 * | |
| Sundry Labor - C.G. | 838.56 | | | | 838.56 | |
| Retort House Labor - C.G. | 3113.26 | | | | 3113.26 | |
| Gas Making Labor - W.G. | 2147.24 | | | | 2147.24 | |
| Purifying Labor - W.G. | 157.68 | | | | 157.68 | |
| Sundry Labor - W. G. | 1271.42 | | | | 1271.42 | |
| Total Expense Labor | $ 7689.10 | $.0535 | $ 7689.10 | $.0535 | $ 7689.10 | $.0535 |
| Net Total Cost Gas Making Material and Labor | $60422.53 | $.4205 | $60422.53 | $.4205 | $59381.30 | $.4133 |

* Exhibit No. 272
A Exhibit No. 280

GAS MAKING MATERIAL AND LABOR

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1906

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. CU.FT. Sold* | Total Expense | Expense Per M. CU.FT. Sold | Total Expense ** | Expense Per M. CU.FT. Sold |
| Coal Carbonized | $ 43033.89 | | | | $ 43033.89 | |
| Enricher - Royalty | 230.74 | | | | 230.74 | |
| Bench Fuel | 5095.92 | | | | 4536.84 | |
| Steam for Coal Gas | 1500.00 | | | | 1500.00 | |
| Steam for Water Gas Gen. | 4107.16 | | | | 4107.16 | |
| Steam for Water Gas | 480.00 | | | | 480.00 | |
| Purifying Material - C.G. | 279.11 | | | | 279.11 | |
| " " - W.G. | 226.50 | | | | 226.50 | |
| Generator Fuel - W.G. | 13985.51 | | | | 0.00 | |
| Enricher for Water Gas | 17584.74 | | | | 17587.74 | |
| Works Exp. & Supplies - C.G. | 824.32 | | | | 824.32 | |
| " " " " - W.G. | 1453.89 | | | | 1453.89 | |
| Retort House Expense | 269.12 | | | | 269.12 | |
| Water Gas House Expense | 73.79 | | | | 73.79 | |
| Gross Cost Gas Making Mat'l. | $ 89144.69 | $.5801 | $ 89144.69 | $.5801 | $ 74603.10 | $.4855 |
| Coke Residual | 22504.15 | | | | 9246.00 | |
| Breeze Residual | 0.00 | | | | 600.48 | |
| Coal Gas Tar Residual | (B)- 1379.77 | | | | 1843.94 | |
| Water " " " | 0.00 | | | | 0.00 | |
| Total Residuals | $ 23883.92 | $.1554 | $ 23883.92 | $.1554 | $ 11690.42 | $.0761 |
| Net Cost Gas Making Mat'l. | $ 65260.77 | $.4247 | $ 65260.77 | $.4247 | $ 62912.68 | $.4094 |
| Purifying Labor - C.G. | 460.92 | | | | ** 460.92 | |
| Sundry Labor - C.G. | 1163.90 | | | | 1163.90 | |
| Retort House Labor - C.G. | 4790.97 | | | | 4790.97 | |
| Gas Making Labor - W.G. | 2919.50 | | | | 2919.50 | |
| Purifying Labor - W.G. | 621.24 | | | | 621.24 | |
| Sundry Labor - W.G. | 1494.95 | | | | 1494.95 | |
| Total Expense Labor | $ 11451.48 | $.0745 | $ 11451.48 | $.0745 | $ 11451.48 | $.0745 |
| Total Net Cost Gas Making Material and Labor | $ 76712.25 | $.4992 | $ 76712.25 | $.4992 | $ 74364.16 | $.4839 |

** Exhibit No. 273
(B) Includes $62.81 for Ammonia.

GAS MAKING MATERIAL AND LABOR

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1907.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H.E.Lea | | As Shown By A.D.Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. CU.FT. Sold | Total Expense * | Expense Per M. CU.FT. Sold | Total Expense | Expense Per M. CU.FT. Sold |
| Coal Carbonized | $ 42844.46 | | | | $ 42844.46 *** | |
| Enricher - Royalty | 178.41 | | | | 178.41 | |
| Bench Fuel | 5347.42 | | | | 2495.39 | |
| Steam for Coal Gas | 1649.97 | | | | 1649.97 | |
| Steam for Water Gas Gen. | 4183.74 | | | | 4183.74 | |
| Steam for Water Gas | 880.78 | | | | 880.78 | |
| Purifying Material - C.G. | 389.13 | | | | 389.13 | |
| " " - W.G. | 392.04 | | | | 392.04 | |
| Generator Fuel - W.G. | 14491.19 | | | | 0.00 | |
| Enricher For Water Gas | 20623.74 | | | | 20652.74 | |
| Works Exp. & Supplies - C.G. | 878.50 | | | | 878.50 | |
| " " " " - W.G. | 1662.97 | | | | 1662.97 | |
| Retort House Expense | 201.54 | | | | 201.54 | |
| Water Gas House Expense | 24.03 | | | | 24.03 | |
| Gross Cost Gas Making Mat'l. | $93747.92 | $.5226 | $93747.92 | $.5226 | $ 76413.70 | $.4260 |
| Coke Residual | 20537.73 | | | | 6755.18 (A) | |
| Breeze Residual | 0.00 | | | | 1109.08 | |
| Coal Gas Tar Residual | 1248.26 | | | | 1607.56 | |
| Water Gas Tar Residual | 916.14 | | | | 916.18 | |
| Total Residuals | $22702.13 | $.1265 | $22702.13 | $.1265 | $ 10386.00 | $.0579 |
| Net Cost Gas Making Mat'l. | $71045.79 | $.3961 | $71045.79 | $.3961 | $ 66027.70 | $.3681 |
| Purifying Labor - C.G. | 386.68 | | | | 386.68 *** | |
| Sundry Labor - C.G. | 1303.51 | | | | 1303.51 | |
| Retort House Labor - C.G. | 5708.18 | | | | 5708.18 | |
| Gas Making Labor - W.G. | 3737.66 | | | | 3737.66 | |
| Purifying Labor - W.G. | 799.10 | | | | 799.10 | |
| Sundry Labor - W.G. | 2266.18 | | | | 2266.18 | |
| Total Expense Labor | $14201.31 | $.0792 | $14201.31 | $.0792 | $ 14201.31 | $.0792 |
| Total Net Cost Gas Making Material and Labor | $85247.10 | $.4753 | $85247.10 | $.4753 | $ 80229.01 | $.4473 |

*** Exhibit No. 274
(A) " " 280

GAS MAKING MATERIAL AND LABOR

(as Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1908.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold. | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Coal Carbonized | $ 32437.01 | | | | **** $ 32437.01 | |
| Enricher - Royalty | 0.00 | | | | 0.00 | |
| Bench Fuel | 3479.84 | | | | 3479.84 | |
| Steam for Coal Gas | 1456.76 | | | | 1456.76 | |
| Steam for Water Gas Gen. | 3577.33 | | | | 3577.33 | |
| Steam for Water Gas | 2421.07 | | | | 2421.07 | |
| Purifying Material - C.G. | 200.47 | | | | 200.47 | |
| " " - W.G. | 503.34 | | | | 503.34 | |
| Generator Fuel - W.G. | 16742.07 | | | | 685.08 | |
| Enricher for Water Gas | 22715.06 | | | | 22715.06 | |
| Works Exp. & Supplies - C.G. | 746.37 | | | | 746.37 | |
| " " " " - W.G. | 2109.35 | | | | 2109.35 | |
| Retort House Expense | 195.39 | | | | 195.39 | |
| Water Gas House Expense | 107.74 | | | | 107.74 | |
| Gross Cost Gas Making Mat'l. | $ 86689.80 | $.4457 | $86689.80 | $.4457 | $ 70632.81 | $.3615 |
| Coke Residual | 16347.69 | | | | (A) 0.00 | |
| Breeze Residual | 0.00 | | | | 930.35 | |
| Coal Gas Tar Residual | 988.36 | | | | 1927.50 | |
| Water " " " | 1938.12 | | | | 1938.12 | |
| Total Residuals | $ 19274.17 | $.0987 | $19274.17 | $.0987 | $ 4795.77 | $.0245 |
| Net Cost Gas Making Mat'l. | $ 67415.63 | $.3450 | $67415.63 | $.3450 | $ 65837.04 | $.3370 |
| Purifying Labor - C.G. | 210.87 | | | | **** 210.87 | |
| Sundry Labor - C.G. | 806.71 | | | | 806.71 | |
| Retort House Labor - C.G. | 5167.13 | | | | 5167.13 | |
| Gas Making Labor - W.G. | 4603.71 | | | | 4603.71 | |
| Purifying Labor - W.G. | 574.26 | | | | 574.26 | |
| Sundry Labor - W.G. | 2079.02 | | | | 2079.02 | |
| Total Expense Labor | $ 13441.70 | $.0688 | $13441.70 | $.0688 | $ 13441.70 | $.0688 |
| Total Net Cost Gas Making Material and Labor | $ 80857.33 | $.4138 | $80857.33 | $.4138 | $ 79278.74 | $.4057 |

**** Exhibit No. 275
(A ) " " 280

GAS MAKING MATERIAL AND LABOR

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1909

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Coal Carbonized | $11264.75 | | | | *$11264.75 | |
| Enricher - Royalty | 0.00 | | | | 0.00 | |
| Bench Fuel | 1109.30 | | | | 1109.30 | |
| Steam for Coal Gas | 365.36 | | | | 365.36 | |
| Steam for Water Gas Gen. | 2245.00 | | | | 2245.00 | |
| Steam for Water Gas | 4509.04 | | | | 4509.04 | |
| Purifying Material - C.Gas | 50.00 | | | | 50.00 | |
| " " - W.Gas | 550.00 | | | | 550.00 | |
| Generator Fuel - W.Gas | 26665.24 | | | | 19469.24 | |
| Enricher for Water Gas | 22186.12 | | | | 22186.12 | |
| Works Exp. & Supplies - C.Gas | 278.55 | | | | 278.55 | |
| " " " " - W.Gas | 2157.76 | | | | 2157.76 | |
| Retort House Expense | 63.68 | | | | 63.68 | |
| Water Gas House Expense | 153.37 | | | | 153.37 | |
| Gross Cost Gas Making Mat'l. | $71598.17 | $.3504 | $71598.17 | $.3504 | $64402.17 | $.3153 |
| Coke Residual | $ 6594.44 | | | | $ 0.00 (A) | |
| Breeze Residual | 0.00 | | | | 321.00 | |
| Coal Gas Tar Residual | 395.08 | | | | 770.41 | |
| Water " " " | 2396.66 | | | | 2399.66 | |
| Total Residuals | $ 9386.18 | $.0459 | $ 9386.18 | $.0459 | $ 3491.07 | $.0171 |
| Net Cost Gas Making Mat'l. | $62211.99 | $.3045 | $62211.99 | $.3045 | $60911.10 | $.2982 |
| Purifying Labor - Coal Gas | $ 135.85 | | | | *$ 135.85 | |
| Sundry Labor - Coal Gas | 255.33 | | | | 255.33 | |
| Retort House Labor - C.Gas | 1475.44 | | | | 1475.44 | |
| Gas Making Labor - Water Gas | 4082.41 | | | | 4082.41 | |
| Purifying Labor - Water Gas | 375.86 | | | | 375.86 | |
| Sundry Labor - Water Gas | 2156.75 | | | | 2156.75 | |
| Total Expense Labor | $ 8481.64 | $.0415 | $ 8481.64 | $.0415 | $ 8481.64 | $.0415 |
| Total Net Cost Gas Making Material and Labor | $70693.63 | $.3460 | $70693.63 | $.3460 | $69392.74 | $.3397 |

* Exhibit No. 276

(A) " " 280

## GAS MAKING MATERIAL AND LABOR

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1910

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Coal Carbonized | $ 0.00 | | | | $ 0.00 ** | |
| Enricher-Royalty | 0.00 | | | | 0.00 | |
| Bench Fuel | 0.00 | | | | 0.00 | |
| Steam For Coal Gas | 0.00 | | | | 0.00 | |
| Steam For Water Gas Gen. | 3020.00 | | | | 3020.00 | |
| Steam For Water Gas | 4514.47 | | | | 4514.47 | |
| Purifying Material - C.G. | 0.00 | | | | 0.00 | |
| " " - W.G. | 575.00 | | | | 575.00 | |
| Generator Fuel - W.G. | 26281.76 | | | | 26281.76 | |
| Enricher For Water Gas | 22960.89 | | | | 22960.89 | |
| Works Exp. & Supplies - C.G. | 0.00 | | | | 0.00 | |
| " " " " - W.G. | 3392.80 | | | | 3392.80 | |
| Retort House Expense | 0.00 | | | | 0.00 | |
| Water Gas House Expense | 111.67 | | | | 111.67 | |
| Gross Cost Gas Making Mat'l. | $ 60856.59 | $.2896 | $ 60856.59 | $.2896 | $ 60856.59 | $.2896 |
| Coke Residual | 0.00 | | | | 0.00 (A) | |
| Breeze Residual | 0.00 | | | | 0.00 | |
| Coal Gas Tar Residual | 0.00 | | | | 0.00 | |
| Water " " " " | 2727.71 | | | | 2727.70 | |
| Total Residuals | $ 2727.71 | $.0130 | $ 2727.71 | $.0130 | $ 2727.70 | $.0130 |
| Net Cost Gas Making Mat'l. | $ 58128.88 | $.2766 | $ 58128.88 | $.2766 | $ 58128.89 | $.2766 |
| Purifying Labor - C.G. | 0.00 | | | | 0.00 ** | |
| Sundry Labor - C.G. | 0.00 | | | | 0.00 | |
| Retort House Labor - C.G. | 0.00 | | | | 0.00 | |
| Gas Making Labor - W.G. | 3956.04 | | | | 3956.04 | |
| Purifying Labor - W.G. | 412.82 | | | | 412.82 | |
| Sundry Labor - W.G. | 3050.66 | | | | 3050.66 | |
| Total Expense Labor | $ 7419.52 | $.0353 | $ 7419.52 | $.0353 | $ 7419.52 | $.0353 |
| Total Net Cost Gas Making Material and Labor | $ 65548.40 | $.3119 | $ 65548.40 | $.3119 | $ 65548.41 | $.3119 |

** Exhibit No. 277

(A) " " 280

GAS MAKING MATERIAL AND LABOR

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1911

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A. D. Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Coal Carbonized | $ 0.00 | | | | $ ***0.00 | |
| Enricher Royalty | 0.00 | | | | 0.00 | |
| Bench Fuel | 0.00 | | | | 0.00 | |
| Steam For Coal Gas | 0.00 | | | | 0.00 | |
| Steam For Water Gas Gen. | 4297.75 | | | | 4297.75 | |
| Steam For Water Gas | 3357.05 | | | | 3357.05 | |
| Purifying Material - C.G. | 0.00 | | | | 0.00 | |
| " " - W.G. | 600.00 | | | | 600.00 | |
| Generator Fuel - W.G. | 25973.02 | | | | 25973.02 | |
| Enricher For Water Gas | 22336.86 | | | | 22336.86 | |
| Works Exp. & Supplies - C.G. | 0.00 | | | | 0.00 | |
| " " " " - W.G. | 3640.26 | | | | 3640.26 | |
| Retort House Expense | 0.00 | | | | 0.00 | |
| Water Gas House Expense | 167.38 | | | | 167.38 | |
| Gross Cost Gas Making Mat'l. | $ 60372.32 | $.2656 | $ 60372.32 | $.2656 | $ 60372.32 (A) | $.2656 |
| Coke Residual | 0.00 | | 0.00 | | 0.00 | |
| Breeze Residual | 0.00 | | 0.00 | | 0.00 | |
| Coal Gas Tar Residual | 0.00 | | 0.00 | | 0.00 | |
| Water Gas Tar Residual | 4028.44 | | 1168.58 | | 3956.85 | |
| Total Residuals | $ 4028.44 | $.0177 | $ 1168.58 | $.0051 | $ 3956.85 | $.0174 |
| Net Cost Gas Making Mat'l. | $ 56343.88 | $.2479 | $ 59203.74 | $.2605 | $ 56415.47 | $.2482 |
| Purifying Labor - C.G. | 0.00 | | | | *** 0.00 | |
| Sundry Labor - C.G. | 0.00 | | | | 0.00 | |
| Retort House Labor - C.G. | 0.00 | | | | 0.00 | |
| Gas Making Labor - W.G. | 3884.79 | | | | 3884.79 | |
| Purifying Labor - W.G. | 130.76 | | | | 130.76 | |
| Sundry Labor - W.G. | 2523.98 | | | | 2523.98 | |
| Total Expense Labor | $ 6539.53 | $.0288 | $ 6539.53 | $.0288 | $ 6539.53 | $.0288 |
| Total Net Cost Gas Making Material and Labor | $ 62883.41 | $.2767 | $ 65743.27 | $.2893 | $ 62955.00 | $.2770 |

*** Exhibit No. 278

(A) " " 280

GAS MAKING MATERIAL AND LABOR

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1912.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Coal Carbonized | $ 0.00 | | | | **** $ 0.00 | |
| Enricher Royalty | 0.00 | | | | 0.00 | |
| Bench Fuel | 0.00 | | | | 0.00 | |
| Steam For Coal Gas | 0.00 | | | | 0.00 | |
| Steam For Water Gas Gen. | 3910.00 | | | | 3910.00 | |
| Steam For Water Gas | 4889.59 | | | | 4889.59 | |
| Purifying Material - C.G. | 0.00 | | | | 0.00 | |
| " " - W.G. | 615.26 | | | | 615.26 | |
| Generator Fuel - W.G. | 28407.02 | | | | 28407.02 | |
| Enricher For Water Gas | 27905.07 | | | | 27905.07 | |
| Works Expense & Supplies - C.G. | 0.00 | | | | 0.00 | |
| " " " " - W.G. | 5585.00 | | | | 5585.00 | |
| Retort House Expense | 0.00 | | | | 0.00 | |
| Water Gas House Expense | 394.63 | | | | 394.63 | |
| Gross Cost Gas Making Mat'l. | $ 71706.57 | $.3059 | $ 71706.57 | $.3059 | $ 71706.57 | $.3059 |
| Coke Residual | 0.00 | | 0.00 | | (A) 0.00 | |
| Breeze Residual | 0.00 | | 0.00 | | 0.00 | |
| Coal Gas Tar Residual | 0.00 | | 0.00 | | 0.00 | |
| Water " " " | 3319.72 | | 597.49 | | 3235.79 | |
| Total Residuals | $ 3319.72 | $.0141 | $ 597.49 | $.0025 | $ 3235.79 | $.0138 |
| Net Cost Gas Making Mat'l. | $ 68386.85 | $.2918 | $ 71109.08 | $.3034 | $ 68470.78 | $.2921 |
| Purifying Labor - C.G. | 0.00 | | | | **** 0.00 | |
| Sundry Labor - C.G. | 0.00 | | | | 0.00 | |
| Retort House Labor - C.G. | 0.00 | | | | 0.00 | |
| Gas Making Labor - W.G. | 3823.62 | | | | 3823.62 | |
| Purifying Labor - W.G. | 291.11 | | | | 291.11 | |
| Sundry Labor - W.G. | 3332.54 | | | | 3332.54 | |
| Total Expense Labor | $ 7447.27 | $.0318 | $ 7447.27 | $.0318 | $ 7447.27 | $.0318 |
| Total Net Cost Gas Making Material and Labor | $ 75834.12 | $.3236 | $ 78556.35 | $.3352 | $ 75918.05 | $.3239 |

**** Exhibit No. 279

(A) " " 280

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1903.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams * | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 524.29 | | | | $ 524.29 | |
| Collection Clerical Salaries | 2479.77 | | | | 2479.77 | |
| Collection Office Expense | 639.80 | | | | 639.80 | |
| Delivery Bills | 125.29 | | | | 125.29 | |
| Outside Collections | 373.28 | | | | 373.28 | |
| General Clerical Salaries | 895.35 | | | | 895.35 | |
| General Office Expense | 489.02 | | | | 489.02 | |
| Executive Salaries | 3470.88 | | | | 3470.88 | |
| General Supervision - C.Gas | 359.70 | | | | 359.70 | |
| General Supervision - W.Gas | 687.57 | | | | 687.57 | |
| Promoting New Business | 5578.97 | | | | 5578.97 | |
| Total Salaries & Office | $ 15623.92 | $.1589 | $ 15623.92 | $.1589 | $ 15623.92 | $.1589 |
| Street Dep't. Expense | 691.14 | | | | 691.14 | |
| Meter Dep't. Expense | 541.00 | | | | 541.00 | |
| Gratuitous Work | 1219.43 | | | | 1219.43 | |
| Legal Expense | 727.48 | | | | 727.48 | |
| Incidental Expense | 2091.05 | | | | 2091.05 | |
| Rent Collection Office | 455.33 | | | | 455.33 | |
| Rent Executive Office | 307.67 | | | | 307.67 | |
| District Holder | | | | | | |
| Total Distribution & General | $ 6033.10 | $.0613 | $ 6033.00 | $.0613 | $ 6033.10 | $.0613 |
| Total Above Expense | $ 21657.02 | $.2202 | $ 21657.02 | $.2202 | $ 21657.02 | $.2202 |

* Exhibit No. 281

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1904.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams ** | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 563.58 | | | | $ 563.58 | |
| Collection Clerical Salaries | 2850.57 | | | | 2850.57 | |
| Collection Office Expense | 557.20 | | | | 557.20 | |
| Delivery Bills | 113.18 | | | | 113.18 | |
| Outside Collections | 500.74 | | | | 500.74 | |
| General Clerical Salaries | 626.25 | | | | 626.25 | |
| General Office Expense | 450.56 | | | | 450.56 | |
| Executive Salaries | 2080.88 | | | | 2080.88 | |
| General Supervision - C.Gas | 623.88 | | | | 623.88 | |
| General Supervision - W.Gas | 1306.36 | | | | 1306.36 | |
| Promoting New Business | 16400.65 | | | | 16400.65 | |
| Total Salaries & Office | $ 26073.85 | $.2220 | $ 26073.85 | $.2220 | $26073.85 | $.2220 |
| Street Dep't. Expense | 496.54 | | | | 496.54 | |
| Meter Dep't. Expense | 354.25 | | | | 354.25 | |
| Gratuitous Work | 1379.45 | | | | 1379.45 | |
| Legal Expense | 831.25 | | | | 831.25 | |
| Incidental Expense | 1596.58 | | | | 1596.58 | |
| Rent Collection Office | 620.43 | | | | 620.43 | |
| Rent Executive Office | 387.98 | | | | 387.98 | |
| District Holder | | | | | | |
| Total Distribution & General | $ 5666.48 | $.0483 | $ 5666.48 | $.0483 | $ 5666.48 | $.0483 |
| Total Above Expense | $ 31740.73 | $.2703 | $31740.73 | $.2703 | $31740.33 | $.2703 |

** Exhibit No. 282

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A.D.Adams' Arrangement of Accounts)

FULL YEAR OF 1905.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams *** | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 699.38 | | | | $ 699.38 | |
| Collection Clerical Salaries | 3153.27 | | | | 3153.27 | |
| Collection Office Expense | 677.01 | | | | 677.01 | |
| Delivery Bills | 155.82 | | | | 155.82 | |
| Outside Collections | 461.54 | | | | 461.54 | |
| General Clerical Salaries | 484.00 | | | | 484.00 | |
| General Office Expense | 337.32 | | | | 337.32 | |
| Executive Salaries | 2446.68 | | | | 2446.68 | |
| General Supervision - C.Gas | 970.66 | | | | 983.36 | |
| General Supervision - W.Gas | 1757.44 | | | | 1744.74 | |
| Promoting New Business | 15919.73 | | | | 15919.73 | |
| Total Salaries & Office | $27062.85 | $.1883 | $27062.85 | $.1883 | $27062.85 | $.1883 |
| Street Dep't. Expense | 716.51 | | | | 716.51 | |
| Meter Dep't. Expense | 404.20 | | | | 404.20 | |
| Gratuitous Work | 1820.32 | | | | 1820.32 | |
| Legal Expense | 652.87 | | | | 652.87 | |
| Incidental Expense | 1621.85 | | | | 1621.85 | |
| Rent Collection Office | 554.08 | | | | 554.08 | |
| Rent Executive Office | 356.48 | | | | 356.48 | |
| District Holder | | | | | | |
| Total Distribution & General | $ 6126.31 | $.0426 | $ 6126.31 | $.0426 | $ 6126.31 | $.0426 |
| Total Above Expense | $33189.16 | $.2309 | $33189.16 | $.2309 | $33189.16 | $.2309 |

*** Exhibit No. 283

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1906

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D,Adams **** | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 980.55 | | | | $ 980.55 | |
| Collection Clerical Salaries | 3674.97 | | | | 3670.97 | |
| Collection Office Expense | 702.68 | | | | 702.68 | |
| Delivery Bills | 141.37 | | | | 141.37 | |
| Outside Collections | 659.73 | | | | 659.73 | |
| General Clerical Salaries | 493.62 | | | | 493.62 | |
| General Office Expense | 340.30 | | | | 340.30 | |
| Executive Salaries | 2804.70 | | | | 2804.70 | |
| General Supervision - C.Gas | 1034.78 | | | | 1034.78 | |
| General Supervision - W.Gas | 1857.98 | | | | 1857.98 | |
| Promoting New Business | 13432.41 | | | | 13432.41 | |
| Total Salaries & Office | $26123.09 | $.1700 | $26123.09 | $.1700 | $ 26119.09 | $.1700 |
| Street Dep't. Expense | 608.38 | | | | 608.38 | |
| Meter Dep't. Expense | 353.11 | | | | 353.11 | |
| Gratuitous Work | 1906.52 | | | | 1906.52 | |
| Legal Expense | 757.43 | | | | 757.43 | |
| Incidental Expense | 2137.77 | | | | 2137.77 | |
| Rent Collection Office | 537.31 | | | | 537.31 | |
| Rent Executive Office | 485.38 | | | | 485.38 | |
| District Holder | | | | | | |
| Total Distribution & General | $ 6785.90 | $.0442 | $ 6785.90 | $.0442 | $ 6785.90 | $.0442 |
| Total Above Expense | $32908.99 | $.2142 | $32908.99 | $.2142 | $ 32904.99 | $.2141 |

**** Exhibit No. 284

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1907

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams * | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 952.10 | | | | $ 952.10 | |
| Collection Clerical Salaries | 5355.20 | | | | 5355.20 | |
| Collection Office Expense | 770.14 | | | | 770.14 | |
| Delivery Bills | 176.26 | | | | 176.26 | |
| Outside collections | 709.63 | | | | 709.63 | |
| General Clerical Salaries | 394.80 | | | | 394.80 | |
| General Office Expense | 478.25 | | | | 478.25 | |
| Executive Salaries | 3215.52 | | | | 3215.52 | |
| General Supervisior - C.Gas | 1052.67 | | | | 1052.67 | |
| General Supervision - W.Gas | 2084.52 | | | | 2084.52 | |
| Promoting New Business | 13394.04 | | | | 13394.04 | |
| Total Salaries & Office | $ 28583.13 | $.1594 | $ 28583.13 | $.1594 | $ 28583.13 | $.1594 |
| Street Dep't. Expense | 797.48 | | | | 797.48 | |
| Meter Dep't. Expense | 458.60 | | | | 458.60 | |
| Gratuitous Work | 1891.53 | | | | 1891.53 | |
| Legal Expense | 2160.31 | | | | 2160.31 | |
| Incidental Expense | 1723.38 | | | | 1723.38 | |
| Rent Collection Office | 634.42 | | | | 634.42 | |
| Rent Executive Office | 664.04 | | | | 664.04 | |
| District Holder | | | | | | |
| Total Distribution & General | $ 8329.76 | $.0464 | $ 8329.76 | $.0464 | $ 8329.76 | $.0464 |
| Total Above Expense | $ 36912.89 | $.2058 | $ 36912.89 | $.2058 | $ 36912.89 | $.2058 |

* Exhibit No. 285

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1908.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams ** | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 914.30 | | | | $ 914.30 | |
| Collection Clerical Salaries | 6315.51 | | | | 6315.51 | |
| Collection Office Expense | 966.96 | | | | 966.96 | |
| Delivery Bills | 218.86 | | | | 218.86 | |
| Outside Collections | 856.52 | | | | 856.52 | |
| General Clerical Salaries | 513.00 | | | | 513.00 | |
| General Office Expense | 663.38 | | | | 663.38 | |
| Executive Salaries | 5001.41 | | | | 5001.41 | |
| General Supervision - C.Gas | 800.99 | | | | 800.99 | |
| General Supervision - W.Gas | 2366.13 | | | | 2366.13 | |
| Promoting New Business | 11634.96 | | | | 11634.96 | |
| Total Salaries & Office | $ 30252.02 | $.1548 | $ 30252.02 | $.1548 | $ 30252.02 | $.1548 |
| Street Dep't. Expense | 1410.59 | | | | 1410.59 | |
| Meter Dep't. Expense | 1165.72 | | | | 1165.72 | |
| Gratuitous Work | 1376.36 | | | | 1376.36 | |
| Legal Expense | 1796.33 | | | | 1796.33 | |
| Incidental Expense | 2679.81 | | | | 2679.81 | |
| Rent Collection Office | 660.96 | | | | 660.96 | |
| Rent Executive Office | 724.94 | | | | 724.94 | |
| District Holder | | | | | | |
| Total Distribution & General | $ 9814.71 | $.0502 | $ 9814.71 | $.0502 | $ 9814.71 | $.0502 |
| Total Above Expense | $ 40066.73 | $.2051 | $ 40066.73 | $.2051 | $ 40066.73 | $.2051 |

** Exhibit No. 286

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1909.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams *** | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. CU.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 1044.84 | | | | $ 1044.84 | |
| Collection Clerical Salaries | 5495.54 | | | | 5495.54 | |
| Collection Office Expense | 1590.45 | | | | 1590.45 | |
| Delivery Bills | 216.27 | | | | 216.27 | |
| Outside Collections | 1010.67 | | | | 1010.67 | |
| General Clerical Salaries | 748.00 | | | | 748.00 | |
| General Office Expense | 978.43 | | | | 978.43 | |
| Executive Salaries | 6113.06 | | | | 6113.06 | |
| General Supervision - C.Gas | 234.64 | | | | 234.64 | |
| General Supervision - W,Gas | 2698.21 | | | | 2698.21 | |
| Promoting New Business | 14019.36 | | | | 14019.36 | |
| Total Salaries & Office | $34149.47 | $.1672 | $34149.47 | $.1672 | $34149.47 | $.1672 |
| Street Dep't. Expense | 1671.98 | | | | 1671.98 | |
| Meter Dep't. Expense | 1294.05 | | | | 1294.05 | |
| Gratuitous Work | 2299.17 | | | | 2299.17 | |
| Legal Expense | 1858.53 | | | | 1858.53 | |
| Incidental Expense | 3715.44 | | | | 3715.44 | |
| Rent Collection Office | 747.30 | | | | 747.30 | |
| Rent Executive Office | 1101.12 | | | | 1101.12 | |
| District Holder | | | | | | |
| Total Distribution & Gen'l | $12687.59 | $.0621 | $12687.59 | $.0621 | $12687.59 | $.0621 |
| Total Above Expense | $46837.06 | $.2293 | $46837.06 | $.2293 | $46837.06 | $.2293 |

*** Exhibit No. 287

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1910

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A.D.Adams **** | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 1241.08 | | | | $ 1241.08 | |
| Collection Clerical Salaries | 5771.39 | | | | 5771.39 | |
| Collection Office Expense | 1770.41 | | | | 1770.41 | |
| Delivery Bills | 268.41 | | | | 268.41 | |
| Outside Collections | 1588.64 | | | | 1588.64 | |
| General Clerical Salaries | 804.40 | | | | 804.40 | |
| General Office Expense | 970.10 | | | | 970.10 | |
| Executive Salaries | 9806.31 | | | | 9806.31 | |
| General Supervision - C.Gas | 0.00 | | | | 0.00 | |
| General Supervision - W.Gas | 3260.41 | | | | 3260.41 | |
| Promoting New Business | 16152.75 | | | | 16152.75 | |
| Total Salaries & Office | $41633.90 | $.1981 | $41633.90 | $.1981 | $41633.90 | $.1981 |
| Street Dep't. Expense | 2042.21 | | | | 2042.21 | |
| Meter Dep't. Expense | 1551.43 | | | | 1551.43 | |
| Gratuitous Work | 2658.62 | | | | 2658.62 | |
| Legal Expense | 5911.70 | | | | 5911.70 | |
| Incidental Expense | 2878.32 | | | | 2878.32 | |
| Rent Collection Office | 774.56 | | | | 774.56 | |
| Rent Executive Office | 1484.45 | | | | 1484.45 | |
| District Holder | 25.29 | | | | 0. | |
| Total Distribution & General | $17326.58 | $.0824 | $17326.58 | $.0824 | $17301.29 | $.0823 |
| Total Above Expense | $58960.48 | $.2805 | $58960.48 | $.2805 | $58935.19 | $.2804 |

**** Exhibit No. 288

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1911

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H.I. Lea | | As Shown By A.D.Adams * | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 1588.76 | | | | $ 1588.76 | |
| Collection Clerical Salaries | 6519.95 | | | | 6519.95 | |
| Collection Office Expense | 1757.15 | | | | 1757.15 | |
| Delivery Bills | 283.68 | | | | 283.68 | |
| Outside Collections | 1646.49 | | | | 1646.49 | |
| General Clerical Salaries | 1066.85 | | | | 1066.85 | |
| General Office Expense | 1202.12 | | | | 1202.12 | |
| Executive Salaries | 9454.17 | | | | 9454.17 | |
| General Supervision - C.Gas | 0.00 | | | | 0.00 | |
| General Supervision - W.Gas | 3412.26 | | | | 3412.26 | |
| Promoting New Business | 18985.52 | | | | 18985.52 | |
| Total Salaries & Office | $ 45716.95 | $.2012 | $45716.95 | $.2012 | $45716.95 | $.2012 |
| Street Dep't. Expense | 2162.94 | | | | 2162.94 | |
| Meter Dep't. Expense | 1584.38 | | | | 1584.38 | |
| Gratuitous Work | 2904.17 | | | | 2904.17 | |
| Legal Expense | 8279.48 | | | | 8279.48 | |
| Incidental Expense | 5162.84 | | | | 5162.84 | |
| Rent Collection Office | 729.27 | | | | 729.27 | |
| Rent Executive Office | 1569.22 | | | | 1569.22 | |
| District Holder | 1581.37 | | | | 1581.37 | |
| Total Distribution & General | $23973.67 | $.1055 | $23973.67 | $.1055 | $23973.67 | $.1055 |
| Total Above Expense | $69690.62 | $.3066 | $69690.62 | $.3066 | $69690.62 | $.3066 |

* Exhibit No. 289

SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1912.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A. D. Adams ** | |
|---|---|---|---|---|---|---|
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Reading Meters | $ 1390.24 | | | | $ 1390.24 | |
| Collection Clerical Salaries | 6975.16 | | | | 6975.16 | |
| Collection Office Expense | 1839.87 | | | | 1839.87 | |
| Delivery Bills | 307.17 | | | | 307.17 | |
| Outside Collections | 1470.36 | | | | 1470.36 | |
| General Clerical Salaries | 1209.05 | | | | 1209.05 | |
| General Office Expense | 1173.41 | | | | 1173.41 | |
| Executive Salaries | 8917.30 | | | | 8917.30 | |
| General Supervision - C.Gas | 0.00 | | | | 0.00 | |
| General Supervision - W.Gas | 3554.00 | | | | 3554.00 | |
| Promoting New Business | 19692.64 | | | | 19692.64 | |
| Total Salaries & Office | $46529.20 | $.1985 | $46529.20 | $.1985 | $46529.20 | $.1985 |
| Street Dep't. Expense | 2611.20 | | | | 2611.20 | |
| Meter Dep't. Expense | 1751.35 | | | | 1751.35 | |
| Gratuitous Work | 3264.13 | | | | 3264.13 | |
| Legal Expense | 7954.73 | | | | 7954.73 | |
| Incidental Expense | 4775.01 | | | | 4775.01 | |
| Rent Collection Office | 897.17 | | | | 897.17 | |
| Rent Executive Office | 1737.73 | | | | 1737.73 | |
| District Holder | 3424.47 | | | | 3424.47 | |
| Total Distribution & General | $26415.79 | $.1127 | $26415.79 | $.1127 | $26415.79 | $.1127 |
| Total Above Expense | $72944.99 | $.3112 | $72944.99 | $.3112 | $72944.99 | $.3112 |

** Exhibit No. 290

458 SECTION M.

(Here follow tables, marked pages 459-468.)

469 SECTION N.

(Here follow tables, marked pages 470-479.)

(As Per A. D. Adams' Arrangement of Accounts)

| Year | Total Repairs & Renewals As Per Gas Co. Records | Depreciation To Be Added As Per Report of H.I.Lea | Total Repairs, Renewals & Depreciation - Per Lea |
|---|---|---|---|
| 1905 | $ 9962.07 | | |
| 1906 | 11555.67 | | |
| 1907 | 12920.67 | $ 14955.00 | $ 27875.67 |
| 1908 | 8914.99 | 15588.00 | 24502.99 |
| 1909 | 9104.01 | 17780.00 | 26884.01 |
| 1910 | 10721.04 | 19111.00 | 29832.04 |
| 1911 | 14898.14 | 20183.00 | 35081.14 |
| 1912 | 11712.60 | 20865.03 | 32577.63 |

REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1903.

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 310 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ 210.46 | | | | | | | | $ 210.46 | |
| " " - W.GAS | 486.47 | | | | | | | | 486.47 | |
| Total Building Repairs | $ 696.93 | $.0071 | $ 696.93 | $.0071 | $ 688.36 | | $ 696.93 | | $ 696.93 | |
| Coal Gas Bench Repairs | | | | | 137.69 | | | | | |
| " " " Renewals | | | | | 395.73 | | | | | |
| Total Bench Repairs and Renewals | $ 701.68 | | | | $ 533.42 | | $ 701.68 | | $ 701.68 | |
| General App.Repairs - C.G. | $ 436.94 | | | | | | | | 436.94 | |
| Total C.G. Repairs and Renewals | $ 1138.62 | $.0116 | $ 1138.62 | $.0116 | | | | | | |
| W.G. Generation App.Repairs | $ 418.23 | | | | $ 418.23 | | $ 418.23 | | $ 418.23 | |
| General App.Repairs - W.G. | 868.42 | | | | | | | | 868.42 | |
| Total W.G.App.Repairs | $ 1286.65 | $.0130 | $ 1286.65 | $.0130 | | | | | $ 1286.65 | |
| Other Machinery | | | | | $ 1515.17 | | $ 1505.56 | | | |
| Street Main Maintenance | $ 471.92 | | | | $ 471.92 | | $ 471.92 | | $ 471.92 | |
| Service Maintenance | 293.00 | | | | 293.00 | | 293.00 | | 293.00 | |
| Meter Maintenance | 794.28 | | | | 732.22 | | 794.28 | | 794.28 | |
| Total Distribution Repairs and Renewals | $ 1559.20 | $.0159 | $ 1559.20 | $.0159 | $ 1497.14 | | $ 1559.20 | | $ 1559.20 | |
| Setting & Removing Meters | $ 1230.81 | $.0125 | $ 1230.81 | $.0125 | $ 1230.81 | | $ 1230.81 | | $ 1230.81 | |
| TOTALS | $ 5912.21 | $.0601 | $ 5912.21 | $.0601 | $ 5883.13 | | $ 5912.21 | $.0601 | $ 5912.21 | $.0601 |

REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1904

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lee | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 311 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ 183.27 | $ | $ | $ | $ | $ | $ | $ | $ 183.27 | $ |
| Building Repairs - W.Gas | 120.41 | | | | | | | | 120.41 | |
| Total Building Repairs | $ 303.68 | $.0026 | $ 303.68 | $.0026 | $ 311.81 | $ | $ 303.68 | $ | $ 303.68 | $ |
| Coal Gas Bench Repairs | | | | | $ 214.37 | | | | | |
| Coal Gas Bench Renewals | | | | | 600.00 | | | | | |
| Total Bench Repairs & Renewals | $ 970.72 | $ | $ | $ | $ 814.37 | $ | $ 970.72 | $ | $ 970.72 | $ |
| General App. Repairs - C.Gas | $ 1221.84 | $ | $ | $ | $ | $ | $ | $ | $1221.84 | $ |
| Total C.G. Repairs & Renewals | $ 2192.56 | $.0187 | $2192.56 | $.0187 | $ | $ | $ | $ | $ | $ |
| W.Gas Generation App. Repairs | $ 1113.69 | $ | $ | $ | $1113.69 | $ | $1113.69 | $ | $1113.69 | $ |
| General App. Repairs - W.Gas | 940.45 | | | | | | | | 940.45 | |
| Total W.Gas App. Repairs | $ 2054.14 | $.0175 | $2054.14 | $.0175 | $ | $ | $ | $ | $2054.14 | $ |
| Other Machinery | $ | $ | $ | $ | $2157.51 | $ | $2162.89 | $ | $ | $ |
| Street Main Maintenance | $ 515.04 | | | | $ 515.04 | | $ 515.04 | | $ 515.04 | |
| Service Maintenance | 450.36 | | | | 450.36 | | 450.36 | | 450.36 | |
| Meter Maintenance | 1208.93 | | | | 1208.93 | | 1208.93 | | 1208.93 | |
| Total Distrib. Repairs & Renewals | $ 2174.33 | $.0185 | $2174.33 | $.0185 | $2174.33 | $ | $2174.33 | $ | $2174.33 | |
| Setting & Removing Meters | $ 1819.97 | $.0155 | $1819.97 | $.0155 | $1819.97 | $ | $1819.97 | $ | $1819.97 | $ |
| TOTALS | $ 8544.68 | $.0726 | $8544.68 | $.0726 | $8391.48 | $ | $8544.68 | $.0726 | $8544.68 | $.0726 |

REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1905

| | As Shown By Gas Company Records | | Gas Company Records As Corrected by H. I. Lea | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 508 | | Exhibit No. 509 | | Exhibit No. 512 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ 141.04 | $ | $ | $ | $ | $ | $ | $ | $ 141.77 | $ |
| " " W.Gas | 127.82 | | | | | | | | 126.09 | |
| Total Building Repairs | $ 268.86 | $.0018 | $ 268.86 | $.0018 | $ 267.81 | $ | $ 267.86 | $ | $ 267.86 | $ |
| Coal Gas Bench Repairs | | | | | $ 111.90 | | | | | |
| " " Rebewals | | | | | 1130.00 | | | | | |
| Total Bench Repairs & Renewals | $1255.62 | $ | $ | $ | $1241.90 | $ | $1255.62 | $ | $1255.62 | $ |
| General App. Repairs - C.Gas | $ 937.76 | | | | | | | | $ 916.51 | $ |
| Total C.Gas Repairs & Renewals | $2193.38 | $.0153 | $2193.38 | $.0153 | $ | $ | $ | $ | $ | $ |
| W.Gas Generation App. Repairs | $1953.28 | | | | $1953.28 | | $1953.28 | | $1953.28 | |
| General W.Gas App. Repairs | 734.48 | | | | | | | | 755.93 | |
| Total W.Gas App. Repairs | $2687.76 | $.0187 | $2687.76 | $.0187 | $ | $ | $ | $ | $2709.21 | $ |
| Other Machinery | | | | | $1682.24 | | $1672.84 | | | |
| Street Main Maintenance | $ 949.45 | | | | $ 949.45 | | $ 949.45 | | $ 949.45 | |
| Service Maintenance | 1060.36 | | | | 1060.36 | | 1060.36 | | 1060.36 | |
| Meter Maintenance | 868.70 | | | | 868.70 | | 868.70 | | 868.70 | |
| Total Distrib. Repairs & Renewals | $2878.51 | $.0200 | $2878.51 | $.0200 | $2878.51 | $ | $2878.51 | $ | $2878.51 | $ |
| Setting and Removing Meters | $1933.56 | $.0135 | $1933.56 | $.0135 | $1933.56 | $ | $1933.56 | $ | $1933.56 | |
| TOTALS | $9962.07 | $.0693 | $9962.07 | $.0693 | $9957.30 | $ | $9961.07 | $.0693 | $9961.07 | $.0693 |

REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1906

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lee | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 315 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ 397.36 | $ | $ | $ | $ | $ | $ | $ | $ 397.36 | $ |
| Building Repairs - W.Gas | 327.11 | | | | | | | | 327.11 | |
| Total Building Repairs | $ 724.47 | $.0047 | $ 724.47 | $.0047 | $ 452.92 | $ | $ 724.47 | $ | $ 724.47 | $ |
| Coal Gas Bench Repairs | | | | | $ 126.39 | | | | | |
| Coal Gas Bench Renewals | | | | | 1850.00 | | | | | |
| Total Bench Repairs & Renewals | $1976.39 | $ | $ | $ | $1976.39 | $ | $1976.39 | $ | $1976.39 | $ |
| General App. Repairs - Coal Gas | $1125.61 | $ | $ | $ | $ | $ | $ | $ | $1125.61 | $ |
| Total C.Gas Repairs & Renewals | $3102.00 | $.0202 | $3102.00 | $.0202 | $ | $ | $ | $ | $ | $ |
| W.Gas Generation App. Repairs | $2312.47 | $ | | | $2059.31 | $ | $2312.47 | $ | $2312.47 | $ |
| General App. Repairs - W.Gas | 952.26 | | | | | | | | 952.26 | |
| Total W.Gas App. Repairs | $3264.73 | $.0212 | $3264.73 | $.0212 | $ | $ | $ | $ | $3264.73 | $ |
| Other Machinery | $ | $ | $ | $ | $1466.66 | $ | $2077.87 | $ | $ | $ |
| Street Main Maintenance | $ 638.00 | $ | $ | $ | $ 457.64 | $ | $ 638.00 | $ | $ 638.00 | $ |
| Service Maintenance | 396.60 | | | | 396.60 | | 396.60 | | 396.60 | |
| Meter Maintenance | 1037.36 | | | | 1037.36 | | 1037.36 | | 1037.36 | |
| Total Distrib. Repairs & Renewals | $2071.96 | $.0135 | $2071.96 | $.0135 | $2071.60 | $ | $2071.96 | $ | $2071.96 | $ |
| Setting and Removing Meters | $2392.51 | $.0156 | $2392.51 | $.0156 | $2392.51 | $ | $2392.51 | $ | $2392.51 | $ |
| TOTALS | $11555.67 | $.0752 | $11555.67 | $.0752 | $10419.39 | $ | $11555.67 | $.0752 | $11555.67 | $.0752 |

## REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1907

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 314 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ 812.40 | $ | $ | $ | $ | $ | $ | $ | $ 812.40 | $ |
| " " - W.Gas | 253.03 | | | | | | | | 253.03 | |
| Total Building Repairs | $ 1065.43 | $.0059 | $ 1065.43 | $.0059 | $ 899.93 | $ | $ 1065.43 | $ | $ 1065.43 | $ |
| Coal Gas Bench Repairs | $ | $ | $ | $ | $ 207.76 | $ | $ | $ | $ | $ |
| " " " Renewals | | | | | 5813.48 | | | | | |
| Total Bench Repairs & Renewals | $ 4022.24 | $ | $ | $ | $ 4021.24 | $ | $ 4022.24 | $ | $ 4022.24 | $ |
| General App. Repairs - C.Gas | $ 908.62 | $ | $ | $ | $ | $ | $ | $ | $ 908.62 | $ |
| Total C.Gas Repairs & Renewals | $ 4930.86 | $.0275 | $ 4930.86 | $.0275 | $ | $ | $ | $ | $ | $ |
| W.Gas Generation App. Repairs | $ 1045.53 | $ | $ | $ | $ 935.64 | $ | $ 1045.53 | $ | $ 1045.53 | $ |
| General App. Repairs - W.Gas | 996.16 | | | | | | | | 996.16 | |
| Total W.Gas App. Repairs | $ 2041.69 | $.0114 | $ 2041.69 | $.0114 | $ | $ | $ | $ | $ 2041.69 | $ |
| Other Machinery | $ | $ | $ | $ | $ 2022.18 | $ | $ 1904.78 | $ | $ | $ |
| Street Main Maintenance | $ 1147.29 | $ | $ | $ | $ 1146.66 | $ | $ 1147.28 | $ | $ 1147.28 | $ |
| Service Maintenance | 585.17 | | | | 585.91 | | 585.17 | | 585.17 | |
| Meter Maintenance | 1338.31 | | | | 1547.60 | | 1338.31 | | 1338.31 | |
| Total Distrib.Repairs & Renewals | $ 2870.76 | $.0160 | $ 2870.76 | $.0160 | $ 2877.17 | $ | $ 2870.76 | $ | $ 2870.76 | $ |
| Setting and Removing Meters | $ 2011.93 | $.0112 | $ 2011.93 | $.0112 | $ 2011.93 | $ | $ 2011.93 | $ | $ 2011.93 | $ |
| TOTALS | $12920.67 | $.0720 | $12920.67 | $.0720 | $12768.09 | $ | $12920.67 | $.0720 | $12920.67 | $.0720 |

## REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1908

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lee | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 315 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ 85.76 | $ | $ | $ | $ | $ | $ | $ | $ 85.76 | $ |
| " - W.Gas | 106.53 | | | | | | | | 106.53 | |
| Total Building Repairs | $ 192.29 | $.0010 | $ 192.29 | $.0010 | $ 188.70 | $ | $ 192.29 | $ | $ 192.29 | $ |
| Coal Gas Bench Repairs | $ | $ | $ | $ | $ 115.28 | $ | $ | $ | $ | $ |
| Coal Gas Bench Renewals | | | | | 2296.25 | | | | | |
| Total Bench Repairs & Renewals | $ 2425.77 | $ | $ | $ | $ 2411.53 | $ | $ 2425.77 | $ | $ 2425.77 | $ |
| General App. Repairs - C.Gas | $ 334.67 | $ | $ | $ | $ | $ | $ | $ | $ 334.67 | $ |
| Total C.G.Repairs & Renewals | $ 2759.44 | $.0141 | $ 2759.44 | $.0141 | $ | $ | $ | $ | $ | $ |
| W.Gas Generation App. Repairs | $ 1151.24 | $ | $ | $ | $ 1150.59 | $ | $ 1151.24 | $ | $ 1151.24 | $ |
| General App. Repairs - W.Gas | 669.01 | | | | | | | | 669.01 | |
| Total W.Gas App. Repairs | $ 1820.25 | $.0093 | $ 1820.25 | $.0093 | $ | $ | $ | $ | $ 1820.25 | $ |
| Other Machinery | $ | $ | $ | $ | $ 2660.49 | $ | $ 1003.68 | $ | $ - | $ |
| Street Main Maintenance | $ 795.75 | $ | $ | $ | $ 861.87 | $ | $ 795.75 | $ | $ 795.75 | $ |
| Service Maintenance | 293.52 | | | | 294.72 | | 293.52 | | 293.52 | |
| Meter Maintenance | 1725.02 | | | | 1902.72 | | 1725.02 | | 1725.02 | |
| Total Distrib.Repairs & Renewals | $ 2812.29 | $.0144 | $ 2812.29 | $.0144 | $ 3059.31 | $ | $ 2812.29 | $ | $ 2812.29 | $ |
| Setting and Removing Meters | $ 1330.72 | $.0068 | $ 1330.72 | $.0068 | $ 1330.72 | $ | $ 1330.72 | $ | $ 1330.72 | $ |
| TOTALS | $ 8914.99 | $.0456 | $ 8914.99 | $.0456 | $10781.34 | $ | $ 8915.99 | $.0456 | $ 8915.99 | $.0456 |

## REPAIRS AND RENEWALS

(As Per A. D. Adams Arrangement of Accounts)

FULL YEAR OF 1909

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By M. I. Lee | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 508 | | Exhibit No. 509 | | Exhibit No. 516 | |
| | Total Expense | Expense Per M. Cu. Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ 2.91 | $ | $ | $ | $ | $ | $ | $ | $ 2.91 | $ |
| " " - W.Gas | 140.84 | | | | | | | | 140.84 | |
| Total Building Repairs | $ 143.75 | $.0007 | $ 143.75 | $.0007 | $ 143.54 | $ | $ 143.75 | $ | $ 143.75 | $ |
| Coal Gas Bench Repairs | $ | $ | $ | $ | $ 37.21 | $ | $ | $ | $ | $ |
| " " " Renewals | | | | | 780.00 | | | | | |
| Total Bench Repairs and Renewals | $ 817.21 | $ | $ | $ | $ 817.21 | $ | $ 817.21 | $ | $ 817.21 | $ |
| General App. Repairs - C.Gas | $ 97.54 | $ | $ | $ | $ | $ | $ | $ | $ 97.54 | $ |
| Total C.Gas Repairs & Renewals | $ 914.75 | $.0045 | $ 914.75 | $.0045 | $ | $ | $ | $ | $ | $ |
| W.Gas Generation App. Repairs | $ 1487.94 | $ | $ | $ | $1486.49 | $ | $1487.94 | $ | $1487.94 | $ |
| General App. Repairs - W.Gas | 944.46 | | | | | | | | 944.46 | |
| Total W,Gas APP. Repairs | $ 2432.40 | $.0119 | $2432.40 | $.0119 | $ | $ | $ | $ | $2432.40 | $ |
| Other Machinery | $ | $ | $ | $ | $1041.92 | $ | $1042.00 | $ | $ | $ |
| Street Main Maintenance | $ 788.26 | $ | $ | $ | $ 788.26 | $ | $ 788.26 | $ | $ 788.26 | $ |
| Service Maintenance | 519.32 | | | | 546.66 | | 519.32 | | 519.32 | |
| Meter Maintenance | 2964.41 | | | | 2970.46 | | 2964.41 | | 2964.41 | |
| Total Distrib. Repairs & Renewals | $ 4271.99 | $.0209 | $4271.99 | $.0209 | $4505.38 | $ | $4271.99 | $ | $4271.99 | $ |
| Setting and Removing Meters | $ 1541.12 | $.0066 | $1541.12 | $.0066 | $1541.12 | $ | $1541.12 | $ | $1541.12 | $ |
| TOTALS | $ 9104.01 | $.0446 | $9104.01 | $.0446 | $9138.46 | $ | $9104.01 | $.0446 | $9104.01 | $.0446 |

REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1910

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lee | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 317 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| " " - W.Gas | 235.75 | | | | | | | | 235.75 | |
| Total Building Repairs | $ 235.75 | $.0011 | $ 235.75 | $.0011 | $ 962.05 | $ | $ 235.75 | $ | $ 235.75 | $ |
| Coal Gas Bench Repairs | | | | | | | | | | |
| Coal Gas Bench Renewals | | | | | | | | | | |
| Total Bench Repairs & Renewals | | | | | | | | | | |
| General App. Repairs - C.Gas | | | | | | | | | | |
| Total C.Gas Repairs & Renewals | | | | | | | | | | |
| W.Gas Generation App. Repairs | $ 809.53 | $ | $ | $ | $ 809.53 | $ | $ 809.53 | $ | $ 809.53 | $ |
| General App. Repairs - W.Gas | 1719.90 | | | | | | | | 1719.90 | |
| Total W.Gas App. Repairs | $ 2529.43 | $.0120 | $ 2529.43 | $.0120 | $ | $ | $ | $ | $ 2529.43 | $ |
| Other Machinery | $ | $ | $ | $ | $ 1719.90 | $ | $ 1719.90 | $ | $ | $ |
| Street Main Maintenance | $ 1727.15 | $ | $ | $ | $ 1743.77 | $ | $ 1727.15 | $ | $ 1727.15 | $ |
| Service Maintenance | 424.05 | | | | 446.98 | | 424.05 | | 424.05 | |
| Meter Maintenance | 3625.99 | | | | 3608.79 | | 3625.99 | | 3625.99 | |
| Total Distrib. Repairs & Renewals | $ 5777.19 | $.0275 | $ 5777.19 | $.0275 | $ 5799.54 | $ | $ 5777.19 | $ | $ 5777.19 | $ |
| Setting and Removing Meters | $ 2178.67 | $.0104 | $ 2178.67 | $.0104 | $ 2178.67 | $ | $ 2178.67 | $ | $ 2178.67 | $ |
| TOTALS | $10721.04 | $.0510 | $10721.04 | $.0510 | $10769.69 | $ | $10721.04 | $.0510 | $10721.04 | $.0510 |

## REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1911

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lee | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 318 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| " " - W.Gas | 819.22 | | | | | | | | 819.22 | |
| Total Building Repairs | $ 819.22 | $.0056 | $ 819.22 | $.0056 | $ 819.22 | $ | $ 819.22 | $ | $ 819.22 | $ |
| Coal Gas Bench Repairs | | | | | | | | | | |
| " " " Renewals | | | | | | | | | | |
| Total Bench Repairs & Renewals | | | | | | | | | | |
| General App. Repairs - C.Gas | | | | | | | | | | |
| Total C.Gas Repairs & Renewals | | | | | | | | | | |
| W.Gas Generation App. Repairs | $ 548.28 | $ | $ | $ | $ 548.28 | $ | $ 548.28 | $ | $ 548.28 | $ |
| General App. Repairs - W.Gas | $ 5000.46 | $ | $ | $ | $ | $ | $ | $ | $ 5000.46 | $ |
| Total W.Gas App. Repairs | $ 5548.74 | $.0244 | $ 5548.74 | $.0244 | $ | $ | $ | $ | $ 5548.74 | $ |
| Other Machinery | $ | $ | $ | $ | $ 5000.46 | $ | $ 5000.46 | $ | $ | $ |
| Street Main Maintenance | $ 909.75 | $ | $ | $ | $ 909.75 | $ | $ 909.75 | $ | $ 909.75 | $ |
| Service Maintenance | 566.74 | | | | 565.74 | | 566.74 | | 566.74 | |
| Meter Maintenance | 4180.20 | | | | 4250.66 | | 4180.20 | | 4180.20 | |
| Total Distrib. Repairs & Renewals | $ 5656.69 | $.0249 | $ 5656.69 | $.0249 | $ 5726.15 | $ | $ 5656.69 | $ | $ 5656.69 | $ |
| Setting and Removing Meters | $ 2873.49 | $.0126 | $ 2873.49 | $.0126 | $ 2873.49 | $ | $ 2873.49 | $ | $ 2873.49 | $ |
| TOTALS | $14898.14 | $.0655 | $14898.14 | $.0655 | $14967.60 | $ | $14898.14 | $.0656 | $14898.14 | $.0656 |

## REPAIRS AND RENEWALS

(As Per A. D. Adams' Arrangement of Accounts)

FULL YEAR OF 1912

| | As Shown By Gas Company Records | | Gas Company Records As Corrected by H. I. Lee | | As Shown By A. D. Adams | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Exhibit No. 308 | | Exhibit No. 309 | | Exhibit No. 319 | |
| | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold | Total Expense | Expense Per M. Cu.Ft. Sold |
| Building Repairs - C.Gas | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| " " - W.Gas | 237.55 | | | | | | | | 237.55 | |
| Total Building Repairs | $ 237.55 | $.0010 | $ 237.55 | $.0010 | $ 237.55 | $ | $ 237.55 | $ | $ 237.55 | $ |
| Coal Gas Bench Repairs | | | | | | | | | | |
| Coal Gas Bench Renewals | | | | | | | | | | |
| Total Bench Repairs & Renewals | | | | | | | | | | |
| General App. Repairs - C.Gas | | | | | | | | | | |
| Total C.Gas Repairs & Renewals | | | | | | | | | | |
| W.Gas Generation App. Repairs | $ 1438.53 | $ | $ | $ | $ 1438.73 | $ | $ 1438.53 | $ | $ 1438.53 | $ |
| General App. Repairs - W.Gas | 429.03 | | | | | | | | 429.03 | |
| Total W.Gas App. Repairs | $ 1867.56 | $.0080 | $ 1867.56 | $.0080 | $ | $ | $ | $ | $ 1867.56 | $ |
| Other Machinery | $ | $ | $ | $ | $ 429.03 | $ | $ 429.03 | $ | $ | $ |
| Street Main Maintenance | $ 1133.54 | $ | $ | $ | $ 1133.54 | $ | $ 1133.54 | $ | $ 1133.54 | $ |
| Service Maintenance | 1414.37 | | | | 1414.37 | | 1414.37 | | 1414.37 | |
| Meter Maintenance | 4207.10 | | | | 4233.88 | | 4207.10 | | 4207.10 | |
| Total Distrib. Repairs & Renewals | $ 6755.01 | $.0288 | $ 6755.01 | $.0288 | $ 6781.79 | $ | $ 6755.01 | $ | $ 6755.01 | |
| Setting and Removing Meters | $ 2852.48 | $.0122 | $ 2852.48 | $.0122 | $ 2852.48 | $ | $ 2852.48 | $ | $ 2852.48 | $ |
| TOTALS | $11712.60 | $.0500 | $11712.60 | $.0500 | $11739.58 | $ | $11712.60 | $.0500 | $11712.60 | $.0500 |

RELATION BETWEEN TOTAL SO-CALLED "LABOR & MATERIAL

AND TOTAL SO-CALLED "OVERHEAD" COSTS

| | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Net Wages, Salaries & Material in Manufacture, Distribution & Sale of Gas | | | | | | | | | | |
| | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| As Shown By Gas Co. Records | .6711 | .7325 | .6106 | .6699 | .6315 | .5573 | .5063 | .4932 | .4750 | .5321 |
| Gas Co.Records Corrected By H.I.Lea | | | | | 6315 | .5573 | .5063 | .4932 | .4876 | .5437 |
| As Shown in A.D.Adams' Arrangement of Costs. Exhibit No. 300 | | | .4133 | .4839 | .4473 | .4057 | .3597 | .3119 | .2770 | .3239 |
| Labor & Material in Repairs, Renewals and Depreciation | | | | | | | | | | |
| As Shown By Gas Co. Records | .0436 | .0554 | .0540 | .0543 | .0595 | .0379 | .0370 | .0397 | .0527 | .0370 |
| Gas Co.Records Corrected By H.I.Lea | | | | | .1429 | .1177 | .1240 | .1306 | .1414 | .1261 |
| As Shown in A.D.Adams' Arrangement of Costs. Exhibit No. 305 | | | .0693 | .0752 | .0720 | .0456 | .0446 | .0510 | .0656 | .0500 |
| Total Labor & Material As Above | | | | | | | | | | |
| | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| As Shown By Gas Co. Records | .7147 | .7879 | .6646 | .7242 | .6910 | .5952 | .5433 | .5329 | .5277 | .5691 |
| Gas Co.Records Corrected By H.I.Lea | | | | | .7744 | .6750 | .6303 | .6238 | .6290 | .6698 |
| As Shown in A.D.Adams' Arrangement of Costs | | | .4826 | .5591 | .5193 | .4513 | .3843 | .3629 | .3426 | .3739 |
| Supervision, Executive Salaries, Office Rent & Incidental Expense | | | | | | | | | | |
| As Shown By Gas Co. Records | .0703 | .0510 | .0498 | .0541 | .0487 | .0592 | .0679 | .0830 | .0863 | .0810 |
| Gas Co.Records Corrected By H.I.Lea | | | | | .0487 | .0592 | .0679 | .0830 | .0863 | .0810 |
| As Shown in A.D.Adams' Arrangement of Costs | | | | | | | | | | |
| Legal Expense | | | | | | | | | | |
| As Shown By Gas Co. Records | .0074 | .0071 | .0045 | .0050 | .0120 | .0092 | .0091 | .0281 | .0364 | .0339 |
| Gas Co.Records Corrected By H.I.Lea | | | | | .0120 | .0092 | .0091 | .0281 | .0364 | .0339 |
| As Shown in A.D.Adams' Arrangement of Costs | | | | | | | | | | |
| Taxes | | | | | | | | | | |
| As Shown By Gas Co. Records | .0371 | .0180 | .0147 | .0435 | .0395 | .0380 | .0391 | .0397 | .0466 | .0651 |
| Gas Co.Records Corrected By H.I.Lea | | | | | .0395 | .0380 | .0391 | .0397 | .0466 | .0651 |
| As Shown in A.D.Adams' Arrangement of Costs. Exhibit No. 305 | | | .0147 | .0435 | .0395 | .0380 | .0391 | .0397 | .0466 | .0651 |
| Total So-Called "Overhead" | | | | | | | | | | |
| | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| As Shown By Gas Co. Records | .1148 | .0761 | .0690 | .1026 | .1002 | .1064 | .1161 | .1508 | .1693 | .1800 |
| Gas Co.Records Corrected By H.I.Lea | | | | | .1002 | .1064 | .1161 | .1508 | .1693 | .1800 |
| As Shown in A.D.Adams' Arrangement of Costs. Exhibit No. 305 | | | .2457 | .2576 | .2453 | .2431 | .2684 | .3201 | .3532 | .3763 |
| Total Operating Expense | | | | | | | | | | |
| | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| As Shown By Gas Co. Records | .8295 | .8640 | .7336 | .8268 | .7912 | .7016 | .6594 | .6837 | .6970 | .7491 |
| Gas Co.Records Corrected By H.I.Lea | | | | | .8746 | .7814 | .7464 | .7746 | .7983 | .8498 |
| As Shown in A.D.Adams' Arrangement of Costs. Exhibit No. 305 | | | .7283 | .8167 | .7646 | .6944 | .6527 | .6830 | .6958 | .7502 |

THIS PAGE BOUND VERTICAL IN BOOK

480 SECTION O.

(Here follows table, marked page 481.)

482 SECTION P.

(Here follow tables, marked pages 483-492.)

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD".

FULL YEAR OF 1903

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 25493.08 | | | |
| Enricher | 0.00 | | | |
| Bench Fuel | 4792.32 | | | |
| Steam for Generating W. Gas | 2014.06 | | | |
| Water Gas Generator Fuel | 7701.97 | | | |
| Water Gas Enricher | 19394.58 | | | |
| Gross Cost Gas Making Material | $ 59396.01 | | | |
| * Coke Residual | 12981.59 | | | |
| Coal Gas Tar Residual | 1986.28 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 828.11 | | | |
| Total Residuals | $ 15795.98 | | | |
| Net Cost of Gas Making Material | 43600.03 | | | |
| Retort House Labor | 2048.36 | | | |
| Retort House Expense | 85.57 | | | |
| Steam - Coal Gas | 345.28 | | | |
| Purifying C.Gas Labor Exp. & Rep. | 31.29 | | | |
| Purifying Material - Coal Gas | 163.75 | | | |
| Sundry Labor - Coal Gas | 525.76 | | | |
| Works Expense & Supplies - Coal Gas | 280.92 | | | |
| Gas Making Labor - Watbr Gas | 1276.98 | | | |
| Water Gas Gen. House Expense | 62.11 | | | |
| Steam - Water Gas | 679.88 | | | |
| Purifying W.Gas Labor Exp. & Rep. | 51.55 | | | |
| Purifying W.Gas Material | 136.25 | | | |
| Sundry Labor - Water Gas | 921.54 | | | |
| Works Expense & Supplies - Water Gas | 546.19 | | | |
| District Holder Station | 0.00 | | | |
| Street Department Expense | 691.14 | | | |
| Meter Department Expense | 541.00 | | | |
| Setting and Removing Meters | 1230.81 | | | |
| Gratuitous Work | 1219.43 | | | |
| Reading Meters | 524.29 | | | |
| Collection Clerical Salaries | 2479.77 | | | |
| Collection Office Expense | 639.80 | | | |
| Rent of Collection Office | 455.33 | | | |
| Delivering Bills | 125.29 | | | |
| Outside Collections | 373.28 | | | |
| General Clerical Salaries | 895.35 | | | |
| General Office Expense | 489.02 | | | |
| Promoting New Business | 5578.97 | | | |
| Total Net Labor & Material As Above | $ 65998.94 | $.6711 | | |
| Bench Repairs | 701.88 | | | |
| Building Repairs - Coal Gas | 210.46 | | | |
| General Apparatus Repairs - Coal Gas | 456.94 | | | |
| Repairs Water Gas Generating Apparatus | 418.23 | | | |
| Building Repairs - Water Gas | 486.47 | | | |
| General Apparatus Repairs - Water Gas | 869.42 | | | |
| Street Main Maintenance | 471.92 | | | |
| Service Maintenance | 293.00 | | | |
| Meter Maintenance | 794.28 | | | |
| Adjustment a/c Gas Used and Stock | R 393.75 | | | |
| Added for Depreciation as Such | 0.00 | | | |
| Total Repairs and Renewals | $ 4287.65 | $.0436 | | |
| Total Wages, Salaries & Material As Above | $ 70286.59 | $.7147 | | |
| General Supervision - Coal Gas | 359.70 | | | |
| General Supervision - Water Gas | 687.57 | | | |
| Executive Salaries | 3470.88 | | | |
| Incidental Expense | 2091.05 | | | |
| Rent of Executive Office | 307.67 | | | |
| Total Above "Overhead" | $ 6916.87 | $.0703 | | |
| Legal Expense | 727.48 | .0074 | | |
| Taxes | 3651.85 | .0371 | | |
| Total So-Called "Overhead" | $ 11296.20 | $.1148 | | |
| Total Operating Expenses | $ 81582.79 | $.8295 | | |

* This includes $238.95 for Carbon

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD".

FULL YEAR OF 1904

| | As Shown By Gas Co. Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 84016.99 | | | |
| Enricher | 0.00 | | | |
| Bench Fuel | 3715.27 | | | |
| Steam for Generating Water Gas | 2250.32 | | | |
| WaterGas Generator Fuel | 9586.03 | | | |
| Water Gas Enricher | 23974.58 | | | |
| Gross Cost Gas Making Material | $ 64421.19 | | | |
| Coke Residual | 12151.09 | | | |
| Coal Gas Tar Residual | 1541.97 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 567.51 | | | |
| Total Residuals | $ 14260.57 | | | |
| Net Cost of Gas Making Material | 50160.62 | | | |
| Retort House Labor | 2650.58 | | | |
| Retort House Expense | 216.81 | | | |
| Steam - Coal Gas | 728.30 | | | |
| Purifying C.Gas Labor Exp. & Rep. | 96.01 | | | |
| Purifying Material - Coal Gas | 91.00 | | | |
| Sundry Labor - Coal Gas | 517.02 | | | |
| Works Exp. & Supplies - C.Gas | 397.68 | | | |
| Gas Making Labor - Water Gas | 1703.59 | | | |
| Water Gas Gen. House Expense | 20.58 | | | |
| Steam - Water Gas | 748.82 | | | |
| Purifying W.Gas Labor Exp. & Rep. | 88.90 | | | |
| Purifying W.Gas Material | 209.00 | | | |
| Sundry Labor - Water Gas | 801.16 | | | |
| Works Exp. & Supplies - W.Gas | 858.27 | | | |
| District Holder Station | 0.00 | | | |
| Street Dep't. Expense | 496.84 | | | |
| Meter Dep't. Expense | 354.25 | | | |
| Setting & Removing Meters | 1819.97 | | | |
| Gratuitous Work | 1379.45 | | | |
| Reading Meters | 563.58 | | | |
| Collection Clerical Salaries | 2850.57 | | | |
| Collection Office Expense | 557.20 | | | |
| Rent of Collection Office | 520.43 | | | |
| Delivering Bills | 113.18 | | | |
| Outside Collections | 500.74 | | | |
| General Clerical Salaries | 626.25 | | | |
| General Office Expense | 450.56 | | | |
| Promoting New Business | 16400.65 | | | |
| Total Net Labor & Material As Above | $ 86021.91 | $.7335 | | |
| Bench Repairs | 970.72 | | | |
| Building Repairs Coal Gas | 183.27 | | | |
| General App. Repairs - Coal Gas | 1221.84 | | | |
| Repairs - W.Gas Generating App. | 1113.69 | | | |
| Building Repairs - Water Gas | 120.41 | | | |
| General Apparatus Repairs - W.Gas | 940.45 | | | |
| Street Main Maintenance | 515.04 | | | |
| Service Maintenance | 450.36 | | | |
| Meter Maintenance | 1208.93 | | | |
| Adjustment a/c Gas Used and Stock | R 212.70 | | | |
| Added For Depreciation as Such | 0.00 | | | |
| Total Repairs and Renewals | $ 6512.01 | $.0554 | | |
| Total Wages Salaries & Mat'l. As Above | $ 92533.92 | $.7879 | | |
| General Supervision - Coal Gas | $ 625.88 | | | |
| General Supervision - Water Gas | 1306.36 | | | |
| Executive Salaries | 2090.88 | | | |
| Incidental Expense | 1596.86 | | | |
| Rent of Executive Office | 387.98 | | | |
| Total Above "Overhead" | $ 5995.66 | $.0510 | | |
| Legal Expense | $ 851.85 | $.0071 | | |
| Taxes | 2112.00 | .0180 | | |
| Total So-Called "Overhead" | $ 8938.93 | $.0761 | | |
| Total Operating Expenses | $101472.85 | $.8640 | | |

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD".

FULL YEAR OF 1905

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 31091.85 | | | |
| Enricher | 171.53 | | | |
| Bench Fuel | 3499.31 | | | |
| Steam for Generating Water Gas | 3794.56 | | | |
| Water Gas Generator Fuel | 12663.95 | | | |
| Water Gas Enricher | 17455.65 | | | |
| Gross Cost Gas Making Material | $ 68676.85 | | | |
| Coke Residual | $ 18518.53 | | | |
| Coal Gas Tar Residual | 2221.65 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 214.97 | | | |
| Total Residuals | $ 20953.15 | | | |
| Net Cost of Gas Making Material | $ 47723.70 | | | |
| Retort House Labor | 3113.26 | | | |
| Retort House Expense | 331.46 | | | |
| Steam - Coal Gas | 1500.00 | | | |
| Purifying C.Gas, Labor,Exp. & Rep. | 160.94 | | | |
| Purifying Material - Coal Gas | 90.00 | | | |
| Sundry Labor - Coal Gas | 838.56 | | | |
| Works Expense & Supplies - Coal Gas | 874.68 | | | |
| Gas Making Labor - Water Gas | 2147.24 | | | |
| Water Gas Gen. House Expense | 39.99 | | | |
| Steam - Water Gas | 480.00 | | | |
| Purifying W.Gas Labor,Exp. & Rep. | 157.68 | | | |
| " " Material | 210.00 | | | |
| Sundry Labor - Water Gas | 1271.42 | | | |
| Works Expense & Supplies - Water Gas | 1485.60 | | | |
| District Holder Station | 0.00 | | | |
| Street Dep't.Expense | 716.51 | | | |
| Meter Dep't. Expense | 404.20 | | | |
| Setting and Removing Meters | 1933.56 | | | |
| Gratuitous Work | 1820.32 | | | |
| Reading Meters | 699.38 | | | |
| Collection Clerical Salaries | 5153.27 | | | |
| Collection Office Expense | 677.01 | | | |
| Rent of Collection Office | 554.08 | | | |
| Delivering Bills | 155.82 | | | |
| Outside Collections | 461.54 | | | |
| General Clerical Salaries | 484.00 | | | |
| General Office Expense | 337.32 | | | |
| Promoting New Business | 15919.73 | | | |
| Total Net Labor & Mat'l. As Above | $ 87739.27 | $.6108 | | |
| Bench Repairs | $ 1255.82 | | | |
| Building Repairs - Coal Gas | 141.04 | | | |
| General App.Repairs - Coal Gas | 937.76 | | | |
| Repairs W.Gas Generating App. | 1953.28 | | | |
| Building Repairs - W.Gas | 127.82 | | | |
| General App.Repairs - W.Gas | 734.48 | | | |
| Street Main Maintenance | 949.45 | | | |
| Service Maintenance | 1060.36 | | | |
| Meter Maintenance | 868.70 | | | |
| Adjustment a/c Gas Used and Stock | R 263.81 | | | |
| Added For Depreciation as such | 0.00 | | | |
| Total Repairs and Renewals | $ 7764.70 | $.0540 | | |
| Total Wages,Salaries & Mat'l.As Above | $ 95503.97 | $.6646 | | |
| General Supervision - Coal Gas | $ 970.88 | | | |
| General Supervision - Water Gas | 1757.44 | | | |
| Executive Salaries | 2446.68 | | | |
| Incidental Expense | 1621.85 | | | |
| Rent of Executive Offices | 356.48 | | | |
| Total Above Overhead | $ 7153.11 | $.0498 | | |
| Legal Expense | $ 652.87 | $.0045 | | |
| Taxes | 2112.00 | $.0147 | | |
| Total So-Called "Overhead" | $ 9917.98 | $.0690 | | |
| Total Operating Expenses | $105421.95 | $.7336 | | |

NOTE: It is impossible to show Adams' figures in parallel here throughout because his report does not show the details entering into, for instance, his assumed unit cost for "Salaries, Office, Distribution & General Expense."

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD".

FULL YEAR OF 1908

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense per M. Sold |
| Coal Carbonized | $ 43033.89 | | | |
| Enricher | 250.74 | | | |
| Bench Fuel | 5095.92 | | | |
| Steam for Generating Water Gas | 4107.16 | | | |
| Water Gas Generator Fuel | 13965.51 | | | |
| Water Gas Enricher | 17584.74 | | | |
| Gross Cost Gas Making Material | $ 84037.96 | | | |
| Coke Residual | $ 22504.15 | | | |
| Coal Gas Tar Residual | 1379.77 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 0.00 | | | |
| Total Residuals | $ 23883.92 | | | |
| Net Cost of Gas Making Material | $ 60154.04 | | | |
| Retort HouseLabor | 4790.97 | | | |
| Retort House Expense | 269.12 | | | |
| Steam - Coal Gas | 1500.00 | | | |
| Purifying C.Gas Labor Exp. & Rep. | 460.92 | | | |
| Purifying Material - Coal Gas | 279.11 | | | |
| Sundry Labor - Coal Gas | 1165.90 | | | |
| Works Expense & Supplies - Coal Gas | 824.32 | | | |
| Gas Making Labor - Water Gas | 2919.50 | | | |
| Water Gas Gen.House Expense | 75.79 | | | |
| Steam - Water Gas | 480.00 | | | |
| Purifying W.Gas Labor Exp. & Rep. | 621.24 | | | |
| Purifying Material - Water Gas | 226.50 | | | |
| Sundry Labor - Water Gas | 1494.95 | | | |
| Works Expense & Supplies - Water Gas | 1453.89 | | | |
| District Holder Station | 0.00 | | | |
| Street Dept. Expense | 608.38 | | | |
| Meter Dept. Expense | 553.11 | | | |
| Setting and Removing Meters | 2592.51 | | | |
| Gratuitous Work | 1906.52 | | | |
| Reading Meters | 980.55 | | | |
| Collection Clerical Salaries | 3674.97 | | | |
| Collection Office Expense | 702.68 | | | |
| Rent Collection Office | 557.51 | | | |
| Delivering Bills | 141.57 | | | |
| Outside Collections | 659.73 | | | |
| General Clerical Salaries | 493.62 | | | |
| General Office Expense | 340.30 | | | |
| Promoting New Business | 13432.41 | | | |
| Total Net Labor & Material As Above | $102935.71 | $.6699 | | |
| Bench Repairs | $ 1978.39 | | | |
| Building Repairs - Coal Gas | 397.56 | | | |
| General App. Repairs - Coal Gas | 1125.61 | | | |
| Repairs W.Gas Generating App. | 2312.47 | | | |
| Building Repairs - W.Gas | 327.11 | | | |
| General App. Rep. W.Gas | 952.26 | | | |
| Street Main Maintenance | 638.00 | | | |
| Service Maintenance | 396.60 | | | |
| Meter Maintenance | 1037.36 | | | |
| Adjustment a/c Gas Used and Stock | R 818.15 | | | |
| Added for Depreciation as Such | 0.00 | | | |
| Total Repairs and Renewals | $ 8545.01 | $.0543 | | |
| Total Wages,Salaries & Mat'l.As Above | $111280.72 | $.7242 | | |
| General Supervision C.Gas | $ 1034.78 | | | |
| General Supervision W.Gas | 1857.98 | | | |
| Executive Salaries | 2804.70 | | | |
| Incidental Expense | 2137.77 | | | |
| Rent Executive Office | 485.58 | | | |
| Total Above Overhead | $ 8320.81 | $.0541 | | |
| Legal Expense | $ 757.43 | $.0050 | | |
| Taxes | 6690.48 | .0435 | | |
| Total So-Called "Overhead" | $ 15768.32 | $.1026 | | |
| Total Operating Expenses | $127094.24 | $.8268 | | |

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD"

FULL YEAR OF 1907

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. F. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 42844.46 | | | |
| Enricher | 178.41 | | | |
| Bench Fuel | 5347.42 | | | |
| Steam for Generating Water Gas | 4185.74 | | | |
| Water Gas Generator Fuel | 14491.19 | | | |
| Water Gas Enricher | 20623.74 | | | |
| Gross Cost Gas Making Material | $ 87868.96 | $. | $ 87868.96 | |
| Coke Residual | 20537.73 | | | |
| Coal Gas Tar Residual | 1248.26 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 916.14 | | | |
| Total Residuals | $ 22702.13 | $. | $ 22702.13 | |
| Net Cost of Gas Making Material | $ 64966.83 | | | |
| Retort House Labor | 5708.18 | | | |
| Retort House Expense | 201.54 | | | |
| Steam - Coal Gas | 1649.97 | | | |
| Purifying C.Gas Labor Exp, & Rep. | 386.68 | | | |
| Purifying Material - Coal Gas | 389.13 | | | |
| Sundry Labor - Coal Gas | 1303.51 | | | |
| Works Exp. & Supplies, Coal Gas | 878.50 | | | |
| Gas Making Labor - Water Gas | 3737.66 | | | |
| Water Gas Gen. House Expense | 24.05 | | | |
| Steam - Water Gas | 880.78 | | | |
| Purifying W.Gas Labor Exp. & Rep. | 799.10 | | | |
| Purifying W.Gas Material | 392.04 | | | |
| Sundry Labor - Water Gas | 2266.18 | | | |
| Works Expense & Supplies - Water Gas | 1662.97 | | | |
| District Holder Station | 0.00 | | | |
| Street Dep't. Expense | 797.48 | | | |
| Meter Dep't. Expense | 458.60 | | | |
| Setting and Removing Meters | 2011.93 | | | |
| Gratuitous Work | 1891.53 | | | |
| Reading Meters | 952.10 | | | |
| Collection Clerical Salaries | 5355.20 | | | |
| Collection Office Expense | 770.14 | | | |
| Rent Collection Office | 634.42 | | | |
| Delivering Bills | 176.26 | | | |
| Outside Collections | 709.63 | | | |
| General Clerical Salaries | 394.80 | | | |
| General Office Expense | 478.25 | | | |
| Promoting New Business | 13324.04 | | | |
| Total Net Cost Labor & Mat'l.As Above | $113271.48 | $.6315 | $113271.48 | $.6315 |
| Bench Repairs | $ 4022.24 | | $ 4022.24 | |
| Building Repairs - Coal Gas | 812.40 | | 812.40 | |
| General App. Repairs - Coal Gas | 908.62 | | 908.62 | |
| Repairs W.Gas Generating App. | 1045.53 | | 1045.53 | |
| Building Repairs - Water Gas | 253.03 | | 253.03 | |
| General App. Repairs - W.Gas | 996.16 | | 996.16 | |
| Street Main Maintenance | 1147.28 | | 1147.28 | |
| Service Maintenance | 385.17 | | 385.17 | |
| Meter Maintenance | 1338.31 | | 1338.31 | |
| Adjustment a/c Gas Used and Stock | R 241.33 | | R 241.33 | |
| Added for Depreciation as Such | 0.00 | | 14955.00 | |
| Total Repairs and Renewals | $ 10667.41 | $.0595 | $ 25622.41 | $.1429 |
| Total Wages,Salaries & Mat'l.As Above | $123938.89 | $.6910 | $138893.89 | $.7744 |
| General Supervision - Coal Gas | $ 1052.87 | | | |
| General Supervision - Water Gas | 2084.52 | | | |
| Executive Salaries | 3215.52 | | | |
| Incidental Expense | 1723.38 | | | |
| Rent of Executive Office | 664.04 | | | |
| Total Above "Overhead" | $ 8740.13 | $.0487 | $ 8740.13 | $.0487 |
| Legal Expense | $ 2160.31 | $.0120 | $ 2160.31 | $.0120 |
| Taxes | 7085.04 | .0395 | 7085.04 | .0395 |
| Total So-Called "Overhead" | $ 17985.48 | $.1002 | $ 17985.48 | $.1002 |
| Total Operating Expenses | $141924.37 | $.7912 | $156879.37 | $.8746 |

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD"

FULL YEAR OF 1908

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 32437.01 | | | |
| Enricher | 0.00 | | | |
| Bench Fuel | 3479.84 | | | |
| Steam for Generating Water Gas | 3577.33 | | | |
| Water Gas Generator Fuel | 16742.07 | | | |
| Water Gas Enricher | 22713.06 | | | |
| Gross Cost Gas Making Material | $ 78949.31 | | $ 78949.31 | - |
| Coke Residual | $ 16347.89 | | | |
| Coal Gas Tar Residual | 988.36 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 1938.12 | | | |
| Total Residuals | $ 19274.17 | | $ 19274.17 | |
| Net Cost Gas Making Material | $ 59675.14 | | | |
| Retort House Labor | 5167.13 | | | |
| Retort House Expense | 195.39 | | | |
| Steam - Coal Gas | 1456.76 | | | |
| Purifying Coal Gas Labor Exp. & Rep. | 210.87 | | | |
| Purifying Material - Coal Gas | 200.47 | | | |
| Sundry Labor - Coal Gas | 806.71 | | | |
| Works Expense and Supplies Coal Gas | 746.37 | | | |
| Gas Making Labor - Water Gas | 4603.71 | | | |
| Water Gas Gen. House Expense | 107.74 | | | |
| Steam - Water Gas | 2421.07 | | | |
| Purifying Water Gas Labor Exp. & Rep. | 574.26 | | | |
| Purifying Water Gas Material | 503.34 | | | |
| Sundry Labor - Water Gas | 2079.02 | | | |
| Works Expense & Supplies - Water Gas | 2109.35 | | | |
| District Holder Station | 0.00 | | | |
| Street Dep't. Expense | 1410.59 | | | |
| Meter Dep't. Expense | 1165.72 | | | |
| Setting and Removing Meters | 1330.72 | | | |
| Gratuitous Work | 1376.36 | | | |
| Reading Meters | 914.30 | | | |
| Collection Clerical Salaries | 6315.51 | | | |
| Collection Office Expense | 966.96 | | | |
| Rent Collection Office | 660.96 | | | |
| Delivering Bills | 218.86 | | | |
| Outside Collections | 856.52 | | | |
| General Clerical Salaries | 513.00 | | | |
| General Office Expense | 663.38 | | | |
| Promoting New Business | 11634.96 | | | |
| Total Net Labor & Material As Above | $108885.17 | $.5573 | $108885.17 | $.5573 |
| Bench Repairs | $ 2425.77 | | $ 2425.77 | |
| Building Repairs - Coal Gas | 85.76 | | 85.76 | |
| General App. Repairs - Coal Gas | 334.67 | | 334.67 | |
| Repairs W.Gas Generating App. | 1151.24 | | 1151.24 | |
| Building Repairs - Water Gas | 106.53 | | 106.53 | |
| General App. Repairs - Water Gas | 669.01 | | 669.01 | |
| Street Main Maintenance | 795.75 | | 795.75 | |
| Service Maintenance | 293.52 | | 293.52 | |
| Meter Maintenance | 1725.02 | | 1725.02 | |
| Adjustment a/c Gas Used & Stock | R 178.66 | | R 178.66 | |
| Added for Depreciation as Such | 0.00 | | 15588.00 | |
| Total Repairs and Renewals | $ 7406.61 | $.0379 | $22994.61 | $.1177 |
| Total Wages, Salaries & Mat'l. As Above | $116291.78 | $.5952 | $131879.78 | $.6750 |
| General Supervision - Coal Gas | $ 800.99 | | | |
| General Supervision - Water Gas | 2366.13 | | | |
| Executive Salaries | 5001.41 | | | |
| Incidental Expense | 2679.81 | | | |
| Rent Executive Office | 724.94 | | | |
| Total Above "Overhead" | $ 11573.28 | $.0592 | $ 11573.28 | $.0592 |
| Legal Expense | $ 1796.33 | $.0092 | $ 1796.33 | $.0092 |
| Taxes | 7428.96 | .0380 | 7428.96 | .0380 |
| Total So-Called "Overhead" | $ 20798.57 | $.1064 | $ 20798.57 | $.1064 |
| Total Operating Expenses | $137090.35 | $.7016 | $152678.35 | $.7814 |

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD".

FULL YEAR OF 1909

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 11264.75 | | | |
| Enricher | 0.00 | | | |
| Bench Fuel | 1109.50 | | | |
| Steam for Generating Water Gas | 2245.00 | | | |
| Water Gas Generator Fuel | 36665.24 | | | |
| Water Gas Enricher | 22186.12 | | | |
| Gross Cost Gas Making Material | $ 63470.41 | | $ 63470.41 | |
| Coke Residual | $ 6594.44 | | | |
| Coal Gas Tar Residual | 395.08 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 2599.66 | | | |
| Total Residuals | $ 9589.18 | | $ 9589.18 | |
| Net Cost of Gas Making Material | $ 54081.23 | | | |
| Retort House Labor | 1475.44 | | | |
| Retort House Expense | 63.68 | | | |
| Steam - Coal Gas | 365.36 | | | |
| Purifying C.Gas Labor Exp. & Repairs | 155.85 | | | |
| Purifying Material - Coal Gas | 50.00 | | | |
| Sundry Labor - Coal Gas | 255.55 | | | |
| Works Expense & Supplies - Coal Gas | 278.55 | | | |
| Gas Making Labor - Water Gas | 4082.41 | | | |
| Water Gas Gen. House Expense | 155.37 | | | |
| Steam - Water Gas | 4509.04 | | | |
| Purifying Water Gas Labor Exp. & Rep. | 375.86 | | | |
| Purifying Water Gas Material | 550.00 | | | |
| Sundry Labor - Water Gas | 2456.75 | | | |
| Works Exp. & Supplies - Water Gas | 2157.76 | | | |
| District Holder Station | 0.00 | | | |
| Street Dep't. Expense | 1571.98 | | | |
| Meter Dep't. Expense | 1294.05 | | | |
| Setting & Removing Meters | 1341.12 | | | |
| Gratuitous Work | 2299.17 | | | |
| Reading Meters | 1044.84 | | | |
| Collection Clerical Salaries | 5495.54 | | | |
| Collection Office Expense | 1590.45 | | | |
| Rent of Collection Office | 747.30 | | | |
| Delivering Bills | 216.27 | | | |
| Outside Collections | 1010.67 | | | |
| General Clerical Salaries | 748.00 | | | |
| General Office Expense | 978.43 | | | |
| Promoting New Business | 14019.36 | | | |
| Total Net Labor & Material As Above | $103447.81 | $.5065 | $103447.81 | $.5065 |
| Bench Repairs | $ 817.21 | | $ 817.21 | |
| Building Repairs - Coal Gas | 8.91 | | 8.91 | |
| General App. Repairs - Coal Gas | 97.54 | | 97.54 | |
| Repairs W.Gas Generating App. | 1487.94 | | 1487.94 | |
| Building Repairs - Water Gas | 140.84 | | 140.84 | |
| General App. Repairs - Water Gas | 944.46 | | 944.46 | |
| Street Main Maintenance | 788.26 | | 788.26 | |
| Service Maintenance | 519.32 | | 519.32 | |
| Meter Maintenance | 2964.41 | | 2964.41 | |
| Adjustment a/c Gas Used & Stock | R 209.70 | | R 209.70 | |
| Added for Depreciation as Such | 0.00 | | 17780.00 | |
| Total Repairs and Renewals | $ 7565.19 | $.0370 | $26353.19 | $.1840 |
| Total Wages, Salaries & Mat'l. As Above | $111001.00 | $.5435 | $128781.00 | $.6305 |
| General Supervision Coal Gas | $ 254.84 | | | |
| General Supervision Water Gas | 2698.21 | | | |
| Executive Salaries | 6115.06 | | | |
| Incidental Expense | 3715.44 | | | |
| Rent Executive Office | 1101.12 | | | |
| Total Above "Overhead" | $ 13868.47 | $.0679 | $ 13868.47 | $.0679 |
| Legal Expense | $ 1858.53 | $.0091 | $ 1858.53 | $.0091 |
| Taxes | 7986.24 | .0391 | 7986.24 | .0391 |
| Total So-Called "Overhead" | $ 23707.24 | $.1161 | $ 23707.24 | $.1161 |
| Total Operating Expenses | $134708.24 | $.6594 | $152488.24 | $.7464 |

* This includes $300.00 flood expense.

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD".

FULL YEAR OF 1910

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 0.00 | | | |
| Enricher | 0.00 | | | |
| Bench Fuel | 0.00 | | | |
| Steam for Generating Water Gas | 5020.00 | | | |
| Water Gas Generator Fuel | 26281.76 | | | |
| Water Gas Enricher | 22960.89 | | | |
| Gross Cost Gas Making Material | $ 52262.65 | | $ 52262.65 | |
| Coke Residual | $ 0.00 | | | |
| Coal Gas Tar Residual | 0.00 | | | |
| Ammonia Residual | 0.00 | | | |
| Water Gas Tar Residual | 2727.71 | | | |
| Total Residuals | $ 2727.71 | | $ 2727.71 | |
| Net Cost Gas Making Material | $ 49534.94 | | | |
| Retort House Labor | 0.00 | | | |
| Retort House Expense | 0.00 | | | |
| Steam - Coal Gas | 0.00 | | | |
| Purifying C.Gas Labor Exp. & Rep. | 0.00 | | | |
| Purifying Material - Coal Gas | 0.00 | | | |
| Sundry Labor - Coal Gas | 0.00 | | | |
| Works Expense & Supplies - Coal Gas | 0.00 | | | |
| Gas Making Labor - Water Gas | 3956.04 | | | |
| Water Gas Gen. House Expense | 111.67 | | | |
| Steam - Water Gas | 4514.47 | | | |
| Purifying W.Gas Labor Exp. & Rep. | 412.82 | | | |
| Purifying W.Gas Material | 575.00 | | | |
| Sundry Labor - Water Gas | 3350.66 | | | |
| Works Exp. & Supplies - Water Gas | 3392.80 | | | |
| District Holder Station | 25.29 | | | |
| Street Dep't. Expense | 2042.21 | | | |
| Meter Dep't. Expense | 1551.43 | | | |
| Setting and Removing Meters | 2178.67 | | | |
| Gratuitous Work | 2658.62 | | | |
| Reading Meters | 1241.08 | | | |
| Collection Clerical Salaries | 5771.39 | | | |
| Collection Office Expense | 1770.41 | | | |
| Rent Collection Office | 774.56 | | | |
| Delivering Bills | 268.41 | | | |
| Outside Collections | 1588.64 | | | |
| General Clerical Salaries | 804.40 | | | |
| General Office Expense | 970.10 | | | |
| Promoting New Business | 16152.75 | | | |
| Total Net Labor & Material As Above | $ 103646.36 | $.4932 | $ 103646.36 | $.4932 |
| Bench Repairs | $ 0.00 | | $ 0.00 | |
| Building Repairs Coal Gas | 0.00 | | 0.00 | |
| General App. Repairs - Coal Gas | 0.00 | | 0.00 | |
| Repairs W.Gas Generating App. | 809.53 | | 809.53 | |
| Building Repairs - Water Gas | 235.75 | | 235.75 | |
| General App. Repairs - Water Gas | 1719.90 | | 1719.90 | |
| Street Main Maintenance | 1727.15 | | 1727.15 | |
| Service Maintenance | 424.05 | | 424.05 | |
| Meter Maintenance | 3625.99 | | 3625.99 | |
| Adjustment a/c Gas Used and Stock | R 194.67 | | R 194.67 | |
| Added for Depreciation as Such | 0.00 | | 19111.00 | |
| Total Repairs and Renewals | $ 8347.70 | $.0397 | $ 27458.70 | $.1306 |
| Total Wages, Salaries & Mat'l. As Above | $ 111994.06 | $.5329 | $131105.06 | $.6238 |
| General Supervision - Coal Gas | $ 0.00 | | | |
| General Supervision - Water Gas | 3260.41 | | | |
| Executive Salaries | 9806.51 | | | |
| Incidental Expense | 2875.32 | | | |
| Rent Executive Office | 1484.45 | | | |
| Total Above "Overhead" | $ 17429.49 | $.0830 | $ 17429.49 | $.0830 |
| Legal Expense | $ 5911.70 | $.0281 | $ 5911.70 | $.0281 |
| Taxes | 8335.20 | .0397 | 8335.20 | .0397 |
| Total So-Called "Overhead" | $ 31676.39 | $.1508 | $ 31676.39 | $.1508 |
| Total Operating Expenses | $ 143670.45 | $.6837 | $162781.45 | $.7746 |

* This includes $300.00 flood expense.

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD"

FULL YEAR OF 1911

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lee | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 0.00 | | | |
| Enricher | 0.00 | | | |
| Bench Fuel | 0.00 | | | |
| Steam for Generating Water Gas | 4297.75 | | | |
| Water Gas Generator Fuel | 25975.62 | | | |
| Water Gas Enricher | 22336.86 | | | |
| Gross Cost Gas Making Material | $ 52607.85 | | $ 52607.85 | |
| Coke Residual | $ 0.00 | | $ 0.00 | |
| Coal Gas Tar Residual | 0.00 | | 0.00 | |
| Ammonia Residual | 0.00 | | 0.00 | |
| Water Gas Tar Residual | 4028.44 | | 1168.58 | |
| Total Residuals | $ 4028.44 | | $ 1168.58 | |
| Net Cost of Gas Making Material | $ 48579.19 | | $ 51439.05 | |
| Retort House Labor | 0.00 | | 0.00 | |
| Retort House Expense | 0.00 | | 0.00 | |
| Steam - Coal Gas | 0.00 | | 0.00 | |
| Purifying C.Gas Labor Exp. & Rep. | 0.00 | | 0.00 | |
| Purifying Material - Coal Gas | 0.00 | | 0.00 | |
| Sundry Labor - Coal Gas | 0.00 | | 0.00 | |
| Works Expense & Supplies - Coal Gas | 0.00 | | 0.00 | |
| Gas Making Labor - Water Gas | 5884.79 | | 5884.79 | |
| Water Gas Gen. House Expense | 167.38 | | 167.38 | |
| Steam - Water Gas | 3357.05 | | 3357.05 | |
| Purifying W.Gas Labor Exp. & Rep. | 150.76 | | 150.76 | |
| Purifying W.Gas Material | 600.00 | | 600.00 | |
| Sundry Labor - Water Gas | 2901.98 | | 2901.98 | |
| Works Expense & Supplies - Water Gas | 3640.26 | | 3640.26 | |
| District Holder Station | 1361.37 | | 1361.37 | |
| Street Dep't. Expense | 2162.94 | | 2162.94 | |
| Meter Dep't. Expense | 1584.38 | | 1584.38 | |
| Setting and Removing Meters | 2873.49 | | 2873.49 | |
| Gratuitous Work | 2904.17 | | 2904.17 | |
| Reading Meters | 1388.76 | | 1388.76 | |
| Collection Clerical Salaries | 6519.95 | | 6519.95 | |
| Collection Office Expense | 1787.15 | | 1787.15 | |
| Rent Collection Office | 729.27 | | 729.27 | |
| Delivering Bills | 283.68 | | 283.68 | |
| Outside Collections | 1646.49 | | 1646.49 | |
| General Clerical Salaries | 1066.85 | | 1066.85 | |
| General Office Expense | 1202.12 | | 1202.12 | |
| Promoting New Business | 18985.52 | | 18985.52 | |
| Total Net Cost Labor & Mat'l. As Above | $ 107947.55 | $.4750 | $110807.41 | $.4876 |
| Bench Repairs | $ 0.00 | | $ 0.00 | |
| Building Repairs - Coal Gas | 0.00 | | 0.00 | |
| General App. Repairs - Coal Gas | 0.00 | | 0.00 | |
| Repairs W.Gas Generating App. | 548.28 | | 548.28 | |
| Building Repairs - Water Gas | 819.22 | | 819.22 | |
| General App. Repairs - Water Gas | 5000.46 | | 5000.46 | |
| Street Main Maintenance | 909.75 | | 909.75 | |
| Service Maintenance | 566.74 | | 566.74 | |
| Meter Maintenance | 4180.20 | | 4180.20 | |
| Adjustment a/c Gas Used and Stock | R 56.06 | | R 56.06 | |
| Added for Depreciation as Such | 0.00 | | 20183.00 | |
| Total Repairs and Renewals | $ 11988.59 | $.0527 | $ 32151.59 | $.1414 |
| Total Wages, Salaries & Mat'l. As Above | $119916.14 | $.5277 | $142959.00 | $.6290 |
| General Supervision - Coal Gas | $ 0.00 | | $ 0.00 | |
| General Supervision - Water Gas | 5412.26 | | 5412.26 | |
| Executive Salaries | 9454.17 | | 9454.17 | |
| Incidental Expense | 5162.84 | | 5162.84 | |
| Rent Executive Office | 1569.22 | | 1569.22 | |
| Total Above "Overhead" | $ 19598.49 | $.0863 | $ 19598.49 | $.0863 |
| Legal Expense | $ 6279.48 | $.0384 | $ 6279.48 | $.0384 |
| Taxes | 10580.00 | .0466 | 10580.00 | .0466 |
| Total So-Called "Overhead" | $ 38457.97 | $.1693 | $ 38457.97 | $.1693 |
| Total Operating Expenses | $158374.11 | $.6970 | $181416.97 | $.7983 |

*This includes $500.00 flood expense.

TOTAL WAGES, SALARIES & MATERIAL ENTERING INTO ACTUAL PRODUCTION, DISTRIBUTION & SALE OF GAS, AS COMPARED WITH SO-CALLED "OVERHEAD".

FULL YEAR OF 1912

| | As Shown By Gas Company Records | | Gas Company Records As Corrected By H. I. Lea | |
|---|---|---|---|---|
| | Total Expense | Expense Per M. Sold | Total Expense | Expense Per M. Sold |
| Coal Carbonized | $ 0.00 | | | |
| Enricher | 0.00 | | | |
| Bench Fuel | 0.00 | | | |
| Steam for Generating Water Gas | 3910.00 | | | |
| Water Gas Generator Fuel | 28407.02 | | | |
| Water Gas Enricher | 27906.07 | | | |
| Gross Cost Gas Making Material | $ 60222.09 | | $ 60222.09 | |
| Coke Residual | $ 0.00 | | $ 0.00 | |
| Coal Gas Tar Residual | 0.00 | | 0.00 | |
| Ammonia Residual | 0.00 | | 00.00 | |
| Water Gas Tar Residual | 3319.72 | | 597.49 | |
| Total Residual | $ 3319.72 | | $ 597.49 | |
| Net Cost of Gas Making Material | $ 56902.37 | | $ 59624.60 | |
| Retort House Labor | 0.00 | | 0.00 | |
| Retort House Expense | 0.00 | | 0.00 | |
| Steam - Coal Gas | 0.00 | | 0.00 | |
| Purifying C.Gas Labor Exp. & Rep. | 0.00 | | 0.00 | |
| Purifying Material - Coal Gas | 0.00 | | 0.00 | |
| Sundry Labor - Coal Gas | 0.00 | | 0.00 | |
| Works Expense & Supplies - Coal Gas | 0.00 | | 0.00 | |
| Gas Making Labor - Water Gas | 3823.62 | | 3823.62 | |
| Water Gas Gen. House Expense | 394.63 | | 394.63 | |
| Steam - Water Gas | 4889.59 | | 4889.59 | |
| Purifying W.Gas Labor Exp. & Rep. | 291.11 | | 291.11 | |
| Purifying W.Gas Material | 615.26 | | 615.26 | |
| Sundry Labor - Water Gas | 3332.54 | | 3332.54 | |
| Works Expense & Supplies - Water Gas | 3595.00 | | 3595.00 | |
| District Holder Station | 3424.47 | | 3424.47 | |
| Street Dep't. Expense | 2611.20 | | 2611.20 | |
| Meter Dep't. Expense | 1751.35 | | 1751.35 | |
| Setting and Removing Meters | 2852.48 | | 2852.48 | |
| Gratuitous Work | 3264.13 | | 3264.13 | |
| Reading Meters | 1390.24 | | 1390.24 | |
| Collection Clerical Salaries | 6975.16 | | 6975.16 | |
| Collection Office Expense | 1839.87 | | 1839.87 | |
| Rent Collection Office | 897.17 | | 897.17 | |
| Delivering Bills | 307.17 | | 307.17 | |
| Outside Collections | 1470.36 | | 1470.36 | |
| General Clerical Salaries | 1209.05 | | 1209.05 | |
| General Office Expense | 1173.41 | | 1173.41 | |
| Promoting New Business | 19692.64 | | 19692.64 | |
| Total Net Cost Labor & Mat'l. As Above | $ 124692.92 | $.5521 | $ 127415.05 | $.5637 |
| Bench Repairs | $ 0.00 | | $ 0.00 | |
| Building Repairs - Coal Gas | 0.00 | | 0.00 | |
| General App. Rep. Coal Gas | 0.00 | | 0.00 | |
| Repairs W.Gas Generating App. | 1438.53 | | 1438.53 | |
| Building Repairs - Water Gas | 237.55 | | 237.55 | |
| General App. Repairs - Water Gas | 429.03 | | 429.03 | |
| Street Main Maintenance | 1133.54 | | 1133.54 | |
| Service Maintenance | 1414.37 | | 1414.37 | |
| Meter Maintenance | 4207.10 | | 4207.10 | |
| Adjustment a/c Gas Used & Stock | R 178.22 | | R 178.22 | |
| Added for Depreciation as Such | 0.00 | | 20865.03 | |
| Total Repairs and Renewals | $ 8691.90 | $.0370 | $ 29548.93 | $.1251 |
| Total Wages, Salaries & Mat'l. As Above | $ 133374.72 | $.5691 | $ 156961.98 | $.6698 |
| General Supervision - Coal Gas | $ 0.00 | | $ 0.00 | |
| General Supervision - Water Gas | 3554.00 | | 3554.00 | |
| Executive Salaries | 8917.30 | | 8917.30 | |
| Incidental Expense | 4775.01 | | 4775.01 | |
| Rent Executive Office | 1737.73 | | 1737.73 | |
| Total Above "Overhead" | $ 18984.04 | $.0810 | $ 18984.04 | $.0810 |
| Legal Expense | $ 7954.75 | $.0339 | $ 7954.75 | $.0339 |
| Taxes | 15260.00 | .0651 | 15260.00 | .0651 |
| Total So-Called "Overhead" | $ 42198.77 | $.1800 | $ 42198.77 | $.1800 |
| Total Operating Expenses | $ 175573.49 | $.7491 | $ 199160.75 | $.8498 |

GAS SOLD PER YEAR (M. Cu.Ft.) IN MASSACHUSETTS CITIES

| Year Ending June 30 | CAMBRIDGE GAS LIGHT CO. Gas Sold General Consumers | As Reported By A. D. Adams (A) | CHARLESTOWN GAS & E.L.CO. Gas Sold General Consumers | As Reported By A. D. Adams (B) | LAWRENCE GAS CO. Gas Sold General Consumers | As Reported By A.D.Adams (C) | LYNN GAS & E.L.CO. Gas Sold General Consumers | As Reported By A.D.Adams (D) | TAUNTON GAS LIGHT CO. Gas Sold General Consumers | As Reported By A.D.Adams (E) | HAVERHILL GAS L.CO. Gas Sold General Consumers | As Reported By A.D.Adams (F) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1896 | | | | | | | | | | | | 72782 |
| 1897 | | | | | | | | | | | | 78745 |
| 1898 | | | | | | | | | | | | 85895 |
| 1899 | | | | | | | | | | | | 91737 |
| 1900 | | 276264 | | 135014 | | 138514 | | 183843 | | 53334 | | 115022 |
| 1901 | | 508680 | | 135669 | | 146549 | | 197189 | | 51139 | | 115457 |
| 1902 | | 325935 | | 145719 | | 184256 | | 224514 | | 58493 | | 123887 |
| 1903 | 412378 | *415705 | 175854 | *181733 | 256628 | *256808 | 282230 | ***282578 | 65289 | *66074 | 151303 | *153068 |
| 1904 | 417248 | **420725 | 173862 | *179798 | 241941 | *242658 | 320621 | ***320642 | 69682 | *70532 | 159350 | *160863 |
| 1905 | 436371 | **439162 | 176727 | *182705 | 260924 | *261888 | 358777 | 358773 | 72588 | *73231 | 163947 | *165483 |
| 1906 | 464547 | **468555 | 184236 | *190244 | 289352 | *290425 | 410221 | 410221 | 75999 | *76559 | 169211 | *170759 |
| 1907 | 528565 | **538033 | 204840 | *210865 | 324414 | *325679 | 477879 | ***477938 | 81309 | *81397 | 180803 | *182359 |
| 1908 | 578949 | **585144 | 221933 | *228126 | 354658 | *356594 | 505748 | ***506125 | 84670 | 84670 | 184394 | |
| 1909 | 614709 | **620594 | 224380 | *230580 | 375481 | *377393 | 538427 | 538426 | 91753 | 91753 | 197613 | |
| 1910 | 664757 | **669982 | 232049 | *238229 | 416392 | *417864 | 601591 | ***605581 | 107366 | 107365 | 199301 | |
| 1911 | 712043 | **717054 | 249193 | *255288 | 439577 | *441397 | 667171 | 667170 | 119921 | 119920 | 210425 | |
| 1912 | 757409 | **762650 | 260779 | *266569 | 439392 | *441394 | 742911 | ***743042 | 126482 | 123482 | 232055 | |
| 1913 | | | | | | | | | | 136492 | | |

A - Exhibit No. 351
B - " " 353
C - " " 355
D - " " 357
E - " " 359
F - " " 361

* Includes gas sold street lamps, only.

** Includes street lamps and sales to other companies.

*** Includes gas sold to other companies, only

493

SECTION Q.

(Here follows table, marked page 494.)

495 SECTION R.

(Here follows table, marked page 496.)

## COMPARISON OF MAINS IN USE JUNE 30, 1913

(Approximately)

| | TOTAL CAST IRON MAINS (Feet) | TOTAL WROUGHT MAINS (Feet) | TOTAL MAINS (Feet) | WROUGHT MAINS PERCENTAGE OF TOTAL MAINS |
|---|---|---|---|---|
| Lincoln, Nebraska | 141285 | 317966 | 459251 | 69.22 |
| Cambridge, Massachusetts | 869100 | 17830 | 886930 | 2.01 |
| Charlestown, " | *305300 | 14421 | 319721 | 4.51 |
| Lawrence, " | 837275 | 69838 | 907111 | 7.70 |
| Lynn, " | 862306 | 113019 | 975325 | 11.58 |
| Taunton, " | 303170 | 140081 | 443251 | 31.60 |
| Haverhill, " | 322883 | 84136 | 407019 | 20.67 |

* Of 141327'-0" listed 3" Cast Iron Mains Some May be Wrought Mains

## MISCELLANEOUS DATA COMPARED

### FOR YEAR OF 1912

| | | Daily Capacity of Works (M.Cu.Ft.) | Average Daily Send Out (M.Cu.Ft.) | Ratio of Daily Capacity to Average Daily Send Out | Gas Sold Per Mile of Main Per Year (M.Cu.Ft.) | Gas Sold Per Consumer Per Year (M.Cu.Ft.) | Gas Sold Per Capita Per Year (M.Cu.Ft.) | Number of Consumers Per Mile of Main |
|---|---|---|---|---|---|---|---|---|
| Lincoln, | Nebraska | *2200. | 642. | 3.42 - 1 | 2187.456 | 27.993 | 5.095 | 78.1 |
| Boston, | Massachusetts | 31000. | 15237. | 2.03 - 1 | 5993.727 | 32.431 | 7.874 | 184.1 |
| Brockton, | " | 1500. | 593. | 2.53 - 1 | 1330.297 | 16.644 | 3.281 | 79.9 |
| Cambridge, | " | 7000. | 2089. | 3.35 - 1 | 4696.844 | 25.012 | 4.596 | 186.5 |
| Charlestown, | " | 1620. | 731. | 2.22 - 1 | 4490.444 | 24.258 | 4.654 | 181.1 |
| East Boston, | " | 1200. | 1027. | 1.17 - 1 | 5115.827 | 22.479 | 4.126 | 212.5 |
| Fall River, | " | 4000. | 1508. | 2.65 - 1 | 4210.001 | 23.968 | 4.511 | 173.7 |
| Fitchburg, | " | 1270. | 281. | 4.51 - 1 | 1739.736 | 17.304 | 2.718 | 100.5 |
| Haverhill, | " | 2000. | 644. | 3.11 - 1 | 3197.814 | 25.446 | 5.351 | 124.0 |
| Lawrence, | " | 4812. | 1209. | 3.98 - 1 | 2640.180 | 21.507 | 4.006 | 122.2 |
| Lowell, | " | 3000. | 1627. | 1.84 - 1 | 3370.618 | 26.301 | 5.012 | 124.2 |
| Lynn, | " | 6000. | 2036.. | 2.94 - 1 | 4208.496 | 26.931 | 6.628 | 156.2 |
| Malden, | " | 3500. | 1591. | 2.20 - 1 | 3135.432 | 20.160 | 9.661 | 120.6 |
| New Bedford, | " | 3870. | 1295. | 2.99 - 1 | 3953.610 | 25.912 | 4.645 | 148.1 |
| Newton, | " | 1600. | 1140. | 1.40 - 1 | 2049.029 | 28.682 | 4.728 | 69.6 |
| Pittsfield, | " | 950. | 408. | 2.33 - 1 | 2235.698 | 20.466 | 4.176 | 109.2 |
| Salem, | " | 1700. | 461. | 3.69 - 1 | 2257.958 | 15.493 | 2.832 | 145.7 |
| Springfield, | " | 5000. | 1899. | 2.63 - 1 | 3645.081 | 24.557 | 6.435 | 153.5 |
| Suburban, | " | | 361. | | 2132.472 | 17.198 | 4.649 | 124.0 |
| Taunton, | " | 700. | 347. | 2.02 - 1 | 1652.028 | 23.216 | 3.373 | 71.2 |
| Worcester, | " | 5200. | 2147. | 2.42 - 1 | 4399.088 | 30.929 | 5.368 | 141.0 |

* Maximum Capacity if only one (1) 7'-6" machine is idle ratio of Capacity to Average Daily Send-Out is reduced to 2.41.

497

SECTION 8.

(Here follows table, marked page 498.)

499 SECTION T.

(Here follow tables, marked pages 500-511.)

# E X P E N S E S

(As Per Classification Used 1907 to 1911 Inclusive)

CAMBRIDGE GAS LIGHT COMPANY.

| I T E M S | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| **FOR MANUFACTURE OF GAS:-** | | | | | |
| 1. Coals (other than those used for enriching), including all expenses of depositing at works - Coal Gas and Water Gas | $ 132567.48 | $ 162650.97 | $ 147243.21 | $ 155626.84 | $ 166870.47 |
| 2. Enrichers - Coal and Oil | 36640.11 | 44412.77 | 31439.83 | 31235.54 | 24474.86 |
| 3. Purifying Materials | 4183.15 | 4563.31 | 7439.78 | 2430.27 | 1497.43 |
| 4. Water | 3073.68 | 3565.60 | 3020.68 | 2405.12 | 2581.03 |
| 5. Wages at Works | 52468.94 | 43974.58 | 41172.04 | 40170.93 | 39360.98 |
| 6. Repairs and maintenance of works | 40078.53 | 49575.21 | 40707.91 | 44096.06 | 43893.85 |
| 7. Renewal of plant (including retorts) | | | | 10069.08 | 16428.28 |
| 8. Apparatus and machinery (station tools and appliances) | | 459.14 | | 442.72 | 539.40 |
| | $ 269011.89 | $ 309101.58 | $ 271023.45 | $ 286476.56 | $ 295446.35 |
| **FOR PURCHASE OF GAS:-** | | | | | |
| 9. Gas bought of _____ Company | $ | $ | $ | $ | $ |
| **FOR DISTRIBUTION OF GAS :-** | | | | | |
| 10. Wages of meter takers, clerical labor in this department, and salary or commission of collectors, | $ 20820.21 | $ 23734.09 | $ 25488.72 | $ 27906.47 | $ 30720.41 |
| 11. Repairs, renewals and maintenance of mains and service pipes | 8588.11 | 16117.95 | 13345.20 | 12933.62 | 28122.36 |
| 12. Distribution tools and appliances | | - 36.14 | | 3224.57 | 4645.21 |
| 13. Repairs and renewals of meters | 13647.01 | 15188.58 | 16256.99 | 18506.52 | 14037.82 |
| 14. Gas Stove fixing, repairs and renewals | 2222.33 | 2828.22 | 3165.82 | 3478.86 | 4239.04 |
| | $ 45277.66 | $ 57704.98 | $ 58256.73 | $ 66050.04 | $ 81764.84 |
| **FOR PUBLIC LAMPS:-** | | | | | |
| 15. Lighting and repairing (gas lamps only) | $ | $ | $ - 873.52 | $ 240.25 | $ |
| 16. Lighting and repairing and material used for other lamps | | - 1566.58 | | | |
| | $ | $ 1566.58 | $ 873.52 | $ 240.25 | $ |
| **FOR OFFICE EXPENSES & MANAGEMENT:-** | | | | | |
| 17. Directors' allowances | $ 1050.00 | $ 785.00 | $ 805.00 | $ 785.00 | $ 740.00 |
| 18. Salaries of officers | 8000.00 | 8000.00 | 8000.00 | 8000.00 | 8000.00 |
| 19. General salaries | 10354.13 | 8994.36 | 7800.00 | 7900.00 | 8000.02 |
| 20. Rent of offices not owned by Company | 4019.74 | - 4225.81 | - 4352.50 | 4382.29 | 4411.42 |
| 21. General office expense | 5386.48 | 6979.82 | 9972.83 | 11488.32 | 14205.57 |
| | $ 28810.35 | $ 28984.99 | $ 30930.35 | $ 32555.61 | $ 35357.01 |

Continued on following page

(Continued)

## E X P E N S E S

(As Per Classification Used 1907 to 1911 Inclusive )

CAMBRIDGE GAS LIGHT COMPANY

| I T E M S | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MISCELLANEOUS EXPENSE:- | | | | | |
| 22. Taxes - Town or City, Corporation, State Commission | $ 37031.93 | $ 38921.21 | $ 44247.92 | $ 56764.76 | $ 55360.54 |
| 23. Insurance - Fire, Employer's Liability | 2769.67 | 4491.92 | 4678.88 | 5975.20 | 5268.90 |
| 24. Law Expenses | 3440.16 | 1910.54 | 2011.48 | 1339.86 | 1656.56 |
| 25. Claims, | 4815.70 | 390.90 | 1277.91 | 732.49 | 2962.85 |
| 26. Bad debts (e) | 900.00 | 900.00 | 993.85 | 1428.73 | 1011.71 |
| 27. Incidental Expenses, viz: (ee) | 5438.47 | 5541.76 | 9360.95 | 9458.16 | 10804.26 |
| | $ 54433.93 | $ 51956.33 | $ 62570.99 | $ 18934.44 | $ 77064.82 |
| 28. Total Expenses | $ 397533.85 | $ 449314.46 | $ 423655.02 | $ 461021.66 | $ 489633.02 |

e Only those included in Income Statement

ee To include only such items of expenses attending the manufacture and sale of Gas as are not already given.

## EXPENSES
(Gas Department)
(As Per Classification Used 1907 to 1911 Inclusive)

CHARLESTOWN (MASS.) GAS & ELECTRIC CO.

| ITEMS | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MANUFACTURE OF GAS:- | | | | | |
| 1. Coals (other than those used for enriching), including all expenses of depositing at works - Coal Gas and Water Gas | $ 70716.27 | $ 81761.19 | $ 89653.68 | $ 91345.10 | $ 94161.61 |
| 2. Enrichers - Coal and Oil | 201.60 | 54.89 | 23;41 | | |
| 3. Purifying Materials | 653.22 | 277.50 | 406.32 | | 269.76 |
| 4. Water | 995.40 | 1102.80 | 1228.80 | 1041.61 | 1196.40 |
| 5. Wages at Works | 33162.54 | 32391.93 | 29823.98 | 27240.62 | 24088.03 |
| 6. Repairs and maintenance of works | 7565.93 | 10744.07 | 12459.94 | 19096.98 | 25516.57 |
| 7. Renewal of plant (including retorts) | | | | | |
| 8. Apparatus and machinery (station tools and appliances) | 451.73 | 322.50 | 797.67 | 595.40 | 781.75 |
| | $ 113746.69 | $ 136654.88 | $ 134393.80 | $139319.71 | $ 145814.12 |
| FOR PURCHASE OF GAS:- | | | | | |
| 9. Gas Bought of _____ Company | $ 17469.25 | $ 7993.76 | $ 5151.87 | $ 6949.75 | $ 547.71 |
| FOR DISTRIBUTION OF GAS:- | | | | | |
| 10. Wages of meter takers, clerical labor in this department, and salary or commission of collectors, | $ 10422.41 | $ 12168.73 | $ 12366.96 | $ 13329.42 | $ 13968.77 |
| 11. Repairs, renewals and maintenance of mains and service pipes | 5549.46 | 8590.32 | 4506.45 | 4837.60 | 4942.61 |
| 12. Distribution tools and appliances | 58.72 | 2.35 | 50.28 | 11.36 | 28.39 |
| 13. Repairs and renewals of meters | 2777.07 | 3087.66 | 4320.45 | 10169.75 | 3515.22 |
| 14. Gas stove fixing, repairs and renewals | 82.05 | 9.37 | | 209.90 | 185.98 |
| | $ 18889.71 | $ 23858.43 | $ 21244.14 | $ 28558.03 | $ 22640.96 |
| FOR PUBLIC LAMPS:- | | | | | |
| 15. Lighting and repairing (gas lamps only) | $ | $ | $ | $ | $ |
| 16. Lighting and repairing and material used for other lamps | | | | | |
| | $ | $ | $ | $ | $ |
| FOR OFFICE EXPENSES & MANAGEMENT:- | | | | | |
| 17. Directors' allowances | $ 296.25 | $ 318.75 | $ 315.00 | $ 273.75 | $ 285.00 |
| 18. Salaries of officers | 3750.04 | 3937.55 | 3755.11 | 3749.98 | 3750.00 |
| 19. General salaries | 4977.52 | 4861.73 | 4057.67 | 3952.57 | 3990.00 |
| 20. Rent of offices not owned by Company | 675.00 | 675.00 | 675.00 | 675.00 | 675.00 |
| 21. General office expense | 2427.92 | 1978.60 | 2602.79 | 2933.88 | 3223.16 |
| | $ 12126.73 | $ 11771.63 | $ 11405.57 | $ 11585.18 | $ 11923.16 |

Continued on following page.

(Continued)

## E X P E N S E S

(Gas Department)

(As Per Classification Used 1907 to 1911 Inclusive)

CHARLESTOWN (MASS.) GAS & ELECTRIC CO.

| I T E M S | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MISCELLANEOUS EXPENSE:- | | | | | |
| 22. Taxes - Town or City, Corporation, State Commission | $ 14637.54 | $ 14795.74 | $ 14925.34 | $ 21167.07 | $ 21426.01 |
| 23. Insurance - Fire, Employer's Liability | 759.97 | 1066.33 | 682.00 | 860.63 | 918.45 |
| 24. Law Expenses | 1159.53 | 1273.09 | 1230.65 | 691.27 | 959.16 |
| 25. Claims | | 384.81 | 2904.81 | | 110.00 |
| 26. Bad debts (*) | 328.99 | 387.50 | 344.26 | 339.83 | 335.55 |
| 27. Incidental Expenses, viz: (**) | 514.90 | 521.75 | 828.11 | 481.20 | 864.67 |
| | $ 17400.93 | $ 18429.22 | $ 20915.17 | $ 23540.00 | $ 24613.84 |
| 28. Total Expenses | $ 179635.31 | $ 198707.92 | $ 193110.55 | $ 209952.67 | $ 205539.79 |

* Only those included in Income Statement

** To include only such items of expenses attending the manufacture and sale of Gas as are not already given.

## EXPENSES

( As Per Classification Used 1907 to 1911 Inclusive )

LAWRENCE GAS COMPANY

| ITEMS | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| **FOR MANUFACTURE OF GAS:-** | | | | | |
| 1. Coals (other than those used for enriching), including all expenses of depositing at works - Coal Gas and Water Gas | $ 104679.68 | $ 110625.34 | $ 123465.67 | $ 151657.96 | $ 140037.67 |
| 2. Enrichers - Coal and Oil | 31501.58 | 31949.33 | 32315.99 | 27876.29 | 28387.58 |
| 3. Purifying Materials | 1642.64 | 1283.54 | 917.16 | 878.40 | 1409.30 |
| 4. Water | 566.70 | 470.19 | 609.07 | 1309.82 | 616.59 |
| 5. Wages at Works | 41186.56 | 43691.66 | 43579.18 | 34742.32 | 37372.30 |
| 6. Repairs and maintenance of works | 12049.29 | 12030.14 | 13042.41 | 16722.85 | 13962.51 |
| 7. Renewal of plant (including retorts) | 4670.96 | 3506.22 | 2402.51 | 3661.37 | 3556.16 |
| 8. Apparatus and machinery (station tools and appliances) | 1542.23 | 1739.04 | 1273.44 | 1736.56 | 2568.88 |
| | (***) | | | | |
| | $ 197835.64 | $ 205295.46 | $ 217803.43 | $ 238585.57 | $ 227710.99 |
| **FOR PURCHASE OF GAS:-** | | | | | |
| 9. Gas bought of _____ Company | $ | $ | $ | $ | $ |
| **FOR DISTRIBUTION OF GAS:-** | | | | | |
| 10. Wages of meter takers, clerical labor in this department, and salary or commission of collectors | $ 4834.83 | $ 5856.32 | $ 4923.05 | $ 5126.19 | $ 5653.80 |
| 11. Repairs, renewals and maintenance of mains and service pipes | 5783.79 | 7901.98 | 6094.45 | 5944.19 | 7107.60 |
| 12. Distribution tools and appliances | | | | | |
| 13. Repairs and renewals of meters | 14215.24 | 14850.74 | 15174.23 | 15384.71 | 16282.11 |
| 14. Gas stove fixing, repairs and renewals | 3609.54 | 3450.41 | 3023.70 | 2944.21 | 3274.85 |
| | $ 28443.40 | $ 31859.45 | $ 29215.43 | $ 29399.30 | $ 32318.36 |
| **FOR PUBLIC LAMPS:-** | | | | | |
| 15. Lighting and repairing (gas lamps only) | $ 675.39 | $ 784.70 | $ 909.20 | 270.04 | $ 322.86 |
| 16. Lighting and repairing and material used for other lamps | 230.60 | 190.40 | 140.12 | 45.10 | 48.40 |
| | $ 905.99 | $ 975.10 | $ 1049.32 | $ 315.14 | $ 371.86 |
| **FOR OFFICE EXPENSES & MANAGEMENT:-** | | | | | |
| 17. Directors' allowances | $ 151.56 | $ 114.06 | $ 114.06 | $ 95.33 | $ 109.37 |
| 18. Salaries of officers | 6687.50 | 8093.75 | 9218.75 | 8312.50 | 8312.50 |
| 19. General salaries | 8918.43 | 9721.98 | 9954.58 | 11462.35 | 10029.52 |
| 20. Rent of offices not owned by Company | 312.50 | 312.50 | 312.50 | 322.61 | 358.75 |
| 21. General office expense | 10696.78 | 10581.60 | 11652.56 | 11851.47 | 14756.72 |
| | $ 26765.77 | $ 28823.89 | $ 31252.45 | $ 32044.26 | $ 33566.86 |

Continued on following page

(Continued)

## E X P E N S E S

(As Per Classification Used 1907 to 1911 Inclusive)

LAWRENCE GAS COMPANY

| I T E M S | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MISCELLANEOUS EXPENSE:- | | | | | |
| 22. Taxes - Town or City, Corporation, State Commission | $ 17348.40 | $ 23283.17 | $ 23890.63 | $ 34749.58 | $ 39681.64 |
| 23. Insurance - Fire, Employer's Liability | 3289.42 | 2705.73 | 3171.42 | 4503.25 | 4321.04 |
| 24. Law Expenses | 425.59 | 593.75 | 466.88 | 577.87 | 488.83 |
| 25. Claims, | | | | 15.00 | 708.00 |
| 26. Bad debts (*) | 1611.40 | 1596.80 | 815.30 | 1977.40 | 1875.50 |
| 27. Incidental Expenses, viz: (**) | | | | | |
| | $ 22668.81 | $ 28179.45 | $ 28344.23 | $ 41823.10 | $ 47075.01 |
| 28. Total Expenses | (***) $ 278557.61 | $ 295133.35 | $ 307464.86 | $ 342167.37 | $ 341042.48 |

(***) Errer of $4.00

* Only those included in Income Statement.

** To include only such items of expense attending the manufacture and sale of Gas as are not already given.

(Continued)

E X P E N S E S.
(Gas Department)
(As Per Classification Used 1907 to 1911 Inclusive)

LYNN GAS & ELEC. CO.

| I T E M S | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MISCELLANEOUS EXPENSE:- | | | | | |
| 22. Taxes - Town or City, Corporation, State Commission | $ 15649.10 | $ 21241.21 | $ 22257.33 | $ 36772.45 | $ 52431.74 |
| 23. Insurance - Fire, Employer's Liability | 1994.76 | 2609.60 | 3081.35 | 3524.85 | 9639.81 |
| 24. Law Expenses | 1914.77 | 891.49 | 966.15 | 1018.49 | 2207.47 |
| 25. Claims | 2058.64 | 139.68 | 1297.49 | 138.98 | 958.28 |
| 26. Bad debts (*) | 1029.10 | 1007.50 | 991.78 | 1375.06 | 1140.10 |
| 27. Incidental Expense, viz: (**) | 3175.72 | 4018.00 | 3692.51 | 3773.98 | 4725.27 |
| | $ 25822.09 | $ 29906.48 | $ 32286.61 | $ 46603.81 | $ 51102.67 |
| 28. Total Expenses | $ 315036.79 | $ 325533.86 | $ 316585.98 | $ 356316.79 | $ 404799.62 |

* Only those included in Income Statement.

** To include only such items of expense attending the manufacture and sale of Gas as are not already given.

## EXPENSES
(As Per Classification Used 1907 to 1911 Inclusive)
TAUNTON GAS LIGHT CO.

| ITEMS | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MANUFACTURE OF GAS:- | | | | | |
| 1. Coals (other than those used for enriching), including all expenses of depositing at works - Coal Gas and Water Gas | $ (1)587.00<br>33152.43 | $ (1)522.00<br>35679.53<br>(2)1776.84 | $ (1)469.00<br>37034.21<br>(2)1761.75 | $ (1)561.00<br>43484.68<br>(2) 961.20 | $ (1)360.90<br>48107.97<br>(2) 180.70 |
| 2. Enrichers - Coal and Oil | 2142.84 | 355.65 | 227.08 | 1018.82 | 889.11 |
| 3. Purifying Materials | 313.50 | 396.00 | 289.28 | 268.42 | 686.62 |
| 4. Water | | | | | |
| 5. Wages at Works | 15388.87 | 15349.17 | 15531.81 | 19875.40 | 20413.81 |
| 6. Repairs and maintenance of works | 4208.40 | 4930.12 | 3055.57 | 4383.60 | 4072.45 |
| 7. Renewal of plant (including retorts) | | 1814.29 | 2000.00 | 3667.69 | 2182.79 |
| | | (3) 469.00 | (3) 561.00 | (3) 360.90 | (3) 528.30 |
| 8. Apparatus & machinery (station tools & appliances) | 522.00 | 42.20 | 194.04 | 190.73 | 109.14 |
| | $ 55671.04 | $ 60396.80 | $ 60001.74 | $ 73050.64 | $ 76474.59 |
| FOR PURCHASE OF GAS:- | | | | | |
| 9. Gas bought of_____Company | $ | $ | $ | $ | $ |
| FOR DISTRIBUTION OF GAS :- | | | | | |
| 10. Wages of meter takers, clerical labor in this department, and salary or commission of collectors | $ 6122.76 | $ 6758.68 | $ 6087.79 | $ 9584.72 | $ 7838.35 |
| 11. Repairs, renewals and maintenance of mains and service pipes | 404.69 | 460.12 | 323.90 | 870.82 | 480.41 |
| 12. Distribution tools and appliances | | | | | |
| 13. Repairs and renewals of meters | Rep. 174.72 | Rep. 87.72 | Rep. 100.97 | Rep. 200.92 | Rep. 187.37 |
| 14. Gas stove fixing, repairs and renewals | | | | | |
| | $ 6702.17 | $ 7306.52 | $ 6512.66 | $ 10656.46 | $ 8446.13 |
| FOR PUBLIC LAMPS:- | | | | | |
| 15. Lighting and repairing (gas lamps only) | $ | $ | $ | $ | $ |
| 16. Lighting & repairing & material used for other lamps | | | | | |
| | $ | $ | $ | $ | $ |
| FOR OFFICE EXPENSES & MANAGEMENT:- | | | | | |
| 17. Directors' allowances | $ 150.00 | $ 110.00 | $ 150.00 | $ 165.00 | $ 150.00 |
| 18. Salaries of officers | 2100.00 | 2200.00 | 2300.00 | 2500.00 | 2700.00 |
| 19. General salaries | 2100.00 | 2200.00 | 2200.00 | 2200.00 | 2200.00 |
| 20. Rent of offices not owned by Company | 916.63 | 999.96 | 999.96 | 999.96 | 999.96 |
| 21. General office expense | 1533.52 | 1723.13 | 1710.54 | 2021.51 | 2294.67 |
| | $ 6800.15 | $ 7233.09 | $ 7340.50 | $ 7886.47 | $ 8394.63 |

Continued on following page

(Continued)

## EXPENSES

(As Per Classification Used 1907 to 1911 Inclusive)

Taunton Gas Light Co.

| ITEMS | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MISCELLANEOUS EXPENSE:- | | | | | |
| 22. Taxes - Town or City, Corporation, State Commission | $ 4737.45 | $ 4660.60 | $ 5597.24 | $ 6078.40 | $ 6055.45 |
| 23. Insurance - Fire, Employer's Liability | 397.81 | 606.14 | 809.87 | 679.21 | 847.82 |
| 24. Law Expenses | | | | | 250.00 |
| 25. Claims, | | 350.00 | | 50.00 | |
| 26. Bad debts (*) | 127.24 | 150.05 | 211.82 | 143.16 | 224.45 |
| 27. Incidental expenses, viz: (**) | | | | | |
| | $ 5262.48 | $ 5766.79 | $ 6618.93 | $ 6950.77 | $ 7375.68 |
| 28. Total Expenses | $ 73835.84 | $ 80703.20 | $ 80273.83 | $ 98544.54 | $ 100621.23 |
| | (1) Gas on hand 6/1/06 | (1) Gas on hand 6/1/07 (2) Steam Coal (3) Gas on hand 6/1/08 | (1) Gas on hand 6/1/08 (2) Steam coal (3) Gas on hand 6/30/09 | (1) Gas on hand 6/30/09 (2) Steam coal (3) Gas on hand 6/30/10 | (1) Gas on hand 6/30/10 (2) Steam coal (3) Gas on hand 6/30/11 |

* Only those included in Income Statement.

** To include only such items of expense attending the manufacture and sale of Gas as are not already given.

## E X P E N S E S

(As Per Classification Used 1907 to 1911 Inclusive)

HAVERHILL GAS LIGHT CO.

| ITEMS | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| **FOR MANUFACTURE OF GAS:-** | | | | | |
| 1. Coals (other than those used for enriching), including all expenses of depositing at works - Coal Gas and Water Gas | $ 27972.04 | $ 27116.05 | $ 27169.18 | $ 27869.91 | $ 27184.07 |
| 2. Enrichers - Coal and Oil | 36037.28 | 44101.38 | 37526.49 | 32700.50 | 27592.25 |
| 3. Purifying materials | 583.19 | 552.67 | 739.20 | 1036.90 | 1092.56 |
| 4. Water | 747.65 | 734.46 | 809.40 | 973.05 | 884.11 |
| 5. Wages at Works | 14837.55 | 14978.54 | 15140.99 | 15288.51 | 14598.68 |
| 6. Repairs and maintenance of works | 4395.93 | 4407.82 | 3674.04 | 3275.49 | 3167.28 |
| 7. Fuel under retorts | | | | 705.45 | 633.03 |
| 8. Apparatus and machinery (station tools and appliances) | | | | (1) 248.00 | |
| | $ 84573.64 | $ 91990.92 | $ 85059.30 | $ 81651.79 | $ 75151.98 |
| **FOR PURCHASE OF GAS:-** | | | | | |
| 9. Gas bought of _____ Company | $ | $ | $ | $ | $ |
| **FOR DISTRIBUTION OF GAS :-** | | | | | |
| 10. Wages of meter takers, clerical labor in this department, and salary or commission of collectors | $ 1302.33 | $ 1423.32 | $ 2135.60 | $ 1465.90 | $ 2089.71 |
| 11. Repairs, renewals and maintenance of mains and service pipes | 2724.60 | 3889.21 | 2687.34 | 3871.52 | 3057.89 |
| 12. Distribution tools and appliances | 391.78 | 494.99 | 393.22 | 2433.32 | 2332.98 |
| 13. Repairs and renewals of meters | 5452.31 | 5174.41 | 4304.80 | 6719.40 | 5582.33 |
| (Stable) 14. Gas Stove fixing, repairs and renewals | 1586.28 | 1811.78 | 3722.21 | 3179.75 | 5105.63 |
| | $ 11457.30 | $ 12753.71 | $ 13243.17 | $ 17669.89 | $ 18167.54 |
| **FOR PUBLIC LAMPS:-** | | | | | |
| 15. Lighting and repairing (gas lamps only) | $ | $ 1881.79 | $ 1754.86 | $ 2024.32 | $ 3409.60 |
| 16. Lighting & repairing & material used for other lamps | | 5232.10 | 7159.81 | 7217.99 | 8114.66 |
| | $ | $ 7113.89 | $ 8914.67 | $ 9242.31 | $ 11524.26 |
| **FOR OFFICE EXPENSES & MANAGEMENT:-** | | | | | |
| 17. Directors' allowances | $ 600.00 | $ | $ | $ 75.00 | $ |
| 18. Salaries of officers | 3500.00 | 3500.00 | 3500.00 | 7890.09 | 7912.69 |
| 19. General salaries | 4066.19 | 5244.37 | 6060.61 | 7016.23 | 7503.37 |
| 20. Rent of offices not owned by Company | 1533.36 | 1600.08 | 1600.08 | 1749.20 | 2544.00 |
| 21. General office expense | 2778.69 | 2386.81 | 2701.93 | 3449.97 | 6329.56 |
| | $ 12478.24 | $ 12731.26 | $ 13862.62 | $ 20180.49 | $ 24349.62 |

(1) Gas on hand 6/30/10

Continued on following page

(Continued)

## E X P E N S E S

(As Per Classification Used 1907 to 1911 Inclusive)

HAVERHILL GAS LIGHT CO.

| I T E M S | 1907 | 1908 | 1909 | 1910 | 1911 |
|---|---|---|---|---|---|
| FOR MISCELLANEOUS EXPENSE:- | | | | | |
| 22. Taxes - Town or City, Corporation, State Commission | $ 6735.79 | $ 6859.97 | $ 8323.18 | $ 10972.09 | $ 13832.42 |
| 23. Insurance - Fire, Employer's Liability | 2115.23 | 1979.94 | 1634.70 | 2045.06 | 3498.52 |
| 24. Law Expenses | 2894.54 | 2110.36 | | 5771.15 | 1964.22 |
| 25. Claims, | 54.00 | | 7118.27 | 35.40 | 996.05 |
| 26. Bad debts (*) | | | | 587.49 | 1102.88 |
| 27. Incidental Expenses, viz: (**) | 713.01 | 2968.65 | 1696.85 | 4579.10 | 1444.10 |
| | $ 12512.57 | $ 13918.92 | $ 18773.00 | $ 23990.29 | $ 22838.19 |
| 28. Total Expenses | $ 122630.65 (***) | $ 138408.70 | $ 139852.76 | $ 152734.77 | $ 152031.59 |

(***) Should be $ 121021.75

* Only those included in Income Statement.

** To include only such items of expense attending the manufacture and sale of Gas as are not already given.

COMPARISON BETWEEN EXTRACTS FROM MASSACHUSETTS RECORDS

AND

FIGURES SHOWN BY A. D. ADAMS

TOTAL SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE (PER M.CU.FT. SOLD PER YEAR)

| | 1909 | | 1910 | | 1911 | | 1912 | |
|---|---|---|---|---|---|---|---|---|
| | As Found By H.I.Lea | As Shown By A.D.Adams | As Found By H.I.Lea | As Shown By A.D.Adams | As Found By H.I.Lea | As Shown By A.D.Adams | As Found By H.I.Lea | As Shown By A.D.Adams |
| A - Cambridge, Mass. | $.12208 | $.1239 | $.12379 | $.1267 | $.13361 | $.1333 | $.12730 | $.1282 |
| B - Charlestown, Mass. | .13791 | .1277 | .11990 | .1140 | .11529 | .1128 | .10391 | .1025 |
| C - Lawrence, Mass. | .12283 | .1162 | .11710 | .1088 | .12062 | .1096 | .12639 | .1210 |
| D - Lynn, Mass. | .10368 | .979 | .09965 | .943 | .17054 | .1116 | .10139 | .990 |
| E - Taunton, Mass. | | .1551 | .17179 | .1694 | .14671 | .1439 | .14485 | .1411 |
| F - Haverhill, Mass. | | | .26140 | | .48407 | | .30054 | |

A - Exhibit No. 351
B - " " 353
C - " " 355
D - " " 357
E - " " 359
F - " " 361

512 SECTION U.

(Here follows table, marked page 513.)

514 SECTION V.

(Here follow tables, marked pages 515-522.)

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By R. T. Lea

FOR YEAR ENDING JUNE 30, 1909
(Gas Department Only)

| | BOSTON | BROCKTON | CAMBRIDGE | CHARLESTOWN | EAST BOSTON | FALL RIVER | FITCHBURG | HAVERHILL | LAWRENCE | LOWELL |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 534553. | 47794. | 145942. | 60647. | 51334. | 105762. | 33021. | 37830. | 89972. | 107095. |
| Total Gas Sold (M.Cu.Ft.) | 4757172. | 176599. | 620594. | 230581. | 157435. | 464192. | 74776. | 191449. | 377393. | 522348. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost of Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost of Material & Labor Making Gas | $.29738 | $.42426 | $.27181 | $.37188 | $.32678 | $.28296 | | | $.39287 | $.23798 |
| Total Taxes | .06482 | .05775 | .07130 | .06473 | .06188 | .05721 | | | .06330 | .07772 |
| Total Net Gas Making Mat'l. and Labor, plus Taxes | .36218 | .48201 | .34311 | .43661 | .38866 | .34017 | | | .45617 | .31570 |
| Repairs and Maint.of Works | .01230 | .04256 | .06559 | .05405 | .03294 | .00885 | | | .05795 | .07184 |
| Renewals of Plant | .00000 | .01202 | .00000 | .00000 | .00000 | .00000 | | | .00636 | .01606 |
| Repairs, Mains & Services | .01947 | .01213 | .02150 | .01954 | .01369 | .03651 | | | .01615 | .02410 |
| Repairs & Renewals of Meters | .01480 | .00637 | .03536 | .01873 | .01631 | .03199 | | | .04020 | .02175 |
| Depreciation & Other Reserves | .00860 | .00952 | .04028 | .05247 | .00527 | .00000 | | | .00000 | .03544 |
| Total Repairs, Renewals & Depreciation | .05517 | .28259 | .16273 | .14477 | .06821 | .07635 | | | .10064 | .16919 |
| Wages - Distribution Dept. | .03772 | .08541 | .04107 | .05585 | .05051 | .02457 | | | .01305 | .03857 |
| Tools & Appl. Dist. Dept. | .00827 | .01331 | .00000 | .00021 | .00351 | .00857 | | | .00000 | .00546 |
| Gas Stoves | .00546 | .02082 | .00882 | .00000 | .00795 | .01681 | | | .00801 | .03331 |
| Public Lamps | .00000 | .03181 | .00141 | .00000 | .00000 | .00000 | | | .00278 | .03783 |
| Other Expenses | .00189 | .00584 | .00450 | .00860 | .00171 | .00334 | | | .00437 | .00200 |
| Office Expenses | .06034 | .04169 | .05204 | .05506 | .13058 | .07842 | | | .08282 | .04290 |
| Miscellaneous Expenses | .00773 | .01624 | .01444 | .02239 | .01368 | .00643 | | | .01180 | .00880 |
| Total Salaries, Office, Distribution & Gen.Expense | .11941 | .21452 | .12209 | .15791 | .20774 | .13814 | | | .12283 | .16167 |
| TOTAL EXPENSES | $.55676 | $.97912 | $.62792 | $.71929 | $.66461 | $.55466 | | | $.67964 | $.64656 |

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By H. Y. Lea

FOR YEAR ENDING JUNE 30, 1909
(Gas Department Only)

| | LYNN | MALDEN | NEW BEDFORD | NEWTON | PITTSFIELD | SALEM | SPRINGFIELD | SUBURBAN | TAUNTON | WORCESTER |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 89359. | 52332. | 74362. | 56305. | 28123. | 50725. | 89281 | 12693. | 33037. | 128135. |
| Total Gas Sold (M.Cu.Ft.) | 538427. | 374061. | 317234. | 220877. | 95819. | 127141. | 494061. | 75724. | 91753. | 561051. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost of Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost of Material and Labor Making Gas | $.22570 | $.33036 | $.28648 | $.44012 | | $.39910 | $.32035 | | | $.30710 |
| Total Taxes | .04134 | .06653 | .06849 | .03821 | | .10785 | .05697 | | | .05269 |
| Total Net Gas Making Mat'l. and Labor, Plus Taxes | .26704 | .39689 | .35497 | .47833 | | .50695 | .37792 | | | .35979 |
| Repairs & Maint. of Works | .04729 | .00979 | .05840 | .01787 | | .06042 | .00616 | | | .09175 |
| Renewals of Plant | .00055 | .01460 | .00000 | .00000 | | .00000 | .05242 | | | .00000 |
| Repairs, Mains & Services | .03208 | .01814 | .00254 | .04799 | | .03902 | .01109 | | | .01361 |
| Repairs & Renewals of Meters | .02434 | .02875 | .00919 | .01117 | | .02182 | .00884 | | | .01238 |
| Depreciation & Other Reserves | .06210 | .00000 | .00000 | .02008 | | .00450 | .01494 | | | .04945 |
| Total Repairs, Renewals & Depreciation | .16636 | .07128 | .07013 | .09691 | | .12576 | .09345 | | | .16717 |
| Wages - Distribution Dept. | .03547 | .03303 | .05133 | .03804 | | .01987 | .02539 | | | .02526 |
| Tools & Appl. Dist. Dept. | .00204 | .01119 | .00174 | .00136 | | .02778 | .00000 | | | .00000 |
| Gas Stoves | .01610 | .00000 | .00000 | .03473 | | .01821 | .01167 | | | .00572 |
| Public Lamps | .00000 | .00000 | .09947 | .04071 | | .01515 | .00199 | | | .00000 |
| Other Expenses | .00865 | .01482 | .00491 | .00000 | | .00120 | .00063 | | | .00000 |
| Office Expenses | .02911 | .07261 | .06619 | .11496 | | .08769 | .07893 | | | .04165 |
| Miscellaneous Expenses | .01221 | .01766 | .00717 | .02461 | | .02142 | .01720 | | | .01379 |
| Total Salaries, Office, Distribution & Gen.Expense | .10368 | .14951 | .23081 | .27843 | | .18932 | .14511 | | | .08642 |
| TOTAL EXPENSES | $.53708 | $.61768 | $.65591 | $.85337 | | $.82203 | $.61649 | | | $.61338 |

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By H. F. Lee

FOR YEAR ENDING JUNE 30, 1910
(Gas Department Only)

| | BOSTON | BROCKTON | CAMBRIDGE | CHARLESTOWN | EAST BOSTON | FALL RIVER | FITCHBURG | HAVERHILL | LAWRENCE | LOWELL |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 706301. | 56878. | 158924. | 64595. | 90940. | 119295. | 37826. | 44115. | 110170. | 118515. |
| Total Gas Sold (M.Cu.Ft.) | 5023907. | 192926. | 669983. | 238230. | 241697. | 495612. | 85164. | 203363. | 417865. | 573673. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost Material and Labor Making Gas | $ .26066 | $ .37111 | $ .25186 | $ .32315 | $ .35755 | $ .26429 | | $ .38550 | $ .35576 | $ .21478 |
| Total Taxes | .06146 | .05431 | .08473 | .08885 | .05594 | .06151 | | .05398 | .08316 | .09678 |
| Total Net Gas Making Mat'l and Labor plus Taxes | .32212 | .42542 | .33659 | .41198 | .41349 | .32580 | | .43948 | .43892 | .31156 |
| Repairs & Maint. of Works | .01146 | .04176 | .06581 | .07932 | .02445 | .00992 | | .01510 | .04001 | .05919 |
| Renewals of Plant | .00000 | .01822 | .01502 | .00000 | .00000 | .00000 | | .00000 | .00876 | .00962 |
| Repairs Mains & Services | .02546 | .01399 | .01931 | .01947 | .01182 | .02930 | | .01904 | .01423 | .03111 |
| Repairs & Renewals of Meters | .01453 | .00324 | .03586 | .04269 | .01506 | .03408 | | .02509 | .03682 | .02071 |
| Depreciation & Other Reserves | .01329 | .16558 | .03731 | .03567 | .00281 | .10089 | | .01616 | .00000 | .01724 |
| Total Repairs, Renewals & Depreciation | .06274 | .23279 | .17351 | .17715 | .05354 | .18427 | | .07639 | .09982 | .13787 |
| Wages - Distribution Dept.. | .03242 | .04621 | .04188 | .05896 | .06851 | .02518 | | .00824 | .01227 | .03482 |
| Tools & Appl. Dist. Dept. | .00638 | .04817 | .00481 | .00005 | .01126 | .00746 | | .01196 | .00000 | .00294 |
| Gas Stoves | .00526 | .02165 | .00897 | .00088 | .00219 | .02322 | | .01534 | .00704 | .02891 |
| Public Lamps | .00000 | .02859 | .00036 | .00000 | .00000 | .00000 | | .05340 | .00075 | .03562 |
| Other Expenses | .00141 | .00426 | .00317 | .00483 | .00283 | .00419 | | .01273 | .00342 | .02320 |
| Office Expenses | .06239 | .03163 | .05069 | .05065 | .11675 | .07337 | | .11755 | .07669 | .03844 |
| Miscellaneous Expenses | .00698 | .01501 | .01414 | .00794 | .01400 | .00660 | | .04188 | .01693 | .00684 |
| Total Salaries, Office, Distribution & Gen.Expense | .11472 | .19544 | .12379 | .11990 | .21574 | .14002 | | .26140 | .11710 | .17057 |
| TOTAL EXPENSES | $ .49959 | $ .85385 | $ .63369 | $ .70903 | $ .68277 | $ .65009 | | $ .77727 | $ .65584 | $ .62000 |

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By H. Y. Lea

FOR YEAR ENDING JUNE 30, 1910
(Gas Department Only)

| | LYNN | MALDEN | NEW BEDFORD | NEWTON | PITTSFIELD | SALEM | SPRINGFIELD | SUBURBAN | TAUNTON | WORCESTER |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 104771. | 60119. | 96652. | 88034. | 35689. | 59418. | 107683. | 28351. | 36494. | 145986. |
| Total Gas Sold (M.Cu.Ft.) | 805582. | 419828. | 360312. | 323053. | 111985. | 144988. | 568113. | 91192. | 107366. | 637570. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost of Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost of Material and Labor Making Gas | $ .22775 | $ .27788 | $ .26410 | $ .43313 | $ .36443 | $ .40737 | $ .29533 | | $ .40058 | $ .27971 |
| Total Taxes | .06072 | .07292 | .07899 | .03994 | .05873 | .09161 | .08268 | | .05661 | .06187 |
| Total Net Gas Making Mat'l. and Labor, plus Taxes | .28847 | .35080 | .34309 | .47307 | .42316 | .49898 | .35801 | | .45719 | .34158 |
| Repairs and Maint.of Works | .03921 | .00261 | .00000 | .02145 | .03995 | .04319 | .00589 | | .04082 | .09145 |
| Renewals of Plant | .00109 | .01817 | .06018 | .00000 | .01098 | .00000 | .03306 | | .03415 | .00000 |
| Repairs, Mains & Services | .02750 | .01926 | .00469 | .02082 | .02623 | .03339 | .00547 | | .00811 | .01050 |
| Repairs & Renewals of Meters | .02338 | .00686 | .00887 | .02206 | .01749 | .02519 | .00871 | | .00187 | .01263 |
| Depreciation & Other Reserves | .00315 | .00000 | .05550 | .00260 | .24698 | .04520 | .02356 | | .11186 | .05284 |
| Total Repairs, Renewals & Depreciation | .09733 | .04690 | .12722 | .06693 | .34161 | .14696 | .07459 | | .19681 | .16742 |
| Wages - Distribution Dept. | .03541 | .03872 | .05332 | .04198 | .09197 | .02043 | .03075 | | .03927 | .02358 |
| Tools & Appl. Distribution Dept. | .00479 | .00967 | .00079 | .02586 | .00634 | .02643 | .01018 | | .00000 | .00000 |
| Gas Stoves | .01300 | .00000 | .00000 | .00498 | .00000 | .00730 | .02815 | | .00000 | .00780 |
| Public Lamps | .00000 | .00000 | .09568 | .02528 | .00000 | .00000 | .00543 | | .00000 | .00000 |
| Other Expenses | .00801 | .03437 | .00157 | .01865 | .01972 | .00167 | .01758 | | .00093 | .00000 |
| Office Expenses | .02751 | .09031 | .05819 | .11691 | .11564 | .07572 | .08031 | | .07346 | .03524 |
| Miscellaneous Expenses | .01093 | .02366 | .00555 | .03766 | .02779 | .02249 | .01880 | | .00813 | .00961 |
| Total Salaries, Office, Distribution & Gen.Expense | .09965 | .21675 | .21600 | .27152 | .26146 | .15404 | .18920 | | .17179 | .07621 |
| TOTAL EXPENSES | $ .48545 | $ .61443 | $ .68539 | $ .81132 | $ 1.02623 | $ .79998 | $ .62180 | | $ .82579 | $ .58521 |

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By H. I. Lea

FOR YEAR ENDING JUNE 30, 1911
(Gas Department Only)

| | BOSTON | BROCKTON | CAMBRIDGE | CHARLESTOWN | EAST BOSTON | FALL RIVER | FITCHBURG | HAVERHILL | LAWRENCE | LOWELL |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 706501. | 56878. | 105924. | 57895. | 90940. | 119295. | | 44115. | 110170. | 118515. |
| Total Gas Sold (M.Cu.Ft.) | 5281044. | 211193. | 717054. | 255288. | 332564. | 330996. | | 214149. | 441397. | 584959. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost of Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost of Material and Labor Making Gas | $ .26088 | $ .41153 | $ .23280 | $ .25672 | $ .36909 | $ .25748 | | $ .33615 | $ .33021 | $ .24949 |
| Total Taxes | .07385 | .05386 | .07721 | .08393 | .06750 | .07944 | | .06459 | .08990 | .09473 |
| Total Net Gas Making Mat'l. and Labor, plus Taxes | .33473 | .46539 | .31001 | .34065 | .43659 | .33692 | | .40074 | .42011 | .34422 |
| Repairs & Maint. of Works | .01037 | .08965 | .08412 | .09971 | .01985 | .01280 | | .01478 | .03968 | .03439 |
| Renewals of Plant | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | | .00000 | .00000 | .00000 |
| Repairs Mains & Services | .02344 | .01787 | .03922 | .01936 | .00936 | .03928 | | .01428 | .01610 | .02718 |
| Repairs & Renewals of Meters | .01391 | .00540 | .02719 | .01377 | .01786 | .03270 | | .02607 | .03689 | .02093 |
| Depreciation & Other Reserves | .01309 | .06629 | .03382 | .10067 | .00759 | .09416 | | .00000 | .00000 | .09853 |
| Total Repairs, Renewals & Depreciation | .06081 | .17919 | .18435 | .23351 | .05466 | .17874 | | .05515 | .09267 | .17803 |
| Wages - Distribution Dept. | .03040 | .04368 | .04284 | .05472 | .06028 | .02398 | | .00976 | .01281 | .04568 |
| Tools & Appl. Dist. Dept. | .00617 | .06404 | .00648 | .00011 | .01529 | .00950 | | .01090 | .00000 | .00328 |
| Gas Stoves | .00512 | .02879 | .00908 | .00073 | .00377 | .02415 | | .02583 | .00742 | .04382 |
| Public Lamps | .00000 | .05085 | .00000 | .00000 | .00064 | .00000 | | .05381 | .00084 | .03277 |
| Other Expenses | .01548 | .00220 | .00642 | .00109 | .01041 | .02784 | | .23001 | .00675 | .00491 |
| Office Expenses | .06077 | .06719 | .05359 | .04954 | .10903 | .07182 | | .12045 | .07305 | .04311 |
| Miscellaneous Expenses | .00569 | .01646 | .01520 | .00910 | .01022 | .00689 | | .03531 | .01675 | .01064 |
| Total Salaries, Office, Distribution & Gen.Expense | .12363 | .25321 | .13361 | .11529 | .20962 | .16419 | | .48407 | .12082 | .18419 |
| TOTAL EXPENSES | $ .51917 | $ .99779 | $ .62797 | $ .68945 | $ .70087 | $ .67984 | | $ .93994 | $ .83540 | $ .70644 |

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By H. I. Lee

FOR YEAR ENDING JUNE 30, 1911
(Gas Department Only)

| | LYNN | MALDEN | NEW BEDFORD | NEWTON | PITTSFIELD | SALEM | SPRINGFIELD | SUBURBAN | TAUNTON | WORCESTER |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 112109. | 60119. | 96652. | 88054. | 35889. | 59418. | 107683. | 28351. | 37493. | 145986. |
| Total Gas Sold (M.Cu.Ft.) | 667171. | 492709. | 457810. | 372796. | 127379. | 157597. | 658862. | 112799. | 119921. | 725965. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost of Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost of Material and Labor Making Gas | $ .22883 | $ .27615 | $ .24488 | $ .42649 | $ .38902 | $ .39842 | $ .26550 | $ .45002 | $ .40066 | $ .28188 |
| Total Taxes | .04861 | .07612 | .07831 | .04426 | .07384 | .08444 | .06185 | .07463 | .05048 | .05922 |
| Total Net Gas Making Mat'l. and Labor, Plus Taxes | .27744 | .35227 | .32319 | .47075 | .46286 | .48286 | .32735 | .52465 | .45114 | .34110 |
| Repairs & Maint. of Works | .03789 | .02537 | .02859 | .02995 | .04281 | .05638 | .04350 | .00386 | .03275 | .07497 |
| Renewals of Plant | .00000 | 000000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| Repairs Mains & Services | .02777 | .01208 | .00600 | .02020 | .03246 | .02365 | .00705 | .01579 | .00351 | .01081 |
| Repairs & Renewals of Meters | .02691 | .01176 | .00809 | .01515 | .01977 | .02245 | .01693 | .00764 | .00156 | .02786 |
| Depreciation & Other Reserves | .07241 | .02154 | .07906 | .00844 | .09874 | .00376 | .01045 | .14538 | .12275 | .12559 |
| Total Repairs, Renewals & Depreciation | .19478 | .07073 | .11974 | .07372 | .19378 | .10624 | .07793 | .17257 | .18057 | .23923 |
| Wages - Distribution Dept. | .03375 | .02755 | .04625 | .03544 | .09876 | .04709 | .02674 | .02140 | .03536 | .02384 |
| Tools & Appl. Dist. Dept. | .00996 | .01182 | .00148 | .03215 | .00584 | .02588 | .02227 | .01864 | .00000 | .00000 |
| Gas Stoves | .01568 | .00670 | .00000 | .00550 | .00000 | .00483 | .00418 | .01590 | .00000 | .00240 |
| Public Lamps | .00000 | .00000 | .04592 | .02333 | .00000 | .00000 | .00411 | .00000 | .00000 | .00000 |
| Other Expenses | .07081 | .04719 | .03150 | .00548 | .00272 | .00096 | .02317 | .00639 | .00090 | .00048 |
| Office Expenses | .02746 | .07314 | .04924 | .10821 | .10649 | .09676 | .08330 | .12100 | .06942 | .03363 |
| Miscellaneous Expenses | .01287 | .04484 | .00925 | .01582 | .03523 | .01995 | .01953 | .06490 | .01105 | .01137 |
| Total Salaries, Office, Distribution & Gen.Expense | .17054 | .21094 | .18362 | .22593 | .24704 | .19547 | .18330 | .24623 | .14671 | .07172 |
| TOTAL EXPENSES | $ .64276 | $ .65394 | $ .62655 | $ .77040 | $ .90348 | $ .78457 | $ .58859 | $ .94325 | $ .77842 | $ .65205 |

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By M. I. Lee

FOR YEAR ENDING JUNE 30, 1912
(Gas Department Only)

| | BOSTON | BROCKTON | CAMBRIDGE | CHARLESTOWN | EAST BOSTON | FALL RIVER | FITCHBURG | HAVERHILL | LAWRENCE | LOWELL |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 706301. | 66008. | 105924. | 57595. | 90940. | 122093. | 37826. | 44115. | 110170. | 118515. |
| Total Gas Sold (M. Cu.Ft.) | 5561427. | 216574. | 762630. | 266869. | 375194. | 550734. | 102806. | 235161. | 441325. | 593972. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost of Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost of Material and Labor Making Gas | $ .26025 | $ .35061 | $ .22751 | $ .21852 | $ .35309 | $ .27932 | $ .40783 | $ .24819 | $ .33656 | $ .27651 |
| Total Taxes | .07728 | .06497 | .07545 | .08522 | .06085 | .07415 | .09080 | .06271 | .09943 | .09230 |
| Total Net Gas Making Mat'l. and Labor, plus Taxes | .33753 | .41558 | .30296 | .30354 | .41394 | .35347 | .49833 | .31090 | .43599 | .36921 |
| Repairs & Maint. of Works | .00886 | .08581 | .08784 | .10085 | .01606 | .00982 | .00827 | .02728 | .03648 | .02685 |
| Renewals of Plant | | .01158 | .00602 | | | | .02727 | | .01390 | |
| Repairs Mains & Services | .02482 | .04513 | .03913 | .03282 | .01018 | .03484 | .03078 | .01571 | .01790 | .02091 |
| Repairs & Renewals of Meters | .01469 | .01924 | .02952 | .01079 | .02089 | .03746 | .01521 | .02578 | .03691 | .02456 |
| Depreciation & Other Reserves | .01322 | .07388 | .07299 | .08810 | .00414 | .09079 | .00000 | .00000 | .00000 | .05816 |
| Total Repairs, Renewals & Depreciation | .06159 | .20564 | .21530 | .23056 | .05127 | .17291 | .08153 | .06877 | .10517 | .13046 |
| Wages - Distribution Dept. | .02922 | .04573 | .04191 | .04643 | .05823 | .02556 | .04472 | .01028 | .01585 | .04777 |
| Tools & Appl. Dist. Dept. | .00571 | .05904 | .00800 | .00353 | .01536 | .00726 | .03691 | .01347 | .00000 | .00460 |
| Gas Stoves | .00586 | .02560 | .01015 | .00058 | .00671 | .02176 | .02955 | .03258 | .01190 | .03977 |
| Public Lamps | .00000 | .02966 | .00000 | .00000 | .00083 | .00000 | .00000 | .03974 | .00102 | .03344 |
| Other Expenses | .00926 | .00291 | .00537 | .00000 | .00311 | .00325 | .00000 | .05029 | .00000 | .01505 |
| Office Expenses | .05794 | .09384 | .05130 | .04695 | .10302 | .05718 | .20594 | .13452 | .08108 | .04498 |
| Miscellaneous Expenses | .00433 | .01122 | .01057 | .00645 | .00627 | .00879 | .03327 | .01966 | .01856 | .01951 |
| Total Salaries, Office, Distribution & Gen. Expense | .11232 | .26900 | .12730 | .10391 | .19153 | .13380 | .35039 | .30054 | .12639 | .20312 |
| TOTAL EXPENSES | $ .51144 | $ .88922 | $ .64556 | $ .63801 | $ .65674 | $ .66018 | $ .93025 | $ .68021 | $ .66755 | $ .70279 |

EXTRACTS FROM RECORDS OF THE BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS
As Prepared By H. I. Lee

FOR YEAR ENDING JUNE 30, 1912
(Gas Department Only)

| | LYNN | MALDEN | NEW BEDFORD | NEWTON | PITTSFIELD | SALEM | SPRINGFIELD | SUBURBAN | TAUNTON | WORCESTER |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Population Served | 112109. | 60119. | 101774. | 88034. | 35689. | 59418. | 107683. | 28351. | 37495. | 145986. |
| Total Gas Sold (M.Cu.Ft.) | 745043. | 580820. | 472546. | 416253. | 149056. | 168513. | 695023. | 131823. | 126482. | 783734. |
| | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold | Total Per M. Sold |
| Coal | | | | | | | | | | |
| Enrichers | | | | | | | | | | |
| Purifiers | | | | | | | | | | |
| Water | | | | | | | | | | |
| Wages | | | | | | | | | | |
| Apparatus & Machinery | | | | | | | | | | |
| Gas Purchased | | | | | | | | | | |
| Gross Cost of Material & Labor Making Gas | | | | | | | | | | |
| Value of Residuals | | | | | | | | | | |
| Net Cost of Material and Labor Making Gas | $ .21507 | $ .27433 | $ .23217 | $ .43210 | $ .34930 | $ .30101 | $ .25766 | $ .42714 | $ .39782 | $ .26821 |
| Total Taxes | .07116 | .08330 | .08900 | .04296 | .07176 | .10450 | .06690 | .07539 | .06495 | .06303 |
| Total Net Gas Making Mat'l. and Labor, plus Taxes | .28623 | .35763 | .32117 | .47506 | .42106 | .40551 | .32456 | .50253 | .46207 | .33124 |
| Repairs & Maint. of Works | .05233 | .00476 | .03893 | .02334 | .02829 | .00000 | .00741 | .00000 | .04258 | .08634 |
| Renewals of Plant | .00549 | .02546 | .00000 | .00000 | .01638 | .03227 | .03638 | .00035 | .01176 | .00000 |
| Repairs Mains & Services | .03617 | .02144 | .00451 | .02445 | .02949 | .03189 | .00740 | .02098 | .00689 | .01390 |
| Repairs & Renewals of Meters | .02340 | .01194 | .01140 | .01301 | .02256 | .01136 | .00487 | .01501 | .00198 | .02718 |
| Depreciation & Other Reserves | .00262 | .00470 | .00199 | .01060 | .10646 | .00373 | .00932 | .12121 | .11613 | .09357 |
| Total Repairs, Renewals & Depreciation | .12001 | .06830 | .05683 | .07140 | .20299 | .07925 | .06538 | .15855 | .17814 | .22099 |
| Wages - Distribution Dept. | .03051 | .02561 | .04567 | .03240 | .04622 | .04024 | .02899 | .02885 | .04416 | .02585 |
| Tools & Appl. Dist. Dept. | .01322 | .01352 | .00585 | .05004 | .00666 | .03406 | .03360 | .03030 | .00000 | .00000 |
| Gas Stoves | .01340 | .00810 | .00000 | .00824 | .00081 | .00000 | .00795 | .00000 | .00000 | .00589 |
| Public Lamps | .00000 | .00000 | .07590 | .02094 | .00000 | .00000 | .00584 | .00000 | .00000 | .00000 |
| Other Expenses | .00000 | .00582 | .00000 | .00139 | .00300 | .00303 | .00582 | .00000 | .00059 | .00000 |
| Office Expenses | .03319 | .08336 | .05425 | .11285 | .13178 | .10006 | .10743 | .13855 | .07054 | .04026 |
| Miscellaneous Expenses | .01107 | .02258 | .00602 | .00528 | .03018 | .02115 | .01596 | .04449 | .00956 | .01476 |
| Total Salaries, Office, Distribution & Gen.Expense | .10139 | .15879 | .18569 | .22812 | .21865 | .19852 | .19927 | .24199 | .14485 | .08596 |
| TOTAL EXPENSES | $ .50763 | $ .58472 | $ .56569 | $ .77458 | $ .84289 | $ .68309 | $ .58921 | $ .90005 | $ .78506 | $ .65819 |

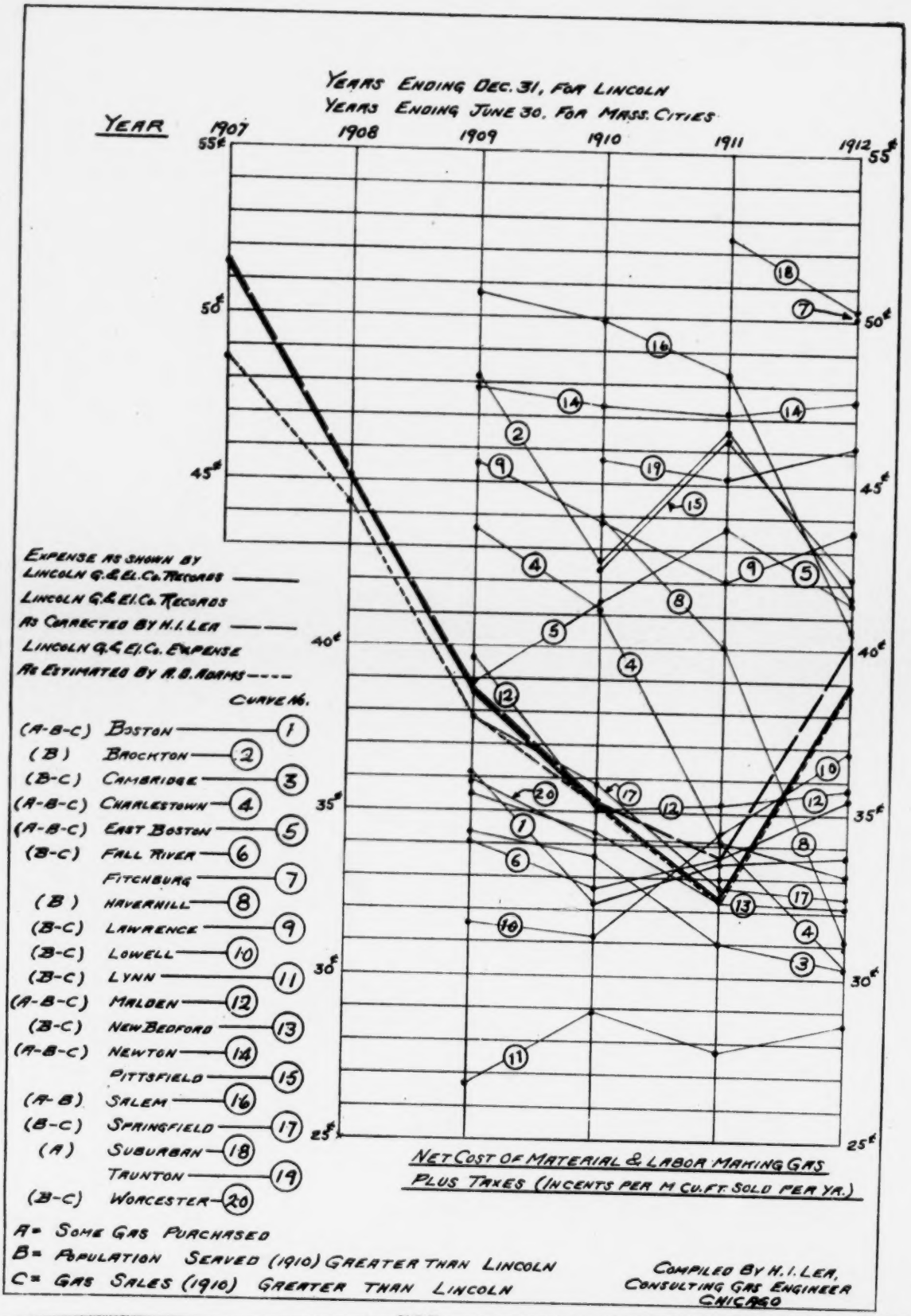
## COMPARISON OF LINCOLN WITH MASSACHUSETTS FIGURES

### As Per A. B. Adams' Arrangement of Accounts

**NET COST OF MATERIAL & LABOR MAKING GAS, PLUS TAXES**
(Per M.Cu.Ft. Sold Per Year)

| | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| As Shown By Records of Lincoln Gas & Electric Light Co. | $.5148 | $.4518 | $.3851 | $.3516 | $.3233 | $.3887 |
| Lincoln Gas & Elec.Light Co.Records As Corrected By H.I.Lea | .5148 | .4518 | .3851 | .3516 | .3589 | .4003 |
| Lincoln Expenses as A.D.Adams claims they should have been | .4868 | .4438 | .3788 | .3515 | .3236 | .3890 |
| **MASSACHUSETTS COSTS AS SHOWN BY H.I.LEA FROM RECORDS of the BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS OF MASS.** | | | | | | |
| Boston | | | .36218 | .32212 | .33473 | .33783 |
| Brockton | | | .48201 | .42542 | .46539 | .41558 |
| Cambridge | | | .34511 | .33659 | .31001 | .30296 |
| Charlestown | | | .43661 | .41198 | .34065 | .30354 |
| East Boston | | | .38866 | .41349 | .43659 | .41394 |
| Fall River | | | .34017 | .32580 | .33692 | .35347 |
| Fitchburg | | | . | | | .40833 |
| Haverhill | | | | .43948 | .40074 | .31090 |
| Lawrence | | | .45617 | .43892 | .42011 | .43599 |
| Lowell | | | .31570 | .31156 | .34422 | .36921 |
| Lynn | | | .26704 | .28847 | .27244 | .28623 |
| Malden | | | .39689 | .35080 | .35227 | .35763 |
| New Bedford | | | .35497 | .34309 | .32319 | .32117 |
| Newton | | | .47853 | .47307 | .47078 | .47506 |
| Pittsfield | | | . | .42516 | .46266 | .42106 |
| Salem | | | .50695 | .40898 | .48286 | .40531 |
| Springfield | | | .37702 | .35801 | .32735 | .32456 |
| Suburban | | | . | | .52465 | .50253 |
| Taunton | | | | .43719 | .45114 | .46207 |
| Worcester | | | .35979 | .34188 | .34110 | .33184 |

(Here follows diagram marked page 525.)

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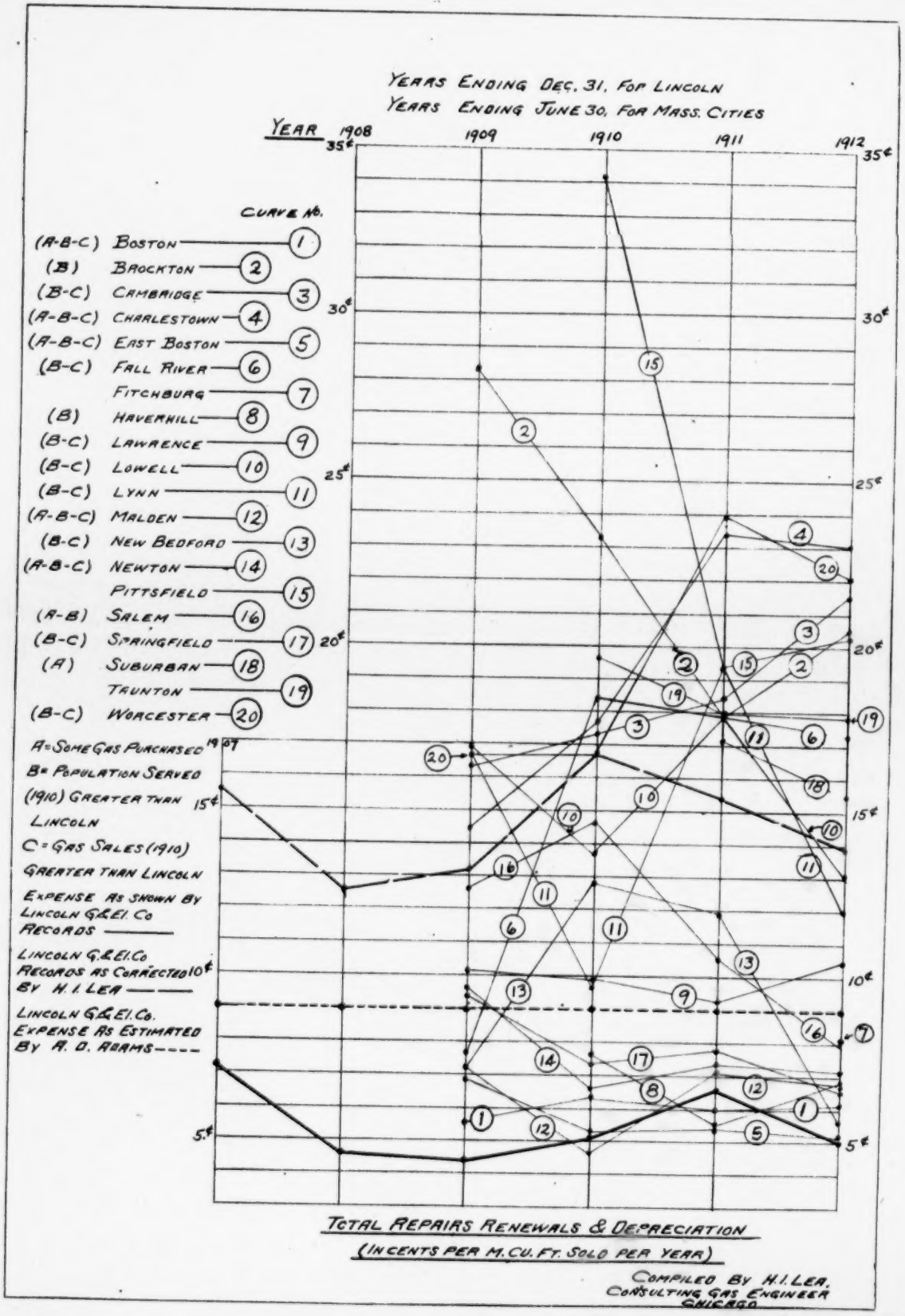
## COMPARISON OF LINCOLN WITH MASSACHUSETTS FIGURES

### As Per A. D. Adams' Arrangement of Accounts

### TOTAL REPAIRS, RENEWALS & DEPRECIATION
(Per M.Cu.Ft. Sold Per Year)

| | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| As Shown By Records of Lincoln Gas & Electric Light Co, | $.0720 | $.0456 | $.0446 | $.0510 | $.0655 | $.0500 |
| Lincoln Gas & Elec.Light Co.Records as Corrected By H.I.Lea | .1554 | .1254 | .1316 | .1669 | .1544 | .1390 |
| Lincoln Expenses as A.D.Adams claims they should have been | .0900 | .0900 | .0900 | .0900 | .0900 | .0900 |
| **MASSACHUSETTS COSTS AS SHOWN BY H.I.LEA FROM RECORDS of the BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS OF MASS.** | | | | | | |
| Boston | | | .05517 | .06274 | .06081 | .06159 |
| Brockton | | | .08259 | .23279 | .17919 | .20564 |
| Cambridge | | | .16273 | .17331 | .18435 | .21530 |
| Charlestown | | | .14477 | .17715 | .23351 | .23056 |
| East Boston | | | .06821 | .05354 | .05466 | .05127 |
| Fall River | | | .07635 | .18427 | .17874 | .17291 |
| Fitchburg | | | . | | | .08153 |
| Haverhill | | | | .07639 | .05513 | .06877 |
| Lawrence | | | .10064 | .09982 | .09257 | .10517 |
| Lowell | | | .16919 | .13787 | .17803 | .13046 |
| Lynn | | | .16636 | .09733 | .19478 | .12001 |
| Malden | | | .07128 | .04690 | .07073 | .06830 |
| New Bedford | | | .07013 | .12722 | .11974 | .05683 |
| Newton | | | .09691 | .06693 | .07372 | .07140 |
| Pittsfield | | | . | .34161 | .19378 | .20298 |
| Salem | | | .12578 | .14696 | .10824 | .07925 |
| Springfield | | | .09345 | .07459 | .07793 | .08538 |
| Suburban | | | . | | .17237 | .15553 |
| Taunton | | | | .19681 | .18057 | .17816 |
| Worcester | | | .16717 | .16742 | .23923 | .22099 |

(Here follows diagram
marked page 527)




TOTAL REPAIRS RENEWALS & DEPRECIATION

(IN CENTS PER M. CU. FT. SOLD PER YEAR)

COMPILED BY H.I. LEA.
CONSULTING GAS ENGINEER
CHICAGO

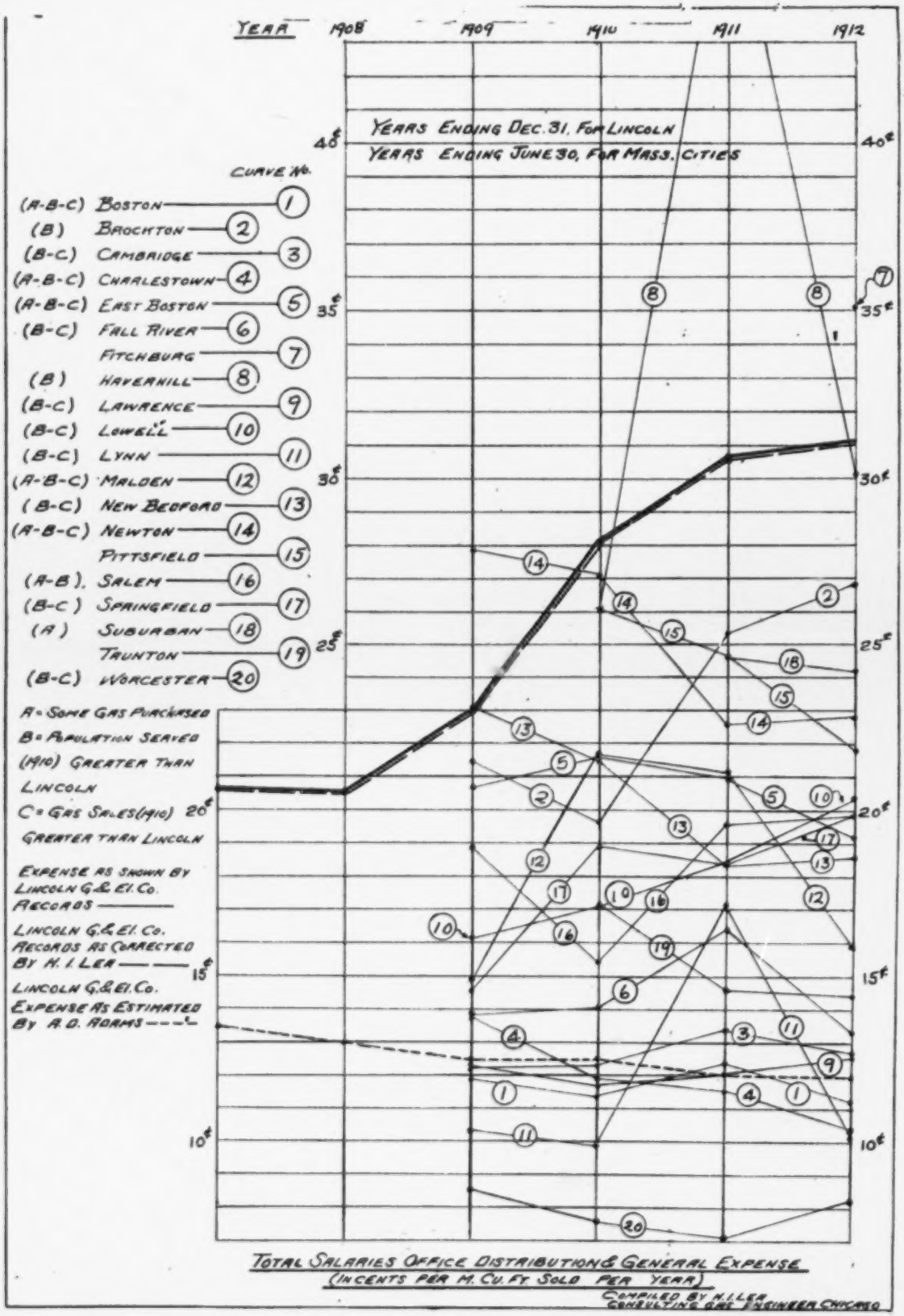
COMPARISON OF LINCOLN WITH MASSACHUSETTS FIGURES

As Per A. D. Adams' Arrangement of Accounts

TOTAL SALARIES, OFFICE, DISTRIBUTION & GENERAL EXPENSE
(Per M.Cu.Ft. Sold Per Year)

| | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| As Shown by Records of Lincoln Gas & Electric Light Co. | $.2058 | $.2051 | $.2293 | $.2805 | $.3066 | $.3112 |
| Lincoln Gas & Elec.Light Co.Records as Corrected by H.I.Lea | .2058 | .2051 | .2293 | .2805 | .3066 | .3112 |
| Lincoln Expenses as A.D.Adams claims they should have been | .1350 | .1300 | .1250 | .1250 | .1200 | .1200 |
| MASSACHUSETTS COSTS AS SHOWN BY H.I.LEA FROM RECORDS of the BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS OF MASS. | | | | | | |
| Boston | | | .11941 | .11472 | .12363 | .11232 |
| Brockton | | | .21452 | .19544 | .25321 | .26800 |
| Cambridge | | | .12208 | .12379 | .13361 | .12730 |
| Charlestown | | | .13791 | .11990 | .11529 | .10391 |
| East Boston | | | .20774 | .21574 | .20962 | .19153 |
| Fall River | | | .13814 | .14002 | .16418 | .13380 |
| Fitchburg | | | | | | .35039 |
| Haverhill | | | | .26140 | .48407 | .30054 |
| Lawrence | | | .12283 | .11710 | .12062 | .12639 |
| Lowell | | | .16167 | .17057 | .18419 | .20312 |
| Lynn | | | .10368 | .09965 | .17054 | .10139 |
| Malden | | | .14951 | .21673 | .21094 | .15879 |
| New Bedford | | | .23081 | .21508 | .18362 | .18569 |
| Newton | | | .27843 | .27132 | .2259? | .22812 |
| Pittsfield | | | | .26140 | .24704 | .21665 |
| Salem | | | .18932 | .15404 | .19547 | .19852 |
| Springfield | | | .14511 | .18920 | .18330 | .19927 |
| Suburban | | | | | .24623 | .24199 |
| Taunton | | | | .17179 | .14671 | .14485 |
| Worcester | | | .09643 | .07621 | .07172 | .09598 |

(Here follows diagram marked page 529.)




TOTAL SALARIES OFFICE DISTRIBUTION & GENERAL EXPENSE
(IN CENTS PER M. CU. FT. SOLD PER YEAR)

COMPILED BY H. I. LEA CONSULTING GAS ENGINEER CHICAGO

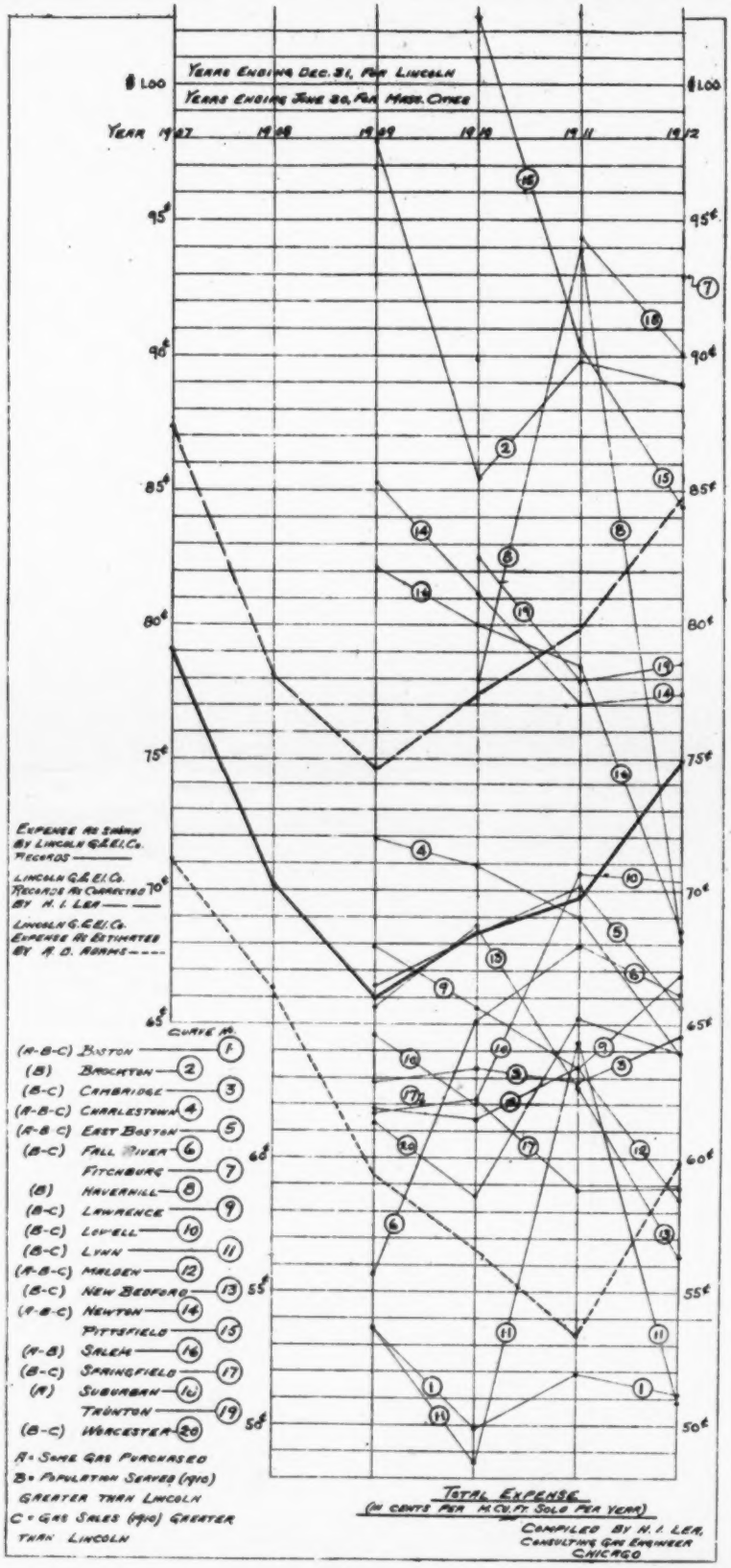
## COMPARISON OF LINCOLN WITH MASSACHUSETTS FIGURES

(As Per A. D. Adams' Arrangement of Accounts)

### T O T A L  E X P E N S E

(Per M.Cu.Ft. Sold Per Year)

| | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| As Shown By Records of Lincoln Gas & Electric Light Co. | $.7912 | $.7016 | $.6594 | $.6837 | $.6970 | $.7491 |
| Lincoln Gas & Elec.Light Co. Records as Corrected By H.I.Lea | .8746 | .7814 | .7464 | .7746 | .7983 | .8498 |
| Lincoln Expenses as A.D.Adams claims they should have been | .7119 | .6838 | .6938 | .6665 | .6836 | .6990 |
| MASSACHUSETTS COSTS AS SHOWN BY H.I.LEA FROM RECORDS of the BOARD OF GAS & ELECTRIC LIGHT COMMISSIONERS OF MASS. | | | | | | |
| Boston | | | .55676 | .49988 | .51917 | .51144 |
| Brockton | | | .97912 | .85365 | .89779 | .88922 |
| Cambridge | | | .62792 | .63369 | .62797 | .64556 |
| Charlestown | | | .71929 | .70905 | .69948 | .63801 |
| East Boston | | | .66461 | .68277 | .70087 | .65674 |
| Fall River | | | .55466 | .65009 | .67984 | .66018 |
| Fitchburg | | | | | | .93025 |
| Haverhill | | | | .77727 | .93994 | .68021 |
| Lawrence | | | .67964 | .65584 | .63340 | .66755 |
| Lowell | | | .64656 | .62000 | .70644 | .70279 |
| Lynn | | | .53708 | .48545 | .64276 | .50763 |
| Malden | | | .61766 | .61443 | .63394 | .58472 |
| New Bedford | | | .65591 | .68539 | .62655 | .56369 |
| Newton | | | .85367 | .91152 | .77040 | .77458 |
| Pittsfield | | | | 1.02623 | .90348 | .84269 |
| Salem | | | .82205 | .79998 | .78457 | .68308 |
| Springfield | | | .61648 | .62180 | .58858 | .58921 |
| Suburban | | | | | .94525 | .90065 |
| Taunton | | | | .82579 | .77842 | .78506 |
| Worcester | | | .61338 | .58521 | .6520[illegible] | .63919 |


Years Ending Dec. 31, for Lincoln
Years Ending June 30, for Mass. Cities
Year 1907 1908 1909 1910 1911 1912
$1.00
95¢
90¢
85¢
80¢
75¢
70¢
65¢
60¢
55¢
50¢
Expense as shown by Lincoln G.&E.El.Co. Records
Lincoln G.&E.El.Co. Records as Corrected by H. I. Lea
Lincoln G.&E.El.Co. Expense as Estimated by A. D. Adams
Curve #
(A-B-C) Boston 1
(B) Brockton 2
(B-C) Cambridge 3
(A-B-C) Charlestown 4
(A-B-C) East Boston 5
(B-C) Fall River 6
Fitchburg 7
(B) Haverhill 8
(B-C) Lawrence 9
(B-C) Lowell 10
(B-C) Lynn 11
(A-B-C) Malden 12
(B-C) New Bedford 13
(A-B-C) Newton 14
Pittsfield 15
(A-B) Salem 16
(B-C) Springfield 17
(A) Suburban 18
Taunton 19
(B-C) Worcester 20
A = Some Gas Purchased
B = Population Served (1910) Greater than Lincoln
C = Gas Sales (1910) Greater than Lincoln
Total Expense
(in cents per M.Cu.Ft. Sold per year)
Compiled by H. I. Lea, Consulting Gas Engineer Chicago

523 SECTION W.

(Here follow tables, marked pages 524-531.)

532 SECTION X.

(Here follows table, marked page 533.)

## NET EARNING OF MASSACHUSETTS GAS COMPANIES AS COMPARED WITH

## LINCOLN GAS & ELECTRIC LIGHT COMPANY

Total Amounts Available for Dividends, Interest and Unapplied Earnings Combined, after Payment of All Expense of Manufacture, Purchase, Distribution, Management and Depreciation as Previously Shown.

(Per M. Cu. Ft. Sold Per Year)

| | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| Net Earnings Gas Department Lincoln G.& E.L.Co. as per Records of Company | $.4119 | $.4978 | $.5406 | $.5152 | $.5099 | $.4548 |
| Net Earnings Gas Department Lincoln G.& E.L.Co. as Corrected by H. I. Lea | .3241 | .4129 | .4489 | .4127 | .3862 | .3238 |
| MASSACHUSETTS COMPANIES:- | | | | | | |
| Boston | | | .34135 | .25597 | .22943 | .25714 |
| Brockton | | | .15082 | .25738 | .21898 | .22976 |
| Cambridge | | | .30148 | .25369 | .23169 | .22886 |
| Charlestown | | | .28180 | .24269 | .24909 | .30275 |
| East Boston | | | .30451 | .22516 | .17137 | .16602 |
| Fall River | | | .32671 | .21861 | .55117 | .15790 |
| Fitchburg | | | | | | .49409 |
| Haverhill | | | | .28504 | .03458 | .22810 |
| Lawrence | | | .47102 | .54629 | .49236 | .49515 |
| Lowell | | | .32574 | .34630 | .25217 | .23182 |
| Lynn | | | .62706 | .61640 | .54123 | .34399 |
| Malden | | | .29569 | .24932 | .27838 | .22119 |
| New Bedford | | | 1.03623 | .53268 | .50508 | .65485 |
| Newton | | | .18502 | .19158 | .23935 | .17966 |
| Pittsfield | | | | .28171 | .25770 | .22483 |
| Salem | | | .37832 | .32114 | .33991 | .36044 |
| Springfield | | | .28123 | .22993 | .24899 | .23849 |
| Suburban | | | | | .65541 | .55386 |
| Taunton | | | | .22212 | .21816 | .18765 |
| Worcester | | | .22144 | .22274 | .15099 | .14269 |

534 In the District Court of the United States, District of Nebraska, Lincoln Division.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Plaintiff,

vs.

THE CITY OF LINCOLN et al., Defendants.

*Stipulation.*

It is hereby stipulated and agreed that the clerk of the court in the preparation of the printed record on appeal of this case shall omit therefrom Exhibits 223, 224, 225, 226, 227, 228 and 258, as found in this volume, for the reason that the matters contained in such exhibits are fully covered by the testimony of witnesses or other exhibits, or are deemed by the parties hereto immaterial under the issues on this appeal.

E. C. STRODE,
*Attorneys for Plaintiffs.*
ANDREW PETERSON,
W. M. MORNING,
*Attorneys for Defendants.*

535 This is one of seven volumes of evidence taken before me at the trial of the case of Lincoln Gas and Electric Light Company vs. City of Lincoln, et al., pending in the United States District Court, for the District of Nebraska, Lincoln Division. These volumes, together with the original printed record containing the evidence given on the first trial and certified to the Supreme Court of the United States, constitute the whole of the evidence submitted to me, and upon which my report heretofore filed in this case is based.

JOHN J. SULLIVAN,
*Special Master.*

536

*Certificate.*

I hereby certify that the statement of the evidence hereto attached, consisting of one volume, and the exhibits material to the issues, consisting of volumes 1, 2 and 3, in each of which a copy of this certificate is attached and likewise signed and allowed, and including certain testimony reproduced in the exact words of the witnesses, desired by the parties and ordered to be so set out by the court; the objections to the evidence and the rulings of the court thereon as set out herein, and including the stipulations of counsel, is a true, complete and properly prepared condensed statement of such evidence, stipulations, exhibits, and objections and rulings of the court thereon, properly prepared and submitted, and that the same is hereby signed, settled and allowed, and ordered made a part of the record in the

above entitled case under the provisions of Rule 75 of said court, as a true, complete and properly prepared condensed statement of all the evidence upon said trial.

Witness my hand this 12th day of August, 1916.

PAGE MORRIS, *Judge.*

537 *Valuation of Lincoln Gas Plant.*

As of Jan. 1, 1907.

Allan D. Adams, Worcester, Mass.

538 Lincoln Gas & Electric Lt. Co.

*Valuation.*


| | Pages. |
|---|---|
| Cost, Depreciation & Value of Lincoln Gas Plant, as of Jan. 1, 1907 | 1 |
| Depreciation of Lincoln Gas Plant as of Jan. 1, 1907 | 2 |
| Ages & Depreciation of Lincoln Gas Plant as of Jan. 1, 1907 | 3–4 |
| Amount of Depreciation of Lincoln Gas Plant as of Jan. 1, 1907 | 5–6 |
| Cost and Value of Lincoln Gas Plant as of Jan. 1, 1907 | 7–8 |
| Detail Cost of Buildings as of Jan. 1, 1907 | 9–10 |
| Cost of C. I. Mains Laid Each Year as of Jan. 1, 1907 | 11 |
| Cost of Steel Mains Laid Each Year as of Jan. 1, 1907 | 12 |
| Cost & Value Lincoln C. I. Gas Mains as of Jan. 1, 1907 | 13 |
| Cost & Value Lincoln Steel Gas Mains as of Jan. 1, 1907 | 13 |
| Total Cost in Cents Per Foot of Gas Mains in Lincoln as of January 1, 1907 | 14 |
| Size of Trenches and Cost Per Linear Foot of Trenching and Filling for Gas Mains as of Jan. 1, 1907 | 15 |
| Cost of C. I. Pipe for Gas Mains at Lincoln as of Jan. 1, 1907 | 16 |
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| Depreciation & Value of Service Pipes Laid Each Year as of Jan. 1, 1907 | 18 |

539 Lincoln Gas & Electric Lt. Co.

*Valuation.*

(Continued.)


| | Pages. |
|---|---|
| Cost of one 1¼ Inch Service from Main to Meter as of Jan. 1, 1907 | 19 |
| Cost of One 1¼ Inch Service from Main to Curb as of Jan. 1, 1907 | 19 |
| Cost of Paving Over Mains Relaid | 20 |
| Feet of Mains to be Relaid under Paving in 1907 | 20 |
| Cost to Cut and Relay Paving Over Mains in 1907 | 21 |
| Cost of Meters Purchased Each Year as of Jan. 1, 1907 | 22 |
| Cost & Value as of Jan. 1, 1907, of Lincoln Gas Meters Owned Before 1903 and Meters Since Bought | 23 |
| Number of Service Pipes under Paving as of Jan. 1, 1907 | 24 |
| Total Gas Mains in Lincoln, Jan. 1, 1913, Per Testimony of Mr. Broadnax minus mains Laid in Lincoln During 1903 to 1912 Inclusive Per Reports of Gas Company, showing Mains in January, 1903 | 25 |


540 *Cost, Depreciation & Value of Lincoln Gas Plant, as of January 1, 1907.*

| Plant items. | $ Total cost. | $ Total depreciation. | $ Total value. |
|---|---|---|---|
| Land | 2,250 | ..... | 2,250 |
| Buildings | 22,247 | 5,585 | 16,662 |
| Works Equipment | 85,518 | 21,717 | 63,801 |
| Distribution System | 229,135 | 50,245 | 178,890 |
| | 339,150 | 77,547 | 261,603 |
| Engineering, Interest, Taxes & General 7 % | 23,740 | 5,428 | 18,312 |
| | 362,890 | 82,975 | 279,915 |

541 *Depreciation of Lincoln Gas Plant as of Jan. 1, 1907.*

| Plant items. | Per cent depreciation. Annual. | Per cent depreciation. Total. | $ Annual depreciation. |
|---|---|---|---|
| Land | .... | ..... | ..... |
| Buildings | 1.6 | 25.1 | 370.40 |
| Works Equipments | 2.3 | 26.4 | 2,005.26 |
| Distribution System | 1.8 | 21.9 | 4,131.58 |
| | 2.06 | 23.30 | 6,507.24 |
| Engineering, Interest, Taxes & General 7% | 2.06 | 23.30 | 455.50 |
| | | | 6,962.74 |

542 *Ages & Depreciation of Lincoln Gas Plant as of Jan. 1, 1907.*

| Plant items. | Years assumed life. | Per cent annual depreciation. | Years old. | Per cent total depreciation. |
|---|---|---|---|---|
| **Buildings:** | | | | |
| Purifying House | 66.6 | 1.5 | 16 | 24.0 |
| Retort House | 66.6 | 1.5 | 16 | 24.0 |
| Coal Shed | 40.0 | 2.5 | 16 | 40.0 |
| Oil Tank House | 66.6 | 1.5 | 9 | 13.5 |
| Stable & Blacksmith Shop | 25.0 | 4.0 | 9 | 36.0 |
| **Works Equipment:** | | | | |
| 6½-Foot Water Gas Set, W. G. C. | 33.3 | 3.0 | 4 | 12.0 |
| 6½-Foot Water Gas Set, Springer | 33.3 | 3.0 | 18 | 54.0 |
| Operating Floor | 66.6 | 1.5 | 4 | 6.0 |
| #1 Roots Blower, Positive | 40.0 | 2.5 | 5 | 12.5 |
| #6 Roots, Exhauster 16" | 40.0 | 2.5 | 16 | 40.0 |
| 10" McKenzie Exhauster | 40.0 | 2.5 | 14 | 35.0 |
| 4" x 5" Greenfield Engine | 40.0 | 2.5 | 9 | 22.5 |
| 15 H. P. Motor for Blower | 33.3 | 3.0 | 2 | 6.0 |
| 35 H. P. Motor D. C. | 33.3 | 3.0 | 2 | 6.0 |
| Countershafting, etc. | 33.3 | 3.0 | 15 | 45.0 |
| 3 Benches of 6's | 33.3 | 3.0 | 14 | 42.0 |
| 3 Benches of 6's | 33.3 | 3.0 | 5 | 15.0 |
| Charging Floor | 66.6 | 1.5 | 9 | 13.5 |
| 4½' x 25' Condenser | 40.0 | 2.5 | 16 | 40.0 |
| 5½' x 31' Scrubber | 40.0 | 2.5 | 16 | 40.0 |
| 4½' x 5' Rotary Scrubber | 40.0 | 2.5 | 19 | 47.5 |
| 3 Purifying Boxes 20' x 24' x 4' | 50.0 | 2.0 | 14 | 28.0 |
| 1 Purifying Box, 20' x 24' x 4' | 50.0 | 2.0 | 6 | 12.0 |
| 10' Station Meter | 40.0 | 2.5 | 7 | 17.5 |
| 6' Station Meter | 40.0 | 2.5 | 24 | 60.0 |
| 200,000 Cu. Ft. Gas Holder | 66.6 | 1.5 | 16 | 24.0 |
| 50,000 Cu. Ft. Gas Holder | 66.6 | 1.5 | 24 | 36.0 |
| 20" Connelly Governor | 50.0 | 2.0 | 16 | 32.0 |
| 6" x 10" x 5" x 10" Knowles Pump | 25.0 | 4.0 | 4 | 16.0 |
| 3" x 4" Vertical Pump | 25.0 | 4.0 | 14 | 56.0 |
| 3½" x 4" x 6" Gardner Pump | 25.0 | 4.0 | 0 | 0.0 |
| 6" x 4" x 6" Warren Pump | 25.0 | 4.0 | 14 | 56.0 |
| Photometer | 33.3 | 3.0 | 13 | 39.0 |
| Shop Tools | 25.0 | 4.0 | 1 | 4.0 |
| Tar Separator Wood | 40.0 | 2.5 | 1 | 2.5 |
| #3 P. & A. Tar Extractor | 40.0 | 2.5 | 26 | 65.0 |
| 4 Old Boilers as Tar Tanks 63' x 16' | 66.6 | 1.5 | 14 | 35.0 |
| Tar Well 3¼' x 3¼' x 10' | 66.6 | 1.5 | 14 | 21.0 |
| Tar Well 6' x 20' x 12' | 66.6 | 1.5 | 8 | 12.0 |
| Oil Tank 8' x 24' / Oil Tank 8½' x 30' | 66.6 | 1.5 | 3 | 4.5 |
| Brick Oil Tank 10' x 10' | 66.6 | 1.5 | 8 | 12.0 |

543 *Ages & Depreciation of Lincoln Gas Plant as of Jan. 1, 1907.*

| Plant items. | Years assumed life. | Per cent annual depreciation. | Years old. | Per cent total depreciation. |
|---|---|---|---|---|
| **Works Equipment:** | | | | |
| Drain Piping | 40.0 | 2.5 | 4 | 10.0 |
| Water Piping | 33.3 | 3.0 | 3 | 9.0 |
| Oil Piping | 33.3 | 3.0 | 3 | 9.0 |
| Gas Yard Mains | 66.6 | 1.5 | 10 | 15.0 |
| Steam Piping | 25.0 | 4.0 | 10 | 40.0 |
| Tar Piping | 40.0 | 2.5 | 10 | 25.0 |
| Work Tools | 10.0 | 10.0 | 3 | 30.0 |
| Office Furniture | 25.0 | 4.0 | .. | 80.0 |
| **Distribution System:** | | | | |
| Cost Iron Mains | 100.0 | 1.0 | 14.7 | 14.7 |
| Steel Mains | 50.0 | 2.0 | 11.7 | 23.5 |
| Service Pipe | 40.0 | 2.5 | 9.9 | 24.9 |
| Meters | 40.0 | 2.5 | 13.0 | 32.2 |
| Paving over C. I. Mains | 100.0 | 1.0 | .... | 14.7 |
| Paving over Steel Mains | 50.0 | 2.0 | .... | 23.5 |
| Paving over Service Pipes | 40.0 | 2.5 | .... | 24.9 |

544 *Age & Depreciation of Lincoln Gas Plant as of Jan. 1, 1907.*

| Plant items. | $ Annual depreciation. | $ Total depreciation. | Year built. |
|---|---|---|---|
| **Buildings:** | | | |
| Purifying House | 188.66 | 3,018 | 1890 |
| Retort House | 91.32 | 1,461 | 1890 |
| Coal Shed | 41.43 | 663 | 1890 |
| Oil Tank House | 16.61 | 149 | 1897 |
| Stable & Blacksmith Shop | 32.72 | 294 | 1897 |
| | 370.74 | 5,585 | |
| **Works equipment:** | | | |
| 6½ Foot Water Gas Set, W. G. C. | 174.24 | 697 | 1902 |
| 6½ Foot Water Gas Set, Springer. | 87.12 | 1,568 | 1888 |
| Operating Floor | 17.76 | 71 | 1902 |
| #1 Roots Blower, Positive | 3.55 | 18 | 1901 |
| #6 Roots Exhauster, 16" | 20.60 | 330 | 1890 |
| 10" McKenzie Exhauster | 10.63 | 149 | 1892 |
| 4"x5" Greenfield Engine | 6.63 | 60 | 1897 |
| 15 H. P. Motor for Blower | 7.50 | 15 | 1904 |
| 35 H. P. Motor, D. C. | 16.05 | 32 | 1904 |
| Countershafting, etc. | 2.31 | 35 | 1891 |
| 3 Benches of 6's, ½ depth | 211.02 | 2,954 | 1892 |
| 3 Benches of 6's, ¾ depth | 229.02 | 1,145 | 1901 |
| Charging Floor | 24.08 | 217 | 1897 |
| 4½'x25' Condenser | 14.58 | 233 | 1890 |
| 5½'x31' Scrubber | 7.98 | 128 | 1890 |
| 4½'x5' Rotary Scrubber | 53.45 | 1,016 | 1887 |

| | | | |
|---|---|---|---|
| 3 Purifying Boxes, 20′x24′x4′.... | 115.20 | 1,613 | 1892 |
| 1 Purifying Box, 20′x24′x4′..... | 38.40 | 230 | 1900 |
| 10′ Station Meter ..... | 98.50 | 690 | 1892 |
| 6′ Station Meter ..... | 31.25 | 750 | 1882 |
| 200,000 Cu. Ft. Gas Holder..... | 270.00 | 2,520 | 1890 |
| 50,000 Cu. Ft. Gas Holder..... | 120.00 | 2,880 | 1882 |
| 20″ Connelly Governor ..... | 17.20 | 275 | 1890 |
| 60″x10″x5″x10″ Knowles' Pump. | 16.72 | 67 | 1902 |
| 3″x4″ Vertical Pump..... | 7.44 | 104 | 1892 |
| 3½″x4″x6″ Gardner Pump ..... | 4.16 | 0 | 1906 |
| 6″x4″x6″ Warren Pump ..... | 7.44 | 104 | 1892 |
| Photometer ..... | 9.00 | 111 | 1893 |
| Shop Tools ..... | 18.48 | 18 | 1905 |
| Tar Separator, wood ..... | 44.75 | 45 | 1905 |
| #3 P. & A. Tar Extractor..... | 19.38 | 504 | 1886 |
| 4 Old Boilers as Tar Tanks 63′x16′ | 9.83 | 138 | 1892 |
| Tar Well 3¼′x3¼′x10′..... | 1.56 | 22 | 1892 |
| Tar Well 6′x20′x12′ ..... | 7.08 | 57 | 1898 |
| Oil Tank 8′x24′ & Oil Tank 8½x 30′ ..... | 9.36 | 28 | 1903 |
| Brick Oil Tank, 10′x10′..... | 3.42 | 27 | 1898 |

545 *Age & Depreciation of Lincoln Gas Plant as of Jan.* 1, 1907.

| Plant items. | $ Annual depreciation. | $ Total depreciation. | Year built. |
|---|---|---|---|
| Works equipment—(Cont.): | | | |
| Drain Piping ..... | 15.58 | 63 | |
| Water Piping ..... | 13.80 | 41 | |
| Oil Piping ..... | 4.11 | 12 | |
| Gas Yard Mains ..... | 27.30 | 273 | |
| Steam Piping ..... | 90.00 | 900 | |
| Tar Piping ..... | 1.38 | 14 | |
| Works Tools ..... | 46.20 | 139 | |
| | 1,934.06 | 20,293 | |
| Office Furniture per Malone..... | 71.20 | 1,424 | |
| | 2,005.26 | 21,717 | |
| Distribution system: | | | |
| Cast Iron Mains ..... | 731.75 | 10,821 | 1875-1907 |
| Steel Mains ..... | 794.08 | 9,354 | 1875-1907 |
| Service Pipes ..... | 1,145.80 | 11,435 | 1872-1907 |
| Meters ..... | 1,048.60 | 13,505 | 1872-1907 |
| Paving over C. I. Mains..... | 186.30 | 2,738 | |
| Paving over Steel Mains..... | 84.80 | 996 | |
| Paving Over Service Pipes..... | 140.25 | 1,396 | |
| | 4,131.58 | 50,245 | |

546 *Cost and Value of Lincoln Gas Plant as of Jan. 1, 1907.*

| Plant items. | $ Cost. | $ Value. |
|---|---|---|
| Land: | | |
| Lots number- 1 to 12, inclusive, Block 79, Original Plat of City of Lincoln, 300 feet by 300 ft., 90,000 square feet, used for Gas Works,—at 2.5 cents per square foot | 2,250 | |
| Buildings: | | |
| Purifying House | 12,577 | 9,559 |
| Retort House | 6,088 | 4,627 |
| Coal Shed | 1,657 | 994 |
| Oil Tank House | 1,107 | 958 |
| Stable & Blacksmith Shop, per Lea | 818 | 524 |
| | 22,247 | 16,662 |
| Works equipment: | | |
| 6½ Foot Water Gas Set, W. G. Const. | 5,808 | 5,111 |
| 6½ Foot Gas Set, Springer | 2,904 | 1,336 |
| Operating Floor | 1,184 | 1,113 |
| #1 Root Blower, Positive | 142 | 124 |
| #6 Roots Exhauster, 16″ | 824 | 494 |
| 10″ McKenzie Exhauster | 425 | 276 |
| 4″x5″ Greenfield Engine | 265 | 205 |
| 15 H. P. Motor for Blower | 250 | 235 |
| 35 H. P. Motor, D. C. | 535 | 503 |
| Countershafting, etc. | 77 | 42 |
| 3 Benches of 6's, ½ depth | 7,034 | 4,080 |
| 3 Benches of 6's, ¾ depth | 7,634 | 6,489 |
| Charging Floor | 1,605 | 1,388 |
| 4½′x25′ Condenser | 583 | 350 |
| 5½′x31′ Scrubber | 319 | 191 |
| 4½′x5′ Rotray Scrubber | 2,138 | 1,122 |
| 3 Purifying Boxes, 20′x24′x4′ | 5,760 | 4,147 |
| 1 Purifying Box, 20′x24′x4′ | 1,920 | 1,690 |
| 10′ Station Meter | 3,940 | 3,250 |
| 6′ Station Meter | 1,250 | 500 |
| 200,000 Cu. Ft. Gas Holder | 18,000 | 15,480 |
| 50,000 Cu. Ft. Gas Holder | 8,000 | 5,120 |
| 20″ Connelly Governor | 860 | 585 |
| 6″x10″x5″x10″ Knowles Pump | 418 | 351 |
| 3″x4″ Vertical Pump | 186 | 82 |
| 3½″x4″x6″ Gardner Pump | 104 | 104 |

547 *Cost and Value of Lincoln Gas Plant as of Jan.* 1, 1907.

| Plant Items. | $ Cost. | $ Value. |
|---|---|---|
| Works equipment—(Cont.): | | |
| 6″x4″x6″ Warren Pump | 186 | 82 |
| Photometer | 300 | 189 |
| Shop Tools, per Lea | 462 | 444 |
| Tar Separator, Wood, per Lea | 179 | 134 |
| #3 P. & A. Tar Extractor | 775 | 271 |
| 4 Old Boilers as Tar Tanks, 63′x16′ | 393 | 255 |
| Tar Well, 3¼′x3¼′x10′, per Lea | 104 | 82 |
| Tar Well, 6′x20′x12′, per Lea | 472 | 415 |
| Oil Tank, 8′x24′ & Oil Tank 8½′x30′ | 624 | 596 |
| Brick Oil Tank 10′x10′, per Lea | 228 | 201 |
| Drain Piping, per Malone | 631 | 568 |
| Water Piping, per Malone | 460 | 419 |
| Oil Piping, per Malone | 137 | 125 |
| Gas Yard Mains, per Malone | 1,820 | 1,547 |
| Steam Piping, per Malone | 2,250 | 1,350 |
| Tar Piping, per Malone | 55 | 41 |
| Works Tools, per Lea | 462 | 323 |
| | 81,703 | 61,410 |
| Horses, wagons & harness, per Malone | 2,035 | 2,035 |
| Office Furniture, per Malone | 1,780 | 356 |
| | 85,518 | 63,801 |
| Distribution system: | | |
| Cast Iron Mains | 73,175 | 62,354 |
| Steel Mains | 39,704 | 30,350 |
| Service Pipes | 45,832 | 34,397 |
| Meters | 41,944 | 28,439 |
| Paving over C. I. Mains | 18,630 | 15,892 |
| Paving over Steel Mains | 4,240 | 3,244 |
| Paving over Service Pipes | 5,610 | 4,214 |
| | 229,135 | 178,890 |

548 Lincoln Gas & Electric Lt. Co.

*Detail Cost of Buildings as of Jan.* 1, 1907.

Purifying House.

| | |
|---|---|
| Excavation and Removal, 453.6 cu. yds. at 40¢ per cu. yd. | $1,814.40 |
| Stone Foundation 505.9 cu. yds. at $7.00 | 3,541.30 |
| 198.155 Brick Laid at $15 per M | 2,972.33 |
| Total of above | 8,328.03 |

| | | |
|---|---|---|
| Total Cost Purifying House per Lea | | $16,620.00 |
| Deduct Cost of Excavation, Foundations, Brick & Tile, per Lea | | 12,371.00 |
| | | 4,249.00 |
| Add Cost of Excavation, Foundation, Brick & Tile, per Adams | | 8,328.03 |
| Total cost | | 12,577.03 |

Retort House.

| | |
|---|---|
| Excavations & removal, 1,244.5 cu. yds.@40¢ | $497.80 |
| Foundations—Stone, 206.4 cu. yds.@$7.00 | 1,444.80 |
| Brick Laid, 160.540 M.@$15.00 | 2,408.10 |
| Total of above | 4,350.70 |

| | | |
|---|---|---|
| Total Cost Retort House per Lea | | $7,689.00 |
| Deduct Cost of Excavations, Foundations, Tile & Brick, per Lea | | 5,951.00 |
| | | 1,738.00 |
| Add Cost of Excavation, Foundations, Brick & Tile, per Adams | | 4,350.70 |
| Total cost | | 6,088.70 |

Coal Shed.

| | |
|---|---|
| Excavation & removal, 146.4 cu. yds.@40¢ | $58.56 |
| Foundation—Stone 63.1 cu. yds.@$7.00 | 441.70 |
| Brick laid 3.593 M.@$15 | 53.90 |
| Total of above | 554.16 |

| | | |
|---|---|---|
| Total Cost Coal Shed, per Lea | | $1,793.00 |
| Deduct Cost of Excavation, Foundations, Brick & Tile, per Lea | | 690.00 |
| | | 1,103.00 |
| Add Cost of Excavation, Foundations, Brick & Tile, per Adams | | 554.16 |
| Total cost | | $1,657.16 |

549 Lincoln Gas & Electric Lt. Co.

*Detail Cost of Buildings as of Jan. 1, 1907.*

Oil Tank House.

| | |
|---|---|
| Excavation & removal 428.9 cu. yds.@40¢ | $171.56 |
| Foundation—Stone 65.5 cu. yds.@$7 | 458.50 |
| Brick laid 5.851 M. @$15 | 87.77 |
| Total of above | 717.83 |
| Total Cost of Oil Tank House, per Lea | 1,558.00 |
| Deduct Cost of Excavation, Foundations, Brick & Tile, per Lea | 1,168.00 |
| | 390.00 |
| Add Cost Excavation, Foundation, Brick & Tile, per Adams | 717.83 |
| Total cost | $1,107.83 |

Stable & Blacksmith Shop.

Total Cost Assumed of Stable & Blacksmith Shop, per Lea $818.00

550 Lincoln Gas & Electric Light Company.

Distribution System, 2.

*Cost of C. I. Mains Laid Each Year as of Jan. 1, 1907.*

| Year. | Inch size. | Feet laid. | $ Cost per foot. | $ Total cost. |
|---|---|---|---|---|
| Before 1903. | 3 | 406 | 0.327 | 132.76 |
| | 4 | 69,260 | 0.402 | 27,842.52 |
| | 6 | 20,451 | 0.624 | 12,761.42 |
| | 8 | 896 | 0.823 | 737.40 |
| | 10 | 9,810 | 1.009 | 9,898.29 |
| | 12 | 3,613 | 1.379 | 4,982.32 |
| | 16 | 1,269 | 1.928 | 2,446.63 |
| | 20 | 1,472 | 2.838 | 4,177.53 |
| | | 107,177 | | 62,978.87 |
| 1903 | 4 | 1,237 | 0.402 | 497.27 |

| | | | | |
|---|---|---|---|---|
| 1904 | 4..... | 2,005 | 0.402 | 806.01 |
| | 6..... | 1,094 | 0.624 | 682.65 |
| | 8..... | 938 | 0.823 | 771.97 |
| | | 4,037 | | 2,260.63 |
| 1905 | 4..... | 8,514 | 0.402 | 3,422.62 |
| | 8..... | 2,734 | 0.823 | 2,250.08 |
| | | 11,248 | | 5,672.70 |
| 1906 | 4..... | 1,909 | 0.402 | 767.41 |
| | 6..... | 1,605 | 0.624 | 1,001.52 |
| | | 3,514 | | 1,768.93 |
| Total..... | | 127,213 | | 73,178.40 |

551 Lincoln Gas & Electric Light Company.

Distribution System, 3.

*Cost of Steel Mains Laid Each Year as of Jan.* 1, 1907.

| Year. | Inch size. | Feet laid. | $ Cost per foot. | $ Total cost. |
|---|---|---|---|---|
| Before 1903 | 1¼+1½..... | 2,258 | 0.144 | 325.15 |
| | 2..... | 131,380 | 0.198 | 26,013.24 |
| | | 133,638 | | 26,338.39 |
| 1903 | 2..... | 23,558 | 0.198 | 4,663.46 |
| 1904 | 2..... | 7,055 | 0.198 | 1,396.89 |
| 1905 | 2..... | 16,787 | 0.198 | 3,323.82 |
| 1906 | 2..... | 20,126 | 0.198 | 3,984.94 |
| Total..... | | 201,164 | | 39,707.50 |

552 Lincoln Gas & Electric Light Company.

Distribution System. 4.

*Cost & Value Lincoln C. I. Gas Mains as of Jan. 1, 1907.*

| Year laid. | $ New cost, Jan. 1, 1907. | Yrs. old. | % Dep. | $ Depreciation, Jan. 1, 1907. | $ Value, Jan. 1, 1907. |
|---|---|---|---|---|---|
| Before 1903..... | 62,978 | 13+4 | 17 | 10,706 | 52,272 |
| 1903..... | 497 | 3 | 3 | 14 | 482 |
| 1904..... | 2,260 | 2 | 2 | 45 | 2,215 |
| 1905..... | 5,672 | 1 | 1 | 56 | 5,616 |
| 1906..... | 1,768 | 0 | 0 | 0 | 1,768 |
| Total..... | 73,175 | | | 10,821 | 62,354 |

*Cost & Value Lincoln Steel Gas Mains as of Jan. 1, 1907.*

| Year laid. | $ New cost, Jan. 1, 1907. | Yrs. old. | % Dep. | $ Depreciation, Jan. 1, 1907. | $ Value, Jan. 1, 1907. |
|---|---|---|---|---|---|
| Before 1903..... | 26,338 | 13+4 | 34 | 8,954 | 17,384 |
| 1903..... | 4,663 | 3 | 6 | 279 | 4,384 |
| 1904..... | 1,396 | 2 | 4 | 55 | 1,341 |
| 1905..... | 3,323 | 1 | 2 | 66 | 3,257 |
| 1906..... | 3,984 | 0 | 0 | 0 | 3,984 |
| Total..... | 39,704 | | | 9,354 | 30,350 |

553 Lincoln Gas & Electric Light Company.

Distribution System. 8.

*Total Cost in Cents per Foot of Gas Mains in Lincoln as of January 1, 1907.*

| Inch. | Steel. 1¼ | Steel. 2 | C. I. 3 | C. I. 4 | C. I. 6 |
|---|---|---|---|---|---|
| Trenching & Filling..... | 6.30 | 7.20 | 7.42 | 7.87 | 8.88 |
| Carting & Laying..... | 1.12 | 1.80 | 2.50 | 3.40 | 6.00 |
| Total Labor ..... | 7.42 | 9.00 | 9.92 | 11.27 | 14.88 |
| Joining Materials & Incidentals..... | .50 | .50 | .88 | .88 | 1.13 |
| All Except Iron..... | 7.92 | 9.50 | 10.80 | 12.15 | 16.01 |
| Pipe & 3% For Specials..... | 6.45 | 10.34 | 21.88 | 28.01 | 46.35 |
| Total Cost Laid..... | 14.37 | 19.84 | 32.68 | 40.16 | 62.36 |
| Used ..... | 14.4 | 19.8 | 32.7 | 40.2 | 62.4 |

| Inch. | C. I. 8 | C. I. 10 | C. I. 12 | C. I. 16 | C. I. 20 |
|---|---|---|---|---|---|
| Trenching & Filling..... | 11.11 | 12.00 | 13.86 | 15.84 | 19.03 |
| Carting & Laying..... | 8.00 | 10.00 | 14.00 | 20.00 | 30.00 |
| Total Labor ..... | 19.11 | 22.00 | 27.86 | 35.84 | 49.03 |
| Joining Materials & Incidentals..... | 1.35 | 1.60 | 1.90 | 2.50 | 3.00 |
| All Except Iron..... | 20.46 | 23.60 | 29.76 | 38.34 | 52.03 |
| Pipe & 3% For Specials..... | 61.80 | 77.25 | 108.15 | 154.50 | 231.75 |
| Total Cost Laid..... | 82.26 | 100.85 | 137.91 | 192.84 | 283.78 |
| Used ..... | 82.3 | 100.9 | 137.9 | 192.8 | 283.8 |

554 Lincoln Gas & Electric Light Company.

Distribution System, 9.

*Size of Trenches & Cost Per Linear Foot of Trenching and Filling for Gas Mains as of Jan. 1, 1907.*

| Inch pipe. | Feet size trench. | | | Cost per linear foot at 1.5 cts. per cu. ft. |
|---|---|---|---|---|
| | Feet wide. | Feet deep. | Cu. ft. per ft. | |
| 1¼ | 1.4 | 3.0 | 4.2 | 6.30 |
| 2 | 1.5 | 3.2 | 4.80 | 7.20 |
| 3 | 1.5 | 3.3 | 4.95 | 7.42 |
| 4 | 1.5 | 3.5 | 5.25 | 7.87 |
| 6 | 1.6 | 3.7 | 5.92 | 8.88 |
| 8 | 1.9 | 3.9 | 7.41 | 11.11 |
| 10 | 2.0 | 4.0 | 8.0 | 12.00 |
| 12 | 2.2 | 4.2 | 9.24 | 13.86 |
| 16 | 2.4 | 4.4 | 10.56 | 15.84 |
| 20 | 2.7 | 4.7 | 12.69 | 19.03 |

555 Lincoln Gas & Electric Light Company.

Distribution System, 10.

*Cost of C. I. Pipe for Gas Mains at Lincoln as of Jan. 1, 1907.*

| Inch size. | Pounds per foot. | $ per ton of 2,000 pounds. | Cents cost per foot. | Cents cost per foot plus 3% for specials. |
|---|---|---|---|---|
| 3 | 12.5 | 34 | 21.25 | 21.88 |
| 4 | 17 | 32 | 27.20 | 28.01 |
| 6 | 30 | 30 | 45.00 | 46.35 |
| 8 | 40 | 30 | 60.00 | 61.80 |
| 10 | 50 | 30 | 75.00 | 77.25 |
| 12 | 70 | 30 | 105.00 | 108.15 |
| 16 | 100 | 30 | 150.00 | 154.50 |
| 20 | 150 | 30 | 225.00 | 231.75 |

556 Lincoln Gas & Electric Light Co.

*Number Service Pipes Each Year Per Gas Reports to Jan. 1, 1907.*

| Year. | Laid main to meter. | Laid curb to meter. | Total laid to meter. | Laid main to curb. | In use end of year. |
|---|---|---|---|---|---|
| 1902 | ... | ... | ... | ... | |
| 1903 | 691 | ... | 691 | ... | 2911 |
| 1904 | 535 | 41 | 576 | 77 | 3602 |
| 1905 | 473 | 137 | 610 | 5 | 4178 |
| 1906 | 479 | 75 | 554 | 34 | 4788 |
| | 2178 | 253 | 2431 | 116 | 5342 |

557 Lincoln Gas & Electric Light Company.

Distribution System, 7.

*Cost of Service Pipes Laid Each Year as of Jan.* 1, 1907.

| Year. Before | Total number laid to meter. | $ Cost each. | $ Total cost. |
|---|---|---|---|
| 1903 | 2,911 | 8.58 | 24,976.38 |
| 1903 | 691 | 8.58 | 5,928.78 |
| 1904 | 576 | 8.58 | 4,942.08 |
| 1905 | 610 | 8.58 | 5,233.80 |
| 1906 | 554 | 8.58 | 4,753.32 |
| Total | | | 45,834.36 |

*Depreciation & Value of Service Pipes Laid Each Year as of Jan.* 1, 1907.

| Year. Before | $ Total cost. | Yrs. old. | % Dep. | $ Depreciation. | $ Value. |
|---|---|---|---|---|---|
| 1903 | 24,976 | 13+4 | 42.5 | 10,614 | 14,362 |
| 1903 | 5,928 | 3 | 7.5 | 444 | 5,484 |
| 1904 | 4,942 | 2 | 5.0 | 247 | 4,695 |
| 1905 | 5,233 | 1 | 2.5 | 130 | 5,103 |
| 1906 | 4,753 | 0 | 0. | 0 | 4,753 |
| Total | 45,832 | | 24.9 | 11,435 | 34,397 |

558 Lincoln Gas & Electric Light Company.

Distribution System, 11.

*Cost of One 1¼-inch Service from Main to Meter as of Jan.* 1, 1907.

| | |
|---|---|
| 50 ft. of 1¼ inch Pipe laid at 14.4 cts. per foot | $7.20 |
| One Street Tee | .09 |
| Two Street Elbows | .13 |
| Two Common Elbows | .09 |
| One Plug | .028 |
| One Meter Cock | .55 |
| Connecting to Main | .50 |
| Total | $8.588 |

*Cost of One 1¼-inch Service from Main to Curb as of Jan. 1, 1907.*

| | |
|---|---|
| 25 ft. of 1¼ inch Steel Pipe Laid at 14.4 cts. per foot | 3.31 |
| One Street Tee | .09 |
| Two Street Elbows | .13 |
| Two Plugs | .056 |
| Connecting to Main | .50 |
| Total | 4.086 |

559 Lincoln Gas & Electric Lt. Co.

*Cost of Paving Over Mains Relaid.*

| Inch size. | Earth trench feet wide. | Paving cut feet wide & square feet per foot of mains. | Cents cost cutting & repaving per linear foot main at 25 cts. per sq. foot paving. |
|---|---|---|---|
| 1¼ | 1.4 | 1.8 | 45.0 |
| 2 | 1.5 | 1.9 | 47.5 |
| 3 | 1.5 | 1.9 | 47.5 |
| 4 | 1.5 | 1.9 | 47.5 |
| 6 | 1.6 | 2.0 | 50.0 |
| 8 | 1.8 | 2.2 | 55.0 |
| 10 | 2.0 | 2.4 | 60.0 |
| 12 | 2.2 | 2.6 | 65.0 |
| 16 | 2.4 | 2.8 | 70.0 |
| 20 | 2.7 | 3.1 | 77.5 |

*Feet of Mains to be Relaid under Paving in 1907.*

| Inch size. | Miles under paving per Malone. | Feet under paving in 1907. | Per cent to be relaid under paving. | Feet to be relaid under paving. |
|---|---|---|---|---|
| 2 | 0.568 | | | |
| | 3.636 | | | |
| 2 | 4.250 | 44,637 | 20 | 8,927 |
| 4 | 4.800 | | | |
| 4 | 4.070 | 46,834 | 33 | 15,455 |
| 6 | 0.075 | | | |
| 6 | 2.080 | | | |
| 6 | 0.447 | 13,739 | 100 | 13,739 |

1409

| | | | | |
|---|---|---|---|---|
| 8..... | 0.150 | .... | 100 | |
| 8..... | 0.530 | 3,590 | 100 | 3,590 |
| 10..... | 0.220 | .... | 100 | |
| 10..... | 0.530 | 3,960 | 100 | 3,960 |
| 12..... | 0.300 | 1,584 | 100 | 1,584 |
| 16..... | 0.060 | 317 | 100 | 317 |
| | | 114,661 | | 47,572 |

560 Lincoln Gas & Electric Lt. Co.

*Cost to Cut and Relay Paving Over Mains in* 1907.

| Inch size. | Feet of mains to be relaid under paving. | Cents cost paving per foot mains. | $ Total cost paving. |
|---|---|---|---|
| 2..... | 8,927 | 47.5 | 4,240 |
| 4..... | 15,455 | 47.5 | 7,341 |
| 6..... | 13,739 | 50.0 | 6,869 |
| 8..... | 3,590 | 55.0 | 1,974 |
| 10..... | 3,960 | 60.0 | 2,376 |
| 12..... | 1,584 | 65.0 | 1,029 |
| 16..... | 317 | 70.0 | 221 |
| | 47,572 | | |

561 Lincoln Gas & Electric Light Company.

Distribution System, 5.

*Cost of Meters Purchased Each Year as of Jan. 1, 1907*

| Year. | Light of meters. | Number meters. | $ List each. | $ Total list. | Cost, list less 40%. |
|---|---|---|---|---|---|
| Before 1903 | 3 | 3,001 | 7.50 | 22,507 | |
| | 5 | 1,583 | 9.50 | 15,038 | |
| | 10 | 48 | 12.50 | 600 | |
| | 20 | 13 | 18.00 | 234 | |
| | 30 | 7 | 27.50 | 192 | |
| | 45 | 10 | 41.50 | 415 | |
| | 60 | 4 | 56.00 | 224 | |
| | 100 | 5 | 87.50 | 437 | |
| | 150 | 1 | 145.00 | 145 | |
| | | 4,672 | ..... | 39,792 | 23,875 |
| 1903 | 5 | 793 | 9.50 | 7,533 | 4,519 |
| 1904 | 5 | 745 | 9.50 | 7,077 | 4,246 |
| 1905 | 45 | 3 | 41.50 | 124 | |
| | 60 | 1 | 56.00 | 56 | |
| | 100 | 1 | 87.50 | 87 | |
| | 150 | 1 | 145.00 | 145 | |
| | | 6 | ..... | 412 | 247 |
| 1906 | 5 | 50 | 9.50 | 475 | 285 |
| Total | | 6,266 | ..... | ..... | 33,172 |

562 Lincoln Gas & Electric Light Company.

Distribution System, 6.

*Cost & Value as of Jan. 1, 1907, of Lincoln Gas Meters Owned Before 1903 and Meters Since Bought.*

| Year. | $ Cost meters. | Yrs. old, Jan. 1, 1907. | % Dep. | $ Depreciation. | $ Value, Jan. 1, 1907. |
|---|---|---|---|---|---|
| Before 1903 | 23,875 | 13+4 | 42.5 | 10,146 | 13,729 |
| 1903 | 4,519 | 3 | 7.5 | 338 | 4,181 |
| 1904 | 4,246 | 2 | 5 | 212 | 4,034 |
| 1905 | 247 | 1 | 2.5 | 6 | 241 |
| 1906 | 285 | 0 | 0 | 0 | 285 |
| Total | 33,172 | | 32.2 | 10,702 | 22,470 |

| | |
|---|---|
| Above Cost Of Meters | $33,172 |
| Freight, Setting Of 6,266 Meters At $1.40 Each | 8,772 |
| Cost Of Meters & Connections | $41,944 |
| Depreciation On Meters And Connections At 32.2 Per Cent | 13,506 |
| Value Of Meters & Connections | $28,438 |

563 *Number of Service Pipes under Paving as of Jan. 1, 1907.*

| | |
|---|---|
| Feet of C. I. Mains, Malone | 127,213 |
| Feet of Street Mains, Malone | 201,164 |
| Total Feet Mains, Malone | 328,377 |
| Per Cent of Mains Under Paving | 34.9 |
| Total Number Services | 5342. |
| Services Under Paving 5342x0.35 | 1870. |

*Cost of Repaving Per Service.*

Average Area of Paving to be relaid per Service 6′x2′=12 sq. ft.
Cost per Service at 25 cents per square foot, 12x25¢=$3.00.

*Cost, Depreciation and Value of Paving Over Services as of Jan. 1, 1907.*

| | |
|---|---|
| Paving Over 1870 Services at $3.00 | $5610 |
| Depreciation at 24.9 per cent as on services | 1396 |
| Value of Paving Over Services | $4214 |

564 *Total Gas Mains in Lincoln, Jan. 1, 1913, Per Testimony of Mr. Brodnax Minus Mains Laid in Lincoln During 1903 to 1912, Inclusive, Per Reports of Gas Company, Showing Mains in January, 1903.*

| Inch size. | Feet, Jan. 1, 1913, per testimony of Broadnax. | Feet laid in Lincoln, 1903-1912, per reports and Lea. | Feet, January 1, 1903. |
|---|---|---|---|
| 1¼ & 1½ | 2,258 | ..... | 2,258 |
| 2 | 315,708 | 184,328 | 131,380 |
| 3 | 406 | ..... | 406 |
| 4 | 94,274 | 25,014 | 69,260 |
| 5 | 25,873 | 5,422 | 20,451 |
| 8 | 4,568 | 3,672 | 896 |
| 10 | 9,810 | ..... | 9,810 |
| 12 | 3,613 | ..... | 3,613 |
| 16 | 1,269 | ..... | 1,269 |
| 20 | 1,472 | ..... | 1,472 |
| | 459,257 | | |

565 Lincoln Gas & Electric Lt. Co. Cost Exhibits.

563 *Cost Exhibits.*


| | Pages. |
|---|---|
| Labor Cost of Laying Gas Mains in Lincoln per Analysis of Testimony of Geo. L. Campen, in Lincoln Gas & El. Lt. Co. vs. Lincoln | 1–2 |
| Labor and Material Cost of Mains Laid 1903 to 1912 per Annual Gas Reports | 3–4 |
| Labor and Material Costs for Service Pipes per Gas Reports | 5 |
| Cost per Service and Charged Consumers | 5 |
| Feet of Pipe Laid for Services | 6 |
| Number of Service Pipes Laid Yearly per Gas Reports | 6 |
| Length and Weight of Cast Iron Pipe Bought | 7 |
| Length of Main at End of 1902 and 1912, per Gas Reports | 8 |
| Amounts Paid for Cast Iron Pipe per Books and Bills | 9 to 13 |


567 *Labor Cost of Laying Gas Mains in Lincoln Per Analysis of Testimony of Geo. L. Campen, in Lincoln Gas & Electric Lt. Co. vs. Lincoln.*

Record Page —.

| Cost Items. | $ per 100 feet of pipe. 1¼" W. I. | 2" W. I. | 3" W. I. |
|---|---|---|---|
| Hauling Pipe at $1 per ton | 0.112 | 0.180 | 0.703 |
| Layman Pipe & Digging Bellholes | 0.625 | 0.625 | 1.537 |
| Foreman | 0.660 | 0.660 | 0.666 |
| Total on Pipe & Foreman | 1.397 | 1.465 | 2.906 |
| Digging Ditch 10 Months in Year | 4.50 | 4.50 | 4.50 |
| Backfilling 10 Months in Year | 2.00 | 2.00 | 2.00 |
| Total on Ditch | 6.50 | 6.50 | 6.50 |
| Total Labor Cost Per 100 Feet | 7.897 | 7.965 | 9.406 |

| Cost items. | $ per 100 feet of pipe. 4" C. I. | 6" C. I. | 8" C. I. |
|---|---|---|---|
| Hauling Pipe at $1 Per Ton | 1.009 | 1.553 | 2.163 |
| Laying Pipe & Digging Bellholes | 1.845 | 2.475 | 3.840 |
| Foreman | .750 | .750 | .750 |
| Total on Pipe & Foreman | 3.604 | 4.778 | 6.753 |
| Digging Ditch 10 Months in Year | 4.80 | 6.00 | 6.00 |
| Hauling Excavated Materials | .... | .... | 0.30 |
| Backfilling 10 Months in Year | 2.50 | 4.00 | 4.00 |
| Total on Ditch | 7.30 | 10.00 | 10.30 |
| Total Labor Cost per 100 Feet | 10.904 | 14.778 | 17.053 |

| Cost items. | $ per 100 feet of pipe. 10" C. I. | 12" C. I. | 16" C. I. |
|---|---|---|---|
| Hauling Pipe at $1 Per Ton | 2.880 | 3.660 | 5.473 |
| Laying Pipe & Digging Bellholes | 6.480 | 10.440 | 16.425 |
| Foreman | .750 | .750 | .750 |
| Total on Pipe & Foreman | 10.110 | 14.850 | 22.648 |
| Digging Ditch,10 Months in Year | 6.50 | 7.20 | 8.00 |
| Hauling Excavated Material | 0.600 | 0.90 | 1.50 |
| Backfilling 10 Months in Year—Av | 4.666 | 4.00 | 4.20 |
| Total on Ditch | 11.766 | 12.10 | 13.70 |
| Total Labor Cost per 100 feet | 21.876 | 26.950 | 36 348 |

568 *Labor Cost of Laying Gas Mains in Lincoln Per Analysis of Testimony of Geo. L. Campen, in Lincoln Gas & Electric Lt. Co. vs. Lincoln.*

Record Page —.

| Cost items. | $ per 100 foot of pipe. 20" C. I. |
|---|---|
| Hauling Pipe at $1 per Ton | 7.578 |
| Laying Pipe & Digging Bellholes | 20.250 |
| Foreman | .750 |
| Total on Pipe & Foreman | 28.578 |

| | |
|---|---|
| Digging Ditch 10 Months in Year | 10.20 |
| Hauling Excavated Material | 2.40 |
| Backfilling 10 Months in Year | 5.112 |
| Total on Ditch | 17.712 |
| Total Labor Cost per 100 Feet | 46.290 |

*Total Labor Cost Per* 100 *Feet.*

| Inch size. | $ Cost. |
|---|---|
| 1¼ | 7.897 |
| 2 | 7.965 |
| 3 | 9.406 |
| 4 | 10.904 |
| 6 | 14.778 |
| 8 | 17.053 |
| 10 | 21.876 |
| 12 | 26.950 |
| 16 | 36.348 |
| 20 | 46.290 |

569 Lincoln Gas & Electric Lt. Co.

*Cost of Mains Laid* 1903 *to* 1912 *Per Annual Gas Reports.*

| Year laid. | $ Cost of labor. | $ Cost of material. | $ Total cost. | Feet main laid. |
|---|---|---|---|---|
| | | | | 2″ |
| 1903 | 1,822.85 | 3,206.21 | 5,029.06 | 23,558 |
| 1904 | 735.37 | 1,107.76 | 1,843.13 | 7,055 |
| 1905 | 1,891.27 | 2,052.19 | 3,943.46 | 16,787 |
| 1906 | 2,229.77 | 2,227.17 | 4,456.94 | 20,126 |
| 1907 | 1,557.00 | 1,718.81 | 3,275.81 | 15,403 |
| 1908 | 1,314.40 | 1,448.13 | 2,762.53 | 12,653 |
| 1909 | 3,330.50 | 3,567.79 | 6,898.29 | 34,533 |
| 1910 | 3,849.90 | 3,874.25 | 7,724.15 | 38,973 |
| 1911 | 3,354.00 | 3,306.77 | 6,660.77 | 31,056 |
| 1912 | 2,259.90 | 2,479.65 | 4,739.55 | 24,314 |
| | 22,344.96 | 24,988.73 | 47,333.69 | 224,458 |
| | | | | 4″ |
| 1903 | 174.99 | 415.73 | 590.72 | 1,237 |
| 1904 | 275.15 | 489.26 | 764.41 | 2,005 |
| 1905 | 1,274.52 | 2,596.84 | 3,871.36 | 8,514 |
| 1906 | 355.95 | 624.28 | 980.23 | 1,909 |

| | | | | |
|---|---|---|---|---|
| 1908 | 62.20 | 157.93 | 220.13 | 494 |
| 1909 | 47.00 | 36.28 | 83.28 | 80 |
| 1910 | 5,494.65 | 8,204.06 | 13,698.71 | 26,788 |
| 1911 | 811.60 | 2,024.37 | 2,835.97 | 5,213 |
| 1912 | 219.10 | 317.61 | 536.71 | 1,284 |
| | 8,715.16 | 14,866.36 | 23,581.52 | 47,524 |
| | | | | 6″ |
| 1904 | 184.90 | 443.86 | 628.76 | 1,094 |
| 1906 | 327.41 | 768.57 | 1,095.98 | 1,605 |
| 1909 | 56.00 | 156.93 | 212.93 | 240 |
| 1910 | 462.54 | 883.75 | 1,346.29 | 2,435 |
| 1912 | 6.00 | 16.56 | 22.56 | 48 |
| | 1,036.85 | 2,269.67 | 3,306.52 | 5,422 |
| | | | | 8″ |
| 1904 | 357.81 | 603.18 | 960.99 | 938 |
| 1905 | 668.92 | 1,743.49 | 2,412.41 | 2,734 |
| | 1,026.73 | 2,346.67 | 3,373.40 | 3,672 |

570 Lincoln Gas & Electric Lt. Co.

*Cost of Mains Laid Years* 1903 *to* 1912 *Per Gas Reports.*

| Inch size. | Total feet laid. | $ Labor cost. | $ Material cost. | $ Total cost. |
|---|---|---|---|---|
| 2 | 224,458 | 22,344.96 | 24,988.73 | 47,333.69 |
| 4 | 47,524 | 8,715.16 | 14,866.36 | 23,581.52 |
| 6 | 5,422 | 1,036.85 | 2,269.67 | 3,306.52 |
| 8 | 3,672 | 1,026.73 | 2,346.67 | 3,373.40 |
| | 281,076 | 33,123.70 | 44,471.43 | 77,595.13 |

*Cost of Mains Laid Years* 1903 *to* 1912 *Per Gas Reports.*

| Inch size. | Total feet laid. | Cost in cents per foot. | | Total cost. |
|---|---|---|---|---|
| | | Labor cost. | Material cost. | |
| 2 | 224,458 | 9.68 | 11.13 | 21.09 |
| 4 | 47,524 | 18.34 | 31.28 | 49.62 |
| 6 | 5,422 | 19.12 | 41.86 | 60.98 |
| 8 | 3,672 | 27.96 | 63.91 | 91.87 |

571 Lincoln Gas & Electric Light Co.

*Labor & Material Costs for Service Pipes Per Gas Report.*

| Year. | $ Total cost material. | $ Total cost labor. | Cents cost per foot. Materials. | Labor. | Total. |
|---|---|---|---|---|---|
| 1903..... | ..... | ..... | .... | .... | 16.17 |
| 1904..... | 3,699.10 | 4,257.26 | 7.43 | 8.55 | 15.98 |
| 1905..... | ..... | ..... | .... | .... | 18.79 |
| 1906..... | ..... | ..... | .... | .... | 18.58 |
| 1907..... | 4,155.33 | 3,908.27 | 9.55 | 8.98 | 18.53 |
| 1908..... | 3,036.47 | 2,828.40 | 9.57 | 8.91 | 18.48 |
| 1909..... | 2,909.97 | 3,797.80 | 6.91 | 9.02 | 15.94 |
| 1910..... | ..... | ..... | .... | .... | 17.67 |
| 1911..... | ..... | ..... | .... | .... | 17.57 |
| 1912..... | 2,071.34 | 3,430.40 | 6.11 | 10.12 | 16.24 |
| Total..... | | | | | 17.33 |

*Cost of Service Pipes Per Gas Reports.*

| Year service pipes laid. | $ Total cost of service pipes. | $ Charged consumers on service pipes. | Total number of services laid from main. | $ Total cost per service from main. |
|---|---|---|---|---|
| 1903..... | 9,060.73 | 81.23 | 691 | 13.11 |
| 1904..... | 7,956.36 | 81.91 | 612 | 13.00 |
| 1905..... | 8,528.05 | 490.75 | 478 | 17.84 |
| 1906..... | 7,657.65 | 2,791.39 | 513 | 14.93 |
| 1907..... | 8,063.60 | 1,941.35 | 577 | 13.98 |
| 1908..... | 5,864.87 | 3,059.95 | 480 | 12.22 |
| 1909..... | 6,707.77 | 7,523.18 | 608 | 11.03 |
| 1910..... | 6,885.04 | 6,942.14 | 654 | 10.53 |
| 1911..... | 5,784.73 | 5,079.39 | 582 | 9.94 |
| 1912..... | 5,501.74 | 5,797.86 | 554 | 9.93 |
| | 72,010.54 | 33,789.15 | 5,749 | 12.53 |

| | |
|---|---|
| Total Cost of Service Pipes..... | 72,010.54 |
| Charges to Consumers for Service Pipes..... | 33,789.15 |
| Total Cost to Company of Service Pipes..... | 38,221.39 |
| Average Cost to Company Per Service from Main..... | 6.65 |
| Average Cost to Consumers Per Service from Main..... | 5.88 |

572 Lincoln Gas & Electric Light Co.

*Feet of Pipe Laid for Services.*

| Year. | Feet for services mains to meter. | Feet for services main to curb. | Total feet for service pipes. | Average feet long. Main to meter. | Main to curb. |
|---|---|---|---|---|---|
| 1903..... | 56,025 | ..... | 56,025 | 81.1 | .... |
| 1904..... | 48,032 | 1,676 | 49,786 | 89.8 | 21.8 |
| 1905..... | 37,728 | 201 | 45,372 | 79.8 | 40.2 |
| 1906..... | 36,316 | 665 | 41,193 | 75.8 | 19.6 |
| 1907..... | 41,627 | 699 | 43,521 | 77.0 | 20.0 |
| 1908..... | 29,900 | 645 | 31,741 | 68.0 | 16.1 |
| 1909..... | 39,320 | 492 | 42,083 | 67.7 | 18.2 |
| 1910..... | 36,727 | 1,523 | 38,971 | 64.0 | 19.0 |
| 1911..... | 28,016 | 3,737 | 32,922 | 61.8 | 29.0 |
| 1912..... | 28,598 | 2,801 | 33,883 | 65.1 | 24.4 |
| | 382,289 | 12,439 | 415,497 | 73.4 | 22.9 |

*Number of Service Pipes Laid Yearly Per Gas Reports.*

| Year laid. | Number laid main to meter. | Number laid main to curb. | Total laid from main. | Number laid curb to meter. | Total laid to meter. |
|---|---|---|---|---|---|
| 1903..... | 691 | 0 | 691 | 0 | 691 |
| 1904..... | 535 | 77 | 612 | 41 | 576 |
| 1905..... | 473 | 5 | 478 | 137 | 610 |
| 1906..... | 479 | 34 | 513 | 75 | 554 |
| 1907..... | 542 | 35 | 577 | 27 | 569 |
| 1908..... | 440 | 40 | 480 | 28 | 468 |
| 1909..... | 581 | 27 | 608 | 35 | 616 |
| 1910..... | 574 | 80 | 654 | 10 | 584 |
| 1911..... | 453 | 129 | 582 | 27 | 480 |
| 1912..... | 439 | 115 | 554 | 48 | 487 |
| | 5,207 | 542 | 5,749 | 428 | 5,635 |

573 Lincoln Gas & Electric Lt. Co.

*Length & Weight of Cast Iron Pipe Bought.*

| Date. | Number of pieces & inch size. | Pounds total weight. | Foot length. | Pounds per foot. |
|---|---|---|---|---|
| Oct. 10, 1901..... | 250—4″ | 54,650 | 3,000 | 18.1 |
| Oct. 10, 1901..... | 17—4″ | 3,706 | 204 | 18.1 |
| Oct. 14, 1901..... | 109—4″ | 23,678 | 1,308 | 18. |
| Nov. 11, 1901..... | 142—4″ | 30,006 | 1,704 | 17.5 |
| Nov. 22, 1901..... | 149—4″ | 32,788 | 1,788 | 18.3 |
| June 27, 1902..... | 250—4″ | 52,998 | 3,000 | 17.5 |
| March 26, 1903..... | 167—4″ | 36,171 | 2,004 | 18. |
| Oct. 9, 1905..... | 425—4″ | 97,126 | 5,100 | 19. |
| Oct. 29, 1909..... | 530—4″ | 122,172 | 6,360 | 19. |
| Nov. 2, 1909..... | 152—4″ | 35,039 | 1,824 | 18.5 |
| Dec. 17, 1909..... | 200—4″ | 45,046 | 2,400 | 18.7 |
| Dec. 24, 1909..... | 400—4″ | 90,595 | 4,800 | 18.8 |
| Jan. 4, 1910..... | 218—4″ | 49,974 | 2,616 | 19. |
| May 12, 1910..... | 200—4″ | 44,520 | 2,400 | 18.5 |
| July 29, 1910..... | 625—4″ | 145,449 | 7,500 | 19.3 |
| April 15, 1911..... | 240—4″ | 55,094 | 2,880 | 19. |
| April 29, 1912..... | 200—4″ | 47,642 | 2,400 | 19.8 |
| Jan. 17, 1913..... | 175—4″ | 39,487 | 2,100 | 18.7 |
| Jan. 17, 1913..... | 200—4″ | 44,838 | 2,400 | 18.6 |
| | 4,649—4″ | 1,050,979 | 55,788 | 18.8 |
| Oct. 14, 1901..... | 33—6″ | 12,074 | 396 | 30.4 |
| July 21, 1906..... | 150—6″ | 55,774 | 1,800 | 30.9 |
| July 24, 1906..... | 140—6″ | 55,236 | 1,680 | 32.8 |
| July 26, 1906..... | 127—6″ | 47,782 | 1,524 | |
| Aug. 26, 1910..... | 84—6″ | 30,344 | 1,008 | 30. |
| | 534—6″ | 201,210 | 6,408 | 31.4 |
| Aug. 26, 1910..... | 10—10″ | 6,705 | 120 | 55.8 |
| April 29, 1912..... | 1—12″ | 845 | 12 | 70.4 |
| Aug. 11, 1892..... | 33—16″ | 37,130 | 396 | 93.7 |

574 Lincoln Gas & Electric Lt. Co.

*Length of Mains at End of* 1902 *and* 1912 *per Gas Reports.*

| Size. | Feet at end of 1902. | Feet at end of 1912. | Feet increase to 1912. | Per cent of length in 1902 to 1912. |
|---|---|---|---|---|
| 2..... | 140,875 | 357,067 | 216,192 | 39.1 |
| 4..... | 69,853 | 117,377 | 47,524 | 59.5 |
| 6..... | 11,100 | 16,522 | 5,422 | 67.2 |
| 8..... | 1,150 | 4,822 | 3,672 | 23.8 |
| | 82,103 | 138,721 | 56,618 | 59.2 |
| 10..... | 9,100 | 9,100 | | |
| 12..... | 3,950 | 3,950 | | |
| 16..... | 1,300 | 1,300 | | |
| 20..... | 1,400 | 1,400 | | |
| | 15,750 | 15,750 | | 100.00 |

575 Lincoln Gas & Electric Light Co.

*Amounts Paid for Cast Iron Pipes for Books and Bills.*

| Years. | Total cost. |
|---|---|
| 1876..... | 1,397.09 |
| 1880..... | 4,108.90 |
| 1881..... | 477.82 |
| 1884..... | 1,606.75 |
| 1885..... | 528.65 |
| 1886..... | 2,821.53 |
| 1887..... | 3,315.75 |
| 1888..... | 1,670.05 |
| 1889..... | 1,510.36 |
| 1890..... | 8,314.16 |
| 1891..... | 14,110.90 |
| 1892..... | 1,341.85 |
| Total to 1892..... | 41,203.81 |
| 1893..... | 970.57 |
| 1894..... | 600.00 |
| 1895..... | 800.00 |
| 1897..... | 25.00 |
| 1899..... | 200.00 |
| 1901..... | 2,214.41 |
| 1902..... | 890.37 |

| | |
|---|---|
| 1903 | 661.93 |
| 1905 | 1,486.03 |
| 1906 | 2,529.93 |
| 1909 | 4,392.95 |
| 1910 | 4,076.77 |
| 1911 | 798.86 |
| 1912 | 716.39 |
| | 20,363.21 |
| Total to 1912 | 61,567.02 |

576 Lincoln Gas & Electric Light Co.

*Amounts Paid for Cast-iron Pipes Per Books and Bills.*

| Years & vendors. | Date. | Inch size. | $ Price per ton. | $ Total cost. |
|---|---|---|---|---|
| 1876: | | | | |
| Dennis Long & Co. | ..... | .... | .... | 1,298.51 |
| " " " " | ..... | .... | .... | 3.69 |
| " " " " | ..... | .... | .... | 45.60 |
| " " " " | ..... | .... | .... | 49.29 |
| | | | | 1,397.09 |
| 1880: | | | | |
| Taylor Jones | ..... | .... | .... | 5.50 |
| " " | ..... | .... | .... | 4,103.40 |
| | | | | 4,108.90 |
| 1881: | | | | |
| Dennis Long & Co. | ..... | .... | .... | 477.82 |
| 1884: | | | | |
| Shickle H. & H. | ..... | 4 | .... | 213.13 |
| Lake Shore Foundry, Cleveland | ..... | 4 | .... | 1,207.77 |
| Six Inch pipe & Return Bends | ..... | 6 | .... | 185.85 |
| | | | | 1,606.75 |
| 1885: | | | | |
| Shickle H. & H. | ..... | .... | .... | 4.02 |
| Dennis Long & Co. | ..... | .... | .... | 352.90 |
| Mc. & M. 4" Pipe | ..... | 4 | .... | 14.56 |
| 10" pipe & fittings | ..... | 10 | .... | 157.17 |
| | | | | 528.65 |

| | | | | | |
|---|---|---|---|---|---|
| 1886: | | | | | |
| Dennis Long & Co. | ..... | Aug. 4 | 4 & 6 | .... | 2,563.10 |
| " " " " | ..... | ..... | .... | .... | 106.63 |
| Shickle H. & H. | ..... | ..... | 10 | .... | 35.45 |
| " " " " | ..... | ..... | 4 | .... | 116.35 |
| | | | | | 2,821.53 |
| 1887: | | | | | |
| Chattanooga Pipe | ..... | April 18 | .... | .... | 1,461.13 |
| Dennis Long & Co. | ..... | ..... | .... | .... | 1,688.27 |
| Shickle H. & H. | ..... | ..... | .... | .... | 17.25 |
| " " " " | ..... | ..... | .... | .... | 149.10 |
| | | | | | 3,315.75 |

577 Lincoln Gas & Electric Light Co.

Amounts Paid For Cast-iron Pipes Per Books and Bills.

| Years & vendors. | Date. | Inch size. | $ Price per ton. | $ Total cost. |
|---|---|---|---|---|
| 1888: | | | | |
| Dennis Long & Co. ..... | ..... | .... | .... | 1,611.45 |
| Shickle H. & H. ..... | ..... | .... | .... | 58.60 |
| | | | | 1,670.05 |
| 1889: | | | | |
| Shickle H. & H. ..... | Apr. 29 | .... | .... | 610.36 |
| " " " " ..... | ..... | .... | .... | 900.00 |
| | | | | 1,510.36 |
| 1890: | | | | |
| Dennis Long & Co. ..... | ..... | .... | .... | 1,423.10 |
| " " " " ..... | ..... | .... | .... | 506.52 |
| " " " " ..... | ..... | .... | .... | 356.39 |
| " " " " ..... | ..... | .... | .... | 456.43 |
| " " " " ..... | ..... | .... | .... | 459.14 |
| " " " " ..... | ..... | .... | .... | 432.49 |
| " " " " ..... | ..... | .... | .... | 450.07 |
| " " " " ..... | Nov. 19 | 4-10-16 | .... | 1,742.87 |
| " " " " ..... | Dec. 22 | 10 & 16 | .... | 1,619.07 |
| " " " " ..... | ..... | .... | .... | 434.99 |
| Car 4" Pipe ..... | ..... | 4 | .... | 433.09 |
| | | | | 8,314.16 |

| | | | | |
|---|---|---|---|---|
| 1891: | | | | |
| Shickle H. & H. | June 10 | .... | .... | 408.42 |
| " " " | Aug. 10 | .... | .... | 418.81 |
| | Apr. 8 | .... | .... | 6,000.00 |
| | May 7 | .... | .... | 7,283.67 |
| | | | | 14,110.90 |
| 1892: | | | | |
| Shickle H. & H. | ..... | .... | .... | 381.28 |
| " " " | Oct. 10 | .... | .... | 473.24 |
| Western Gas Const. Co. | Aug. 11 | 16 | 26.25 | 487.33 |
| | | | | 1,341.85 |
| 1893: | | | | |
| Shickle H. & H. | Mch. 16 | 4 | .... | 500.00 |
| " " " | June 12 | .... | .... | 470.57 |
| | | | | 970.57 |

578 Lincoln Gas & Electric Light Co.

*Amounts Paid for Cast-iron Pipes Per Books and Bills.*

| Years & vendors. | Date. | Inch size. | $ Price per ton. | $ Total cost. |
|---|---|---|---|---|
| 1894: | | | | |
| 4" Pipe | ..... | 4 | .... | 300.00 |
| Dennis Long & Co. | ..... | .... | .... | 250.00 |
| 4" Pipe J. P. M. | ..... | 4 | .... | 50.00 |
| | | | | 600.00 |
| 1895: | | | | |
| Dennis Long & Co. | ..... | .... | .... | 500.00 |
| 4" Pipe | ..... | 4 | .... | 300.00 |
| | | | | 800.00 |
| 1897: | | | | |
| 4" Pipe | ..... | 4 | .... | 25.00 |
| 1899: | | | | |
| Dennis Long & Co. | ..... | .... | .... | 200.00 |
| 1901: | | | | |
| U. S. C. I. Pipe | Oct. 10 | 4 | 27.00 | 737.78 |
| " " " | Oct. 10 | 4 | 29.00 | 53.74 |
| " " " | Oct. 14 | 6 | 28.00 | 169.04 |
| " " " | Oct. 14 | 4 | 29.00 | 343.33 |

| | | | | |
|---|---|---|---|---|
| " " " ..... | Nov. 11 | 4 | 29.00 | 435.09 |
| " " " ..... | Nov. 22 | 4 | 29.00 | 475.43 |
| | | | | 2,214.41 |
| 1902: | | | | |
| U. S. C. I. Pipe..... | June 27 | 4 | 33.60 | 890.37 |
| 1903: | | | | |
| U. S. C. I. Pipe..... | Mch. 26 | 4 | 36.60 | 661.93 |
| 1905: | | | | |
| U. S. C. I. Pipe..... | Oct. 9 | 4 | 30.60 | 1,486.03 |
| 1906: | | | | |
| U. S. C. I. Pipe..... | July 24 | 6 | 32.35 | 844.92 |
| " " " ..... | July 21 | 6 | 32.35 | 902.14 |
| " " " ..... | July 26 | 6 | 32.35 | 772.87 |
| | | | | 2,529.93 |

579 Lincoln Gas & Electric Light Co.

*Amounts Paid for Cast-iron Pipe Per Books and Bills.*

| Years & vendors. | Date. | Inch size. | $ Price per ton. | $ Total cost. |
|---|---|---|---|---|
| 1909: | | | | |
| Sheffield C. I. Pipe Co..... | Oct. 29 | 4 | 30.00 | 1,832.59 |
| " " " " ..... | Nov. 2 | 4 | 30.00 | 525.59 |
| " " " " ..... | Dec. 17 | 4 | 30.00 | 675.84 |
| " " " " ..... | Dec. 24 | 4 | 30.00 | 1,358.93 |
| | | | | 4,392.95 |
| 1910: | | | | |
| Sheffield C. I. Pipe Co..... | Jan. 4 | 4 | 30.00 | 749.61 |
| " " " " ..... | May 12 | 4 | 30.00 | 667.80 |
| U. S. C. I. Pipe..... | July 29 | 4 | 29.55 | 2,149.01 |
| " " " " " ..... | Aug. 26 | 6 | 27.55 | 417.99 |
| " " " " " ..... | Aug. 26 | 10 | 27.55 | 92.36 |
| | | | | 4,076.77 |
| 1911: | | | | |
| U. S. C. I. Pipe..... | April 15 | 4 | 29.00 | 798.86 |
| 1912: | | | | |
| U. S. C. I. Pipe..... | April 29 | 12 | 29.55 | 12.48 |
| " " " " " ..... | April 29 | 4 | 29.55 | 703.91 |
| | | | | 716.39 |

580 *Data Considered in Valuation of Gas Plant, Lincoln, Nebraska.*

581 *Data Considered in Valuation of Gas Plant, Lincoln, Nebraska.*


| | Pages. |
|---|---|
| Feet from Curb to Lot Line on all Paved Streets in the City of Lincoln, Sept. 1, 1913 | 1 to 4 |
| Total length in feet for each District from Curb to Lot Lines on all Paved Streets of the City of Lincoln | 5 |
| Limits of Business District | 6 |
| Water Mains Between Curb and Lot Line | 7–8 |
| Assumed Pounds per Foot of Cast Iron Pipe | 9 |
| Pounds per Foot Standard Weights of Cast Iron Gas Pipe | 9 |
| Extracts from Addyston Pipe & Steel Co. v. United States | 9–10 |
| Cost of Paving in Lincoln | 11 |
| Proposal 1,500,000 Gallon Reservoir | 12 |
| Cost of Manhole Covers | 13 |

| Street. | Between— | | Length in feet. | Feet width street. | Feet width paving. | Feet curb to lot line. |
|---|---|---|---|---|---|---|
| N St | 19th | —24th | 1,800 | 60 | 38 | 11 |
| Cherry | 17th | —20th | 1,250 | 50 | 25 | 12½ |
| Dudley | 27th | —29th | 800 | 50 | 25 | |
| 15th | "S" | —"T" | 400 | 50 | 25 | |
| 21st | "A" | —Washington | 400 | 60 | 35 | |
| 25th | Vine | —"X" | 800 | 55 | 30 | |
| 26th | "R" | —"W" | 2,000 | 50 | 25 | |
| Total | | | 5,650 | | | |
| 14th | Vine | —Claremont | 2,400 | 66 | 40 | 13 |
| 17th | South | —"A" | 2,640 | 66 | 40 | |
| 27th | "O" | —Holdrege | 2,600 | 66 | 40 | |
| Total | | | 7,640 | | | |
| Prospect | 17th | —20th | 1,250 | 60 | 30 | 15 |
| Garfield | 20th | —27th | 2,640 | 60 | 30 | |
| Washington | 19th | —23d | 1,550 | 60 | 30 | |
| "J" | 17th | —18th | 300 | 60 | 30 | |
| "O" | 7th | —27th | 8,000 | 100 | 70 | |
| 9th | "H" | —"S" | 4,020 | 100 | 70 | |
| 20th | "M" | —"N" | 400 | 60 | 30 | |
| 21st | Vine | —"Y" | 1,300 | 60 | 30 | |
| 22d | "G" | —Randolph | 110 | 60 | 30 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 25th | South | —Franklin | 1,300 | 60 | 30 | |
| 26th | South | —Garfield | 1,700 | 60 | 30 | |
| Total | | | 22,570 | | | |
| Euclid | 17th | —22d | 1,900 | 60 | 25 | 17½ |
| Garfield | 17th | —20th | 1,250 | 60 | 25 | |
| 18th | South | —Harwood | 500 | 60 | 25 | |
| 20th | "A" | —"D" | 1,220 | 60 | 25 | |
| 29th | "N" | —"O" | 400 | 70 | 35 | |
| Total | | | 5,270 | | | |
| South | 11th | —27th | 6,480 | 66 | 30 | 18 |
| "G" | 20th | —22d | 650 | 66 | 30 | |
| Randolph | 22d | —24th | 650 | 66 | 30 | |
| "O" | 33d | —36th | 1,200 | 66 | 30 | |
| "R" | 27th | —34th | 2,800 | 66 | 30 | |
| Vine | 16th | —27th | 4,400 | 66 | 30 | |
| 17th | Sewell | —South | 1,300 | 66 | 30 | |
| 20th | Garfield | —"A" | 750 | 66 | 30 | |
| 27th | "L" | —"O" | 1,200 | 66 | 30 | |
| Total | | | 19,430 | | | |

583 Feet from Curb to Lot Line on All Paved Streets in the City of Lincoln, September 1, 1913.

| Street. | Between— | | Length in feet. | Feet width street. | Feet width paving. | Feet curb to lot line. |
|---|---|---|---|---|---|---|
| "M" St | 7th | —16th | 3,660 | 100 | 60 | 20 |
| "N" | 7th | —19th | 4,860 | 100 | 60 | |
| "O" | 27th | — 33d | 2,600 | 80 | 40 | |
| "P" | 7th | —14th | 2,840 | 100 | 60 | |
| "P" | 15th | —16th | 400 | 100 | 60 | |
| "Q" | 7th | —11th | 1,620 | 100 | 60 | |
| "R" | 7th | — 9th | 800 | 100 | 60 | |
| 9th | "Q" | —"S" | 800 | 100 | 60 | |
| 10th | "N" | —"Q" | 1,620 | 100 | 60 | |
| 12th | "L" | —"R" | 2,420 | 100 | 60 | |
| 13th | "M" | —"P" | 1,220 | 100 | 60 | |
| 14th | "M" | —"P" | 1,200 | | | |
| Total | | | 24,040 | | | |
| "T" | 27th | —31st | 1,600 | 70 | 25 | 22½ |
| 8th | "P" | —"Q" | 400 | 100 | 55 | |
| Total | | | 2,000 | | | |
| "B" | 20th | —27th | 2,640 | 80 | 30 | 25 |
| "C" | 20th | —27th | 2,640 | 80 | 30 | |
| "F" | 16th | —17th | 400 | 100 | 50 | |
| "H" | 14th | —16th | 820 | 100 | 50 | |
| "K" | 14th | —16th | 820 | 100 | 50 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| "R" | 9th | — 10th | 400 | 100 | 50 | | |
| "S" | 8th | — 9th | 400 | 120 | 70 | | |
| 8th | "L" | — "P" | 1,220 | 100 | 50 | | |
| 10th | "J" | — "N" | 1,620 | 100 | 50 | | |
| 10th | "Q" | — "T" | 1,220 | 100 | 50 | | |
| 11th | "J" | — "Q" | 2,820 | 120 | 70 | | |
| 12th | "R" | — "T" | 800 | 100 | 50 | | |
| 14th | "H" | — "K" | 820 | 100 | 50 | | |
| 15th | "M" | — "O" | 800 | 120 | 70 | | |
| 16th | "F" | — Vine | 6,000 | 100 | 50 | | |
| 17th | "N" | — "O" | 400 | 100 | 50 | | |
| 18th | "N" | — "O" | 400 | 100 | 50 | | |
| 19th | "N" | — "O" | 400 | 100 | 50 | | |
| Total | | | 24,620 | | | | |
| "N" | 25th | — 26th | 400 | 100 | 45 | 27½ | |

584 Feet from Curb to Lot Line on All Paved Streets in the City of Lincoln, September 1, 1913.

| Street. | Between— | | Length in feet. | Feet width street. | Feet width paving. | Feet curb to lot line. |
|---|---|---|---|---|---|---|
| "A" St. | 16th | —22d | 2,400 | 100 | 40 | 30 |
| "E" | 10th | —12th | 820 | 100 | 40 | |
| "F" | 10th | —12th | 820 | 100 | 40 | |
| "F" | 17th | —20th | 1,200 | 100 | 40 | |
| "G" | 10th | —12th | 820 | 100 | 40 | |
| "G" | 18th | —20th | 800 | 100 | 40 | |
| "H" | 9th | —14th | 2,030 | 100 | 40 | |
| "H" | 16th | —17th | 350 | 100 | 40 | |
| "J" | 16th | —17th | 400 | 120 | 60 | |
| "K" | 8th | —14th | 2,440 | 100 | 40 | |
| "K" | 16th | —18th | 800 | 100 | 40 | |
| "L" | 6th | —17th | 4,480 | 100 | 40 | |
| "P" | 14th | —15th | 400 | 100 | 40 | |
| "Q" | 11th | —16th | 2,020 | 100 | 40 | |
| "R" | 10th | —27th | 6,800 | 100 | 40 | |
| "T" | 9th | —12th | 1,220 | 100 | 40 | |
| 7th | "L" | —"N" | 400 | 120 | 60 | |
| 7th | "N" | —"R" | 1,620 | 120 | 60 | |
| 10th | "F" | —"J" | 1,200 | 100 | 40 | |
| 11th | "C" | —"J" | 2,420 | 120 | 60 | |
| 12th | "J" | —"L" | 800 | 100 | 40 | |
| 13th | "D" | —"M" | 3,220 | 100 | 40 | |
| 13th | "P" | —"R" | 800 | 100 | 40 | |
| 14th | "B" | —"C" | 400 | 100 | 40 | |
| 14th | "F" | —"H" | 800 | 100 | 40 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 14th | "K" | — "M" | 800 | 100 | 40 | |
| 14th | "P" | — Vine | 3,040 | 100 | 40 | |
| 15th | "A" | — "H" | 2,820 | 120 | 60 | |
| 17th | "A" | — "N" | 4,800 | 100 | 40 | |
| 19th | Alley south of "F" to "F" | | 150 | 100 | 40 | |
| Total | | | 51,150 | | | |
| "N" | 24th | — 25th | 400 | 100 | 38 | 31 |
| "N" | 26th | — 27th | 400 | 100 | 38 | |
| Total | | | 800 | | | |
| "L" | 17th | — 18th | 400 | 100 | 36 | 32 |
| "M" | 16th | — 18th | 800 | 100 | 36 | |
| Total | | | 1,200 | | | |
| "E" | 12th | — 20th | 3,220 | 100 | 35 | 32½ |
| "F" | 12th | — 16th | 1,620 | 100 | 35 | |
| 16th | "A" | — "F" | 2,020 | 100 | 35 | |
| Total | | | 6,860 | | | |

| Street. | Between— | | Length in feet. | Feet width street. | Feet width paving. | Feet curb to lot line. |
|---|---|---|---|---|---|---|
| Washington | 7th | —19th | 4,850 | 100 | 30 | 35 |
| "A" | 11th | —16th | 2,020 | 100 | 30 | |
| "B" | 8th | —20th | 4,840 | 100 | 30 | |
| "C" | 17th | —20th | 1,200 | 100 | 30 | |
| "G" | 16th | —18th | 800 | 100 | 30 | |
| "J" | 8th | —14th | 2,440 | 120 | 50 | |
| "S" | 9th | —10th | 420 | 120 | 50 | |
| 9th | "S" | —"T" | 400 | 120 | 50 | |
| 11th | "Q" | —"P" | 400 | 120 | 50 | |
| 15th | "K" | —"M" | 800 | 120 | 50 | |
| 18th | "A" | —"G" | 2,420 | 100 | 30 | |
| 19th | "D" to Alley between "E" and "F" | | 150 | 100 | 30 | |
| 26th | "J" | —"O" | 2,000 | 100 | 30 | |
| Total | | | 22,740 | | | |
| "C" | 9th | —17th | 3,250 | 100 | 25 | 37½ |
| 19th | "A" | —"D" | 1,200 | 100 | 25 | |
| 24th | "R" | —Vine | 1,200 | 100 | 25 | |
| Total | | | 5,650 | | | |
| 7th | "J" | —"L" | 800 | 120 | 40 | 40 |
| 9th | "T" | —"K" | 1,600 | 120 | 40 | |
| 11th | South | —"C" | 3,440 | 120 | 40 | |
| Total | | | 5,840 | | | |
| "D" | 8th | —20th | 4,860 | 120 | 35 | 42½ |
| "S" | 14th | —16th | 820 | 120 | 30 | 45 |

586 Total Length in Feet for Each District from Curb to Lot Lines on all the Paved Streets of the City of Lincoln.

| Number of feet long. | Feet from curb to lot line. |
|---|---|
| 1,800 | 11 |
| 5,650 | 12½ |
| 7,640 | 13 |
| 22,570 | 15 |
| 5,270 | 17½ |
| 19,430 | 18 |
| 24,040 | 20 |
| 2,000 | 22½ |
| 24,620 | 25 |
| 400 | 27½ |
| 51,150 | 30 |
| 800 | 31 |
| 1,200 | 32 |
| 6,860 | 32½ |
| 22,740 | 35 |
| 5,650 | 37½ |
| 5,840 | 40 |
| 4,860 | 42½ |
| 820 | 45 |
| Total.... 213,340 | |

587 LINCOLN GAS & ELECTRIC LT. CO.

v.

CITY OF LINCOLN.

CITY OF LINCOLN, Oct. 7, 1913.

A. D. Adams, City.

DEAR SIR: The ordinances which provides that all sidewalks in the business district shall be laid from the property line to the curb line does not specify the boundaries of the district. The district in which the sidewalks are laid in this manner is about as follows:

Sidewalks in Business District.

| | | | | | | | | Feet. |
|---|---|---|---|---|---|---|---|---|
| M | street | from | 7th | street | to | 14th | street | 2,740 |
| N | " | " | 7th | " | " | 16th | " | 3,560 |
| O | " | " | 7th | " | " | 24th | " | 6,760 |
| P | " | " | 7th | " | " | 15th | " | 3,140 |
| Q | " | " | 7th | " | " | 12th | " | 1,940 |
| R | " | " | 7th | " | " | 10th | " | 1,120 |
| S | " | " | 8th | " | " | 10th | " | 720 |
| 7th | " | " | L | " | " | R | " | 2,320 |
| 8th | " | " | L | " | " | S | " | 2,720 |
| 9th | " | " | L | " | " | S | " | 2,720 |
| 10th | " | " | M | " | " | S | " | 2,320 |
| 11th | " | " | K | " | " | Q | " | 2,320 |
| 12th | " | " | L | " | " | Q | " | 1,920 |
| 13th | " | " | M | " | " | Q | " | 1,520 |
| 14th | " | " | M | " | " | Q | " | 1,520 |
| 15th | " | " | N | " | " | O | " | 300 |
| 16th | " | " | N | " | " | P | " | 720 |
| 17th | " | " | N | " | " | P | " | 720 |
| | | | | | | | | 39,080 |

Yours truly,

ADNA DOBSON,
*City Engineer.*

588 LINCOLN GAS & ELECTRIC LT. CO.

v.

CITY OF LINCOLN.

CITY OF LINCOLN, Oct. 7, 1913.

A. D. Adams, City.

DEAR SIR: The following is a list of the streets where the water mains are laid between the curb and the property line and also a list of Streets where the water main is laid directly under the curb:

Water Mains Outside of Curb.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Washington | street | from | 7th | st. to | 19th | st. | 4,700 feet. |
| A | street | " | 11th | " " | 16th | " | 2,020 " |
| B | " | " | 8th | " " | 20th | " | 5,000 " |
| C | " | " | 9th | " " | 17th | " | 3,240 " |
| C | " | " | 17th | " " | 20th | " | 1,330 " |
| C | " | " | 22nd | " " | 27th | " | 1,910 " |
| D | " | " | 9th | " " | 20th | " | 4,560 " |
| E | " | " | 12th | " " | 20th | " | 3,220 " |
| F | " | " | 12th | " " | 16th | " | 1,620 " |
| G | " | " | 16th | " " | 18th | " | 800 " |
| J | " | " | 8th | " " | 14th | " | 2,460 " |
| L | " | " | 17th | " " | 18th | " | 400 " |
| M | " | " | 16th | " " | 18th | " | 800 " |
| N | " | " | 24th | " " | 25th | " | 500 " |
| N | " | " | 26th | " " | 27th | " | 380 " |
| S | " | " | 9th | " " | 10th | " | 410 " |
| S | " | " | 14th | " " | 16th | " | 820 " |
| 9th | " | " | S | " " | T | " | 400 " |
| 9th | " | " | T | " " | X | " | 400 " |
| 19th | " | " | A | " " | B | " | 400 " |
| 19th | " | " | C | " " | D | " | 400 " |
| 24th | " | " | R | " " | Vine | " | 1,400 " |
| 26th | " | " | J | " " | O | " | 1,900 " |
| | | | | | | | 39,070 |

See Sheet #2 for Under the Curb.

____ ____,
*City Engineer.*

#2. Mr. A.

Water Main Under Curb.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | street | from | 16th | street | to | 19th | street | 1,200 | feet. |
| E | " | " | 10th | " | " | 12th | " | 820 | " |
| F | " | " | 10th | " | " | " | " | 820 | " |
| F | " | " | 17th | " | " | 20th | " | 1,200 | " |
| G | " | " | 10th | " | " | 12th | " | 820 | " |
| G | " | " | 18th | " | " | 20th | " | 920 | " |
| H | " | " | 9th | " | " | 14th | " | 2,020 | " |

589

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| H | " | " | 16th | " | " | 17th | " | 400 | " |
| N | " | " | 8th | " | " | 9th | " | 400 | " |
| N | " | " | 11th | " | " | 14th | " | 1,200 | " |
| N | " | " | 16th | " | " | 18th | " | 800 | " |
| L | " | " | 6th | " | " | 17th | " | 4,480 | " |
| P | " | " | 14th | " | " | 15th | " | 400 | " |
| Q | " | " | 11th | " | " | 16th | " | 2,020 | " |
| R | " | " | 10th | " | " | 27th | " | 6,800 | " |
| T | " | " | 9th | " | " | 12th | " | 1,220 | " |
| 11th | " | " | Q | " | " | R | " | 400 | " |
| 14th | " | " | B | " | " | C | " | 400 | " |
| 14th | " | " | F | " | " | H | " | 800 | " |
| 14th | " | " | K | " | " | M | " | 800 | " |
| 14th | " | " | T | " | " | V | " | 730 | " |
| 17th | " | " | A | " | " | N | " | 4,830 | " |
| | | | | | | | | 33,880 | |

Yours truly,

ADNA DOBSON,
*City Engineer.*

590 Lincoln Gas & Electric Lt. Co.

*Pounds Per Foot of Cast-iron Mains.*

| Inch size. | Pounds assumed, by Lea. | Pounds assumed by Campen. | Pounds assumed by Adams. | Pounds average company records. | Years of company records. |
|---|---|---|---|---|---|
| 3..... | 14.54 | 13.9 | 12.5 | .... | |
| 4..... | 19.38 | 20.0 | 17.0 | 18.8 | 1901—1913 |
| 6..... | 30.00 | 30.8 | 30.0 | 30.2 | 1901 & 1910 |
| 8..... | 42.84 | 42.9 | 40.0 | .... | |
| 10..... | 56.92 | 57.1 | 50.0 | 55.8 | 1910 |
| 12..... | 73.95 | 72.5 | 70.0 | 70.4 | 1912 |
| 16..... | 110.47 | 108.3 | 100.0 | 93.7 | 1892 |
| 20..... | 153.00 | 150.0 | 150.0 | .... | |

*Pounds Per Foot Standard Weights of Cast-iron Gas Pipe.*

| Inch size. | Pounds per American Gas Light Association in 1898. | Pounds per catalogue R. D. Wood & Co. in 1901. | Pounds per Addyston Pipe Co. in Kent's Pocketbook in 1895. | Pounds per American Gas Light Association in 1905. |
|---|---|---|---|---|
| 3..... | 11. | 11. | 12.5 | |
| 4..... | 17.33 | 15.5 | 17. | 19. |
| 6..... | 25.5 | 25. | 30. | 30. |
| 8..... | 39.25 | 38. | 40. | 42. |
| 10..... | 56.1 | 50. | 50. | 55.8 |
| 12..... | 75.4 | 58. | 70. | 72.5 |
| 16..... | 110.5 | 100. | 100. | 108.3 |
| 20..... | 166.5 | 140. | 150. | 150.0 |

*Extracts from Addyston Pipe & Steel Co. vs. United States,* 175 *U. S.,* 211; 20 *Supreme Court Reporter,* 96.

P. 97, S. C. Reporter.

"Statement by Mr. Justice Peckham:

The six defendants are the Addyson Pipe & Steel Company, of Cincinnati, Ohio; Dennis Long & Company, of Louisville,
591 Kentucky; the Howard-Harrison Iron Company, of Bessemer, Alabama; the Anniston Pipe & Foundry Company, of Anniston, Alabama; the South Pittsburg Pipe Works, of South Pittsburg, Tennessee; and the Chattanooga Foundry & Pipe Works, of Chattanooga, Tennessee; one company being in the state of Ohio, one in Kentucky, two in Alabama, and two in Tennessee.

The following are in substance the facts upon which the judgment of the circuit court of appeals rested, as stated in the records:

It was charged in the petition that on the 28th of December, 1894, the defendants entered into a combination and conspiracy among themselves, by which they agreed that there should be no competition between them in any of the states or territories mentioned in the agreement (comprising some thirty-six in all), in regard to the manufacture and sale of cast-iron pipe."

P. 98, S. C. Reporter.

"From the minutes of the association, a copy of which was put in evidence by the petitioner, it appeared that, prior to December 28, 1894, the Anniston Company, the Howard-Harrison Company, the Chattanooga Company, and the South Pittsburg Company had been associated as the Southern Associated Pipe Works. Upon that date the Addyston Company and Dennis Long & Co. were admitted to membership."

P. 99, S. C. Reporter.

"The contract was let to the Howard-Harrison Company, of Bessemer, at $24, who allowed the Shickle, Harrison & Howard Company, a pipe company of St. Louis not in the association, but having the same president as the Howard-Harrison Company, of Bessemer, to fill part of the order."

592 *Cost of Paving Per Sq. Yard in Lincoln.*

| | Asphalt contracts in 1912. | Brick on brick contracts in 1890 & 1893. | Brick on concrete contracts in 1907 & 1908. | Brick on concrete asphalt filler contracts in 1911 & 1912. | Brick on concrete Grant filler contracts in 1910 & 1911. |
|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ |
| | 1.73 | 1.75 | 2.09 | 2.40 | 2.19 |
| | 1.73 | 1.71 | 1.90 | 2.19 | 2.27 |
| | 3.46 | 3.46 | 3.99 | 4.59 | 4.46 |
| Average | 1.73 | 1.73 | 1.99 | 2.29 | 2.23 |

*Average Cost of Paving Per Square Yard Per Foot of Paved Streets in Lincoln, October, 1912.*

| Kind of paving. | Feet of streets paved. | $ Cost per square yard. | $ Feet times cost per square yard. |
|---|---|---|---|
| Asphalt | 90,180 | 1.73 | 156,011.40 |
| Brick on Brick | 61,670 | 1.73 | 106,689.10 |
| Brick on Concrete | 19,920 | 1.99 | 39,640.80 |
| Brick on Con. Asphalt Filler | 19,240 | 2.29 | 44,059.60 |
| Brick on Con. Grant Filler | 2,200 | 2.23 | 4,906.00 |
| | 193,210 | | 351,306.90 |

Average Cost per Sq. Yard Per Foot of Paved Street..... 1.82
Average Cost per Sq. Foot per Foot of Paved Street..... $0.202
Allow per Square Foot to Remove & Relay Paving..... $0.25

593 *Reinforced Concrete Reservoir—Proposal.*

The undersigned hereby propose to furnish labor and material, and complete all work in connection with the building of a reinforced concrete reservoir of 1,500,000 gallons capacity, at the Mockett Pumping Station, for the City of Lincoln, Nebraska, in accordance with the plans and specifications now on file in the office of the City Clerk, in Lincoln, for the following prices, to-wit:

For reservoir complete, including excavation and back filling ..... $13,361.00

Dollars.

For reservoir complete, according to specifications on file, and plans filed herewith..... Dollars.

I propose to use twisted bars for reinforcement. Method of waterproofing proposed Painting with neat cement immediately upon removal of forms.

The following schedule of quantities and prices is to be used in connection with my bid to determine the unit prices for any work more or less than called for by the plans, and for partial estimates according to the specifications.

| | Rate. | Total. |
|---|---|---|
| 8,620 cu. yds. of excavation | @30 cts. | $2,586.00 |
| 970 " " concrete | @ $8.50 | $8,245.00 |
| 85,500 Lbs. of reinforcing steel | @ $0.026 | $2,223.00 |
| 2 wrought iron ladders | @$10.00 | $20.00 |
| 2 iron manholes and covers | @$12.50 | $25.00 |
| 2 ventilators | @ $6.00 | $12.00 |
| Waterproofing | @ | $250.00 |
| | | $13,361.00 |

Total equal to price named in proposal $13,361.00.

If awarded this contract, I agree to complete said reservoir on or before Dec. 1st, 1912.

Enclosed is a certified check for $750.00, payable to George Dayton, City Treasurer, which is to be retained by the City of Lincoln, as liquidated damages in case I fail to enter into a contract with sufficient bond within ten days from the date of notification of awarding of contract.

Dated this 31 day of Aug., 1912.

(Signed) ABEL & ROBERTS.

Address, Lincoln, Nebr.

594 *Cost of Manhole Covers.*

The Standard Manhole Ring and Cover used by the City of Lincoln, has a weight of 375 pounds cast iron.

At the price of $8.00 each per the following bills these covers cost 2.13 cents per pound.

A part of the casting is ¾ inch thick and most of the remainder one inch thick.

The City of Lincoln to John Westover, Incorporated, Dr.

1912. Dollars-Cents.

July 25—1 Manhole Ring & Cover..... 8.00
23 Harvard.

The City of Lincoln to John Westover, Incorporated, Dr.

1912. Dollars-Cents.

June 4—1 Manhole Ring & Cover..... 8.00

(Here follow diagrams marked pp. 595 to 602, inclusive.)

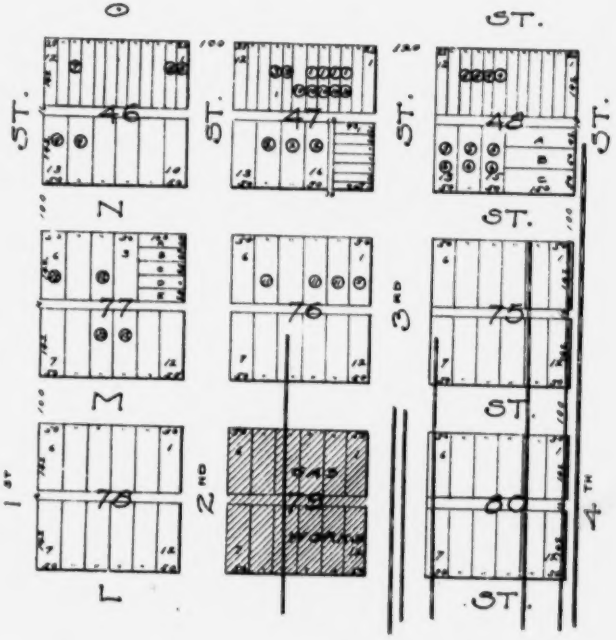
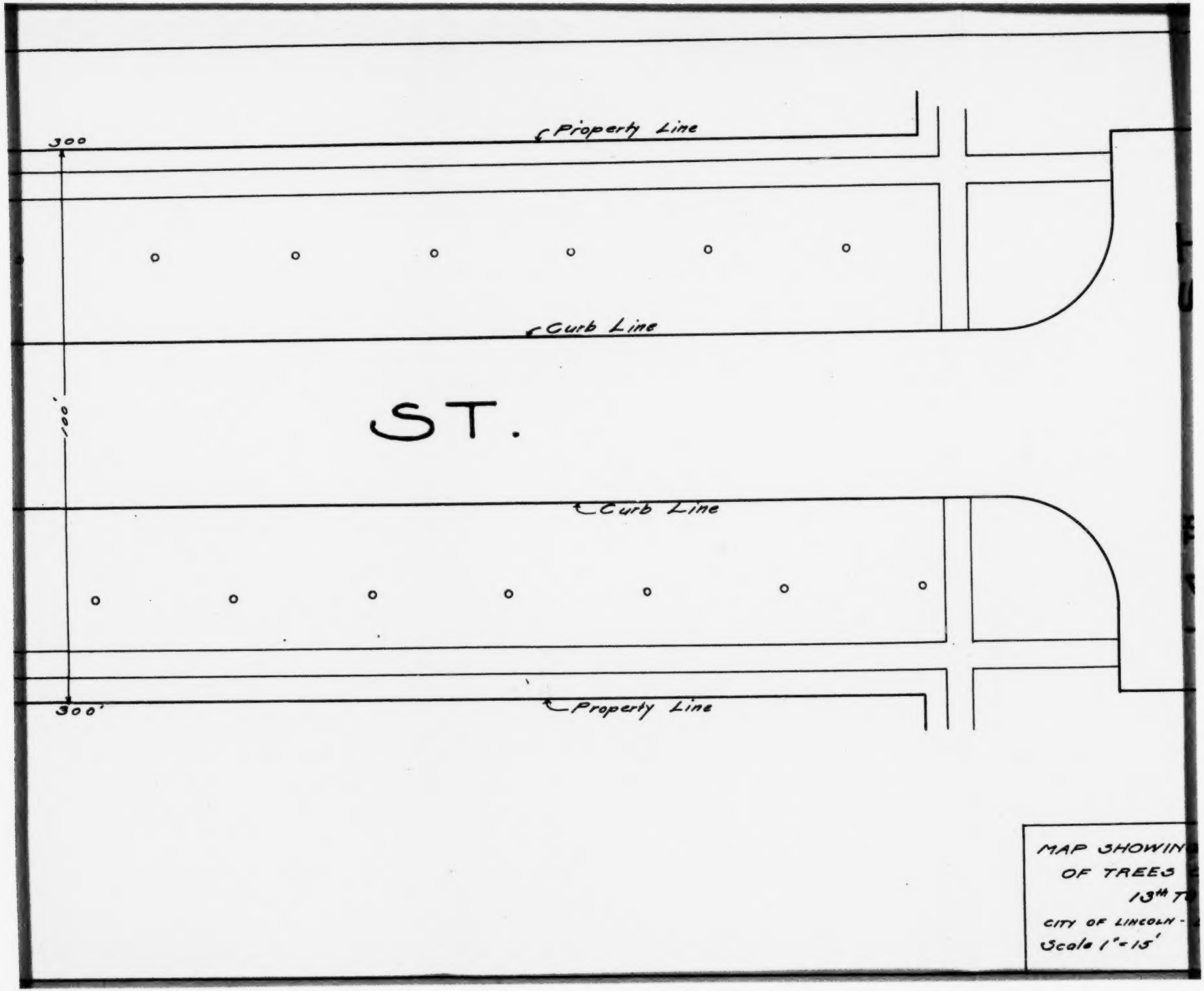


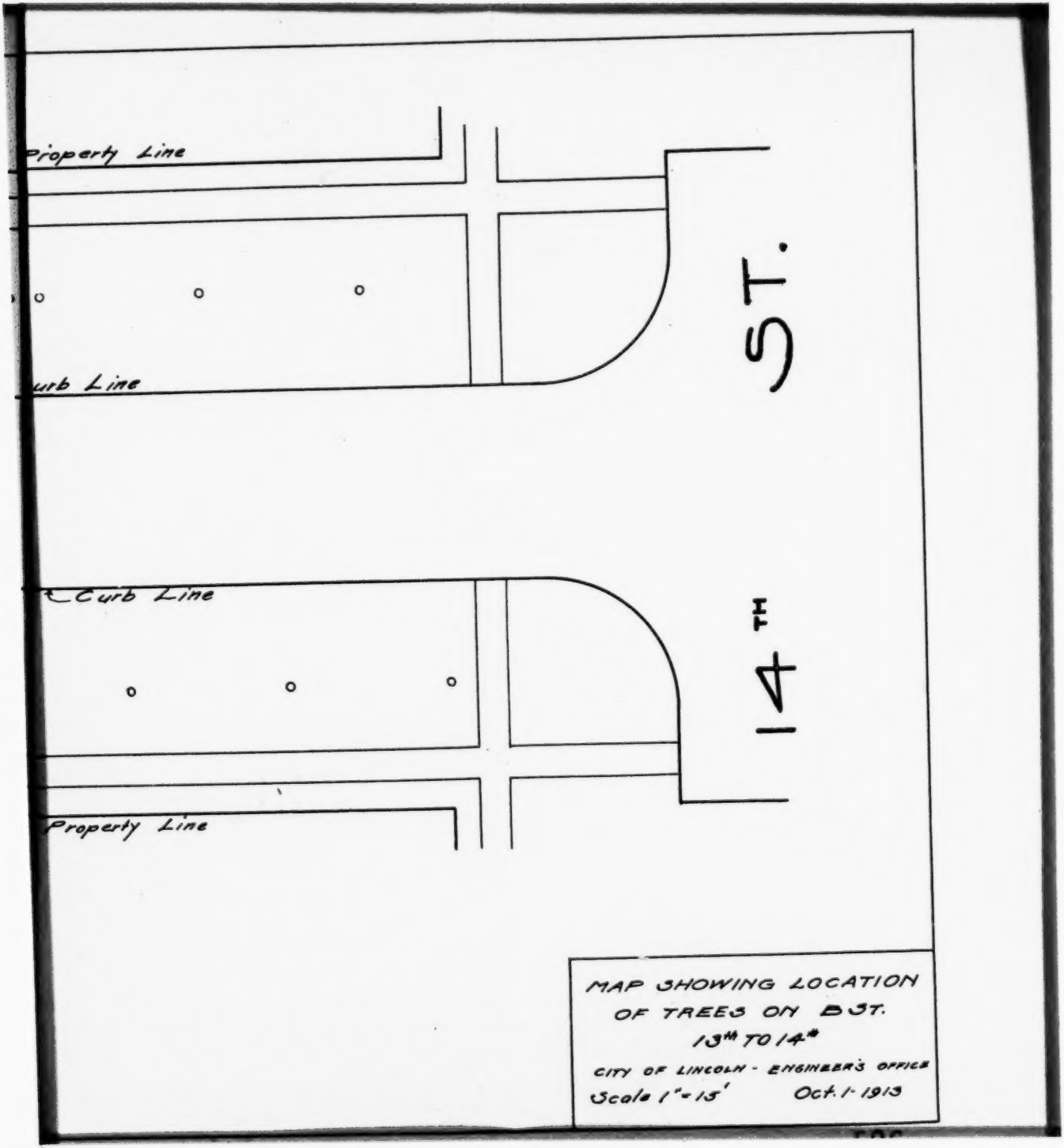

EXHIBIT 22

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

EXHIBIT
No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

Page 965


Property Line
300
Curb Line
ST.
Curb Line
300'
Property Line
MAP SHOWIN
OF TREES
13TH T
CITY OF LINCOLN -
Scale 1"=15'


Property Line
Curb Line
B ST.
Curb Line
14TH
Property Line
MAP SHOWING LOCATION
OF TREES ON B ST.
13TH TO 14TH
CITY OF LINCOLN - ENGINEER'S OFFICE
Scale 1"=15'
Oct. 1- 1913

603 *Contract Between the City of Lincoln and George E. Tobin, for the Construction of a Concrete Roof Over Certain Water Pipes at the City Water and Light Plant, at 29th & "A" Sts.*

This agreement made and entered into this 8th day of September, 1913, by and between the City of Lincoln and George E. Tobin.

Witnesseth: That said George E. Tobin by these presents agrees with the said City of Lincoln, under penalty of bond in the sum of $600.00, to construct a concrete roof over certain water pipes at the city water and light plant located at 29th & "A" streets in said city, according to the plans and specifications for same now on file with the City Clerk of said city, and a copy of which are hereto attached and made a part hereof. All of said work to be completed within 40 days from the date of the approval of this contract by the City Council.

In consideration for the completion of said work according to the plans and specifications and contract, the City of Lincoln agrees to pay said George E. Tobin the sum of $1,090; for any grading within the lines of structure, 50¢ per cubic yard; and for extra concrete $12.00 per cubic yard; for extra reinforcing steel 3¢ per lb., and for extra structural steel 4¢ per lb.

In witness whereof, the parties hereto have set their hands and seals the day and year last above written.

CITY OF LINCOLN,
By F. C. ZEHRUNG, *Mayor.*
GEO. E. TOBIN.

Attest:
[SEAL.] THEO. H. BERG,
*City Clerk.*

604 *Proposal.*

500,000 Reinforced Concrete Reservoir.

The undersigned hereby propose to furnish labor and material and complete all work in connection with the building of a reinforced concrete reservoir of 500,000 gallons capacity, at 17th and Van Dorn streets, for the City of Lincoln, Nebraska, in accordance with the plans and specifications now on file, in the office of the City Clerk, in Lincoln, for the following prices, to-wit:

For reservoir complete, according to plans and specifications, on file herewith $6,175 Dollars.

I propose to use steel to meet specification bars for reinforcement. Method of waterproofing proposed, Cement washing.

The following schedule of quantities and prices is to be used in connection with my bid to determine the unit prices for any work more or less than called for by the plans, and for partial estimates, in accordance with the specifications.

| | Rate. | Total. |
|---|---|---|
| 2,300 Cu. Yds. of excavation | @30¢ | $690.00 |
| 383 " " " concrete | @ $10.00 | $3,830 |
| 47,000 lbs. of reinforcing steel | @3¢ | $1,410 |
| 2 wrought iron ladders | @ $10.00 | $20 |
| 2 iron manholes and covers | @ $12.50 | $25 |
| 2 ventilators | @ $12.50 | $25 |
| Waterproofing | @$175.00 | $175 |
| | | 6,175 |

Total equal to price named in proposal..... $6,175.00

If awarded this contract, I agree to complete said reservoir on or before Dec. 15, 1913.

Enclosed is a certified check for $500 payable to George Dayton, City Treasurer, which is to be retained by the City of Lincoln, as liquidated damages in case I fail to enter into a contract with sufficient bond within ten days from the date of notification of awarding of contract.

Dated this 19 day of Sept., 1913.

(Signed) ABEL & ROBERTS.
By G. P. ABEL.

Address, ——.

605 *Valuation of Lincoln Gas Plant as of January* 1, 1913.

Alton D. Adams, Worcester, Mass.

606 Lincoln Gas & Electric Lt. Co.

*Valuation.*


| | Pages. |
|---|---|
| Cost, Depreciation and Value of Lincoln Gas Plant, as of Jan. 1, 1913 | 1 |
| Depreciation of Lincoln Gas Plant, as of Jan. 1, 1913 | 2 |
| Age & Depreciation of Lincoln Gas Plant, as of Jan. 1, 1913 | 3 to 5 |
| Amount of Depreciation of Lincoln Gas Plant, as of Jan. 1, 1913 | 6 to 9 |
| Cost and Value of Lincoln Gas Plant, as of Jan. 1, 1913 | 10 to 13 |
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607 Lincoln Gas & Electric Lt. Co.

*Valuation.*


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608 Cost, Depreciation and Value of Lincoln Gas Plant, as of Jan. 1, 1913.

| Plant items. | $ Total cost. | $ Total depreciation. | $ Total value. |
|---|---|---|---|
| Land | 2,625 | ..... | 2,625 |
| Buildings | 28,135 | 8,232 | 19,903 |
| Works Equipment | 160,069 | 38,065 | 122,004 |
| Distribution System | 324,659 | 80,644 | 244,015 |
| | 515,488 | 126,941 | 388,547 |
| Engineering, Int., Etc. 7%. | 36,084 | 8,886 | 27,198 |
| | 551,572 | 135,827 | 415,745 |

609 Age & Depreciation, Lincoln Gas Plant, as of Jan. 1, 1913.

| Plant Items. | Per cent annual. | Depreciation total. | $ Annual depreciation. |
|---|---|---|---|
| Land | .... | .... | .... |
| Buildings | 1.6 | 29.2 | 460.55 |
| Works Equipment | 2.2 | 23.8 | 3,579.69 |
| Distribution System | 1.9 | 24.8 | 6,160.00 |
| | 1.9 | 24.6 | 10,200.24 |
| Engineering Int., etc. 7%. | .... | .... | 714.02 |
| | .... | 24.6 | 10,914.26 |

*Age & Depreciation of Lincoln Gas Plant as of Jan. 1, 1913.*

| Plant items. | Years assumed life. | Per cent annual depreciation. | Years old. | Per cent total depreciation. |
|---|---|---|---|---|
| Buildings: | | | | |
| Purifying House | 66.6 | 1.5 | 22 | 33.0 |
| Generator House | 66.6 | 1.5 | 5 | 7.5 |
| Retort House | 66.6 | 1.5 | 22 | 33.0 |
| Meter Shop & Booster House | 66.6 | 1.5 | 5 | 7.5 |
| Coal Shed | 40.0 | 2.5 | 22 | 55.0 |
| Oil Tank House | 66.6 | 1.5 | 15 | 22.5 |
| Oxide Shed | 25.0 | 4.0 | 3 | 12.0 |
| Stable & Blacksmith Shop | 25.0 | 4.0 | 15 | 60.0 |
| District Holder Booster House | 66.0 | 1.5 | 2 | 3.0 |
| Works Equipment: | | | | |
| 7½ Foot Water Gas Set | 33.3 | 3.0 | 4 | 12.0 |
| 7½ Foot Gater Gas Set | 33.3 | 3.0 | 0 | 0.0 |
| Water Gas Condenser & Scrubber | 33.3 | 3.0 | 4 | 12.0 |
| Operating Floor for 7½ Ft. Sets | 66.6 | 1.5 | 2 | 3.0 |
| 6½ Foot Water Gas Set W. G. C. | 33.3 | 3.0 | 10 | 30.0 |
| 6½ Foot Water Gas Set, Springer | 33.3 | 3.0 | 24 | 72.0 |
| Operating Floor | 66.6 | 1.5 | 10 | 15.0 |
| #7 Sturtevant Blower | 40. | 2.5 | 3 | 7.5 |
| #7 Sturtevant Blower | 40. | 2.5 | 3 | 7.5 |
| #1 Roots Blower | 40. | 2.5 | 11 | 27.5 |
| #8 Sturtevant Turbo-Blower | 33.3 | 3.0 | 4 | 12.0 |
| #8 Sturtevant Blower | 40. | 2.5 | 3 | 7.5 |
| #6 Roots Exhauster | 40. | 2.5 | 22 | 55.0 |

| Plant items. | Years assumed life. | Per cent annual depreciation. | Years old. | Per cent total depreciation. |
|---|---|---|---|---|
| #6 Sturtevant Exhauster | 40. | 2.5 | 4 | 10.0 |
| 10″ McKenzie Exhauster | 40. | 2.5 | 20 | 50.0 |
| 4″ x 5″ Greenfield Engine | 40. | 2.5 | 15 | 37.5 |
| 5″ x 5″ Sturtevant Engine | 40. | 2.5 | 4 | 10.0 |
| 7″ x 6″ Sturtevant Engine | 40. | 2.5 | 3 | 7.5 |
| 40 H. P. Motor | 33.3 | 3.0 | 8 | 24.0 |
| 35 H. P. Motor | 33.3 | 3.0 | 8 | 24.0 |
| Countershafting etc. | 33.3 | 3.0 | 21 | 63.0 |
| 3 Benches of 6's | 33.3 | 3.0 | 20 | 60.0 |
| 3 Benches of 6's | 33.3 | 3.0 | 11 | 33.0 |
| Charging Floor | 66.0 | 1.5 | 15 | 22.5 |
| 4½′ x 25′ Condenser | 40.0 | 2.5 | 22 | 55.0 |
| 5½′ Scrubber | 40.0 | 2.5 | 22 | 55.0 |
| 4½′ x 5′ Rotary Scrubber | 40.0 | 2.5 | 25 | 62.5 |
| 1—20′ x 24′ x 4′ Purifying Box | 50. | 2.0 | 12 | 24.0 |
| 3—20′ x 24′ x 4′ " Boxes | 50. | 2.0 | 20 | 40.0 |

*Age & Depreciation of Lincoln Gas Plant as of Jan. 1, 1913.*

| Plant items. | Years assumed life. | Per cent annual depreciation. | Years old. | Per cent total depreciation. |
|---|---|---|---|---|
| Works Equipment: | | | | |
| 10′ Station Meter | 40. | 2.5 | 13 | 32.5 |
| 6′ Station Meter | 40. | 2.5 | 30 | 75.0 |
| 500,000 Cu. Ft. Gas Holder | 66.6 | 1.5 | 4 | 6.0 |
| 200,000 Cu. Ft. Gas Holder | 66.6 | 1.5 | 22 | 33.0 |
| 50,000 Cu. Ft. Gas Holder | 66.6 | 1.5 | 30 | 45.0 |
| 20″ Connelly Governor | 50. | 2.0 | 22 | 44.0 |
| 12″ Reynolds Governor | 50. | 2.0 | 3 | 6.0 |
| 6″ x 10″ x 5″ x 10″ Knowles Pump | 25. | 4.0 | 10 | 40.0 |
| 3″ x 4″ Vertical Pump | 25. | 4.0 | 20 | 80.0 |
| 3½″ x 4″ x 6″ Gardner Pump | 25. | 4.0 | 6 | 24.0 |
| 4½″ x 2¾″ x 4″ Worthington Pump | 25. | 4.0 | 2 | 8.0 |
| 4½″ x 2¾″ x 4″ Gardner Pump | 25. | 4.0 | 4 | 16.0 |
| 4½″ x 2¾″ x 4″ Worthington Pump | 25. | 4.0 | 4 | 16.0 |
| 3″ x 2″ x 3″ Worthington Pump | 25. | 4.0 | 1 | 4.0 |
| 6″ x 4″ x 6″ Warren Pump | 25. | 4.0 | 20 | 80.0 |
| 2½″ x 3″ x 4″ Marsh Pump | 25. | 4.0 | 4 | 16.0 |
| Otis Platform Elevator | 33.3 | 3.0 | 4 | 12.0 |
| Fairbanks Scale | 33.3 | 3.0 | 5 | 15.0 |
| Photometer | 33.3 | 3.0 | 19 | 57.0 |
| Calarimeter | 25. | 4.0 | 3 | 12.0 |
| Shop Tools | 25. | 4.0 | 7 | 28.0 |
| Four Tar Tanks 63′ x 16′ | 40. | 2.5 | 20 | 50.0 |
| Tar Separator | 40. | 2.5 | 7 | 17.5 |
| Tar Well 3¼′ x 3¼′ x 10′ | 66.6 | 1.5 | 20 | 30.0 |

| Plant items. | Years assumed life. | Per cent annual depreciation. | Years old. | Per cent total depreciation. |
|---|---|---|---|---|
| Tar Well, 6′ x 20′ x 12′ | 66.6 | 1.5 | 14 | 21.0 |
| 2 Steel Tar Tanks, 10½′ x 29¼′ | 66.6 | 1.5 | 2 | 3.0 |
| 2 Steel Oil Tanks, Each 10¾′ x 29¼′ | 66.6 | 1.5 | 3 | 4.5 |
| 2 Steel Oil Tanks, one 8′ x 24′ & one 8½′ x 30′ | 66.6 | 1.5 | 9 | 13.5 |
| Brick Oil Tank 10′ x 10′ | 66.6 | 1.5 | 14 | 21.0 |
| Water Piping | 33.3 | 3.0 | 9 | 27.0 |
| Drain Piping | 40.0 | 2.5 | 10 | 25.0 |
| Oil Piping | 33.3 | 3.0 | 6 | 18.0 |
| Gas Piping in Yard | 66.6 | 1.5 | 12 | 18.0 |
| Steam Piping | 25.0 | 4.0 | 8 | 32.0 |
| Tar Piping | 40.0 | 2.5 | 12 | 30.0 |
| Work Tools | 10.0 | 10.0 | 3 | 30.0 |
| Office Furniture & Fixtures | 25.0 | 4.0 | 3 | 12.0 |
| District Holder Equipment: | | | | |
| 100,000 Cu. Ft. Holder | 66.6 | 1.5 | 2 | 3.0 |
| Water piping | 33.3 | 3.0 | 2 | 6.0 |
| Gas piping in Yard | 66.6 | 1.5 | 2 | 3.0 |

*Age & Depreciation of Lincoln Gas Plant as of Jan. 1st, 1913.*

| Plant items. | Years assumed life. | Per cent annual depreciation. | Years old. | Per cent total depreciation. |
|---|---|---|---|---|
| District Holder Equipment: | | | | |
| Manholes | 66.6 | 1.5 | 2 | 3.0 |
| 25 H. P. Motor | 33.3 | 3.0 | 2 | 6.0 |
| 5 H. P. Motor | 33.3 | 3.0 | 2 | 6.0 |
| #5 Sturtevant Blower, Belted | 40.0 | 2.5 | 2 | 5.0 |
| #5 Sturtevant Blower Positive | 40.0 | 2.5 | 2 | 5.0 |
| Distribution System: | | | | |
| Cast Iron Mains | 100.0 | 1.0 | †19.3 | 19.2 |
| Steel Mains | 50.0 | 2.0 | †12.1 | 24.3 |
| Service Pipes | 40.0 | 2.5 | †10.8 | 27.1 |
| Meters | 40.0 | 2.5 | †14.4 | 36.1 |
| Paving over C. I. Mains | 100.0 | 1.0 | 19.3 | 19.2 |
| Paving over Steel Mains | 50. | 2.0 | 12.1 | 24.3 |
| Paving Over Service Pipes | 40. | 2.5 | 10.8 | 27.1 |

†Average Age of Investment.

613 *Age & Depreciation of Lincoln Gas Plant as of Jan. 1, 1913.*

| Plant items. | $ Annual depreciation. | $ Total depreciation. | Year built. |
|---|---|---|---|
| Buildings: | | | |
| Purifying House..... | 188.66 | 4,150 | 1890 |
| Generator House..... | 48.92 | 245 | 1908 |
| Retort House..... | 91.32 | 2,009 | 1890 |
| Meter Shop & Booster House ..... | 30.72 | 154 | |
| Coal Shed..... | 41.43 | 911 | 1890 |
| Oil Tank House..... | 16.61 | 249 | 1897 |
| Oxide Shed..... | 2.40 | 7 | 1909 |
| Stable & Blacksmith Shop | 32.72 | 491 | 1897 |
| District Holder Booster House ..... | 7.77 | 16 | 1910 |
| | 460.55 | 8,232 | |
| Less Dist. Holder Booster House ..... | 452.78 | 8,216 | |
| Works Equipment: | | | |
| 7½ Foot Water Gas Set. | 225.18 | 901 | 1908 |
| 7½ Foot Water Gas Set. | 225.18 | 00 | 1912 |
| Water Gas Condenser & Scrubber ..... | 36.18 | 145 | 1908 |
| Operating Floor for 7½ Ft. Sets..... | 19.79 | 40 | 1908 |
| 6½ Foot Water Gas Set W. G. C..... | 174.24 | 1,742 | 1902 |
| 6½ Foot Water Gas Set, Springer ..... | 87.12 | 2,091 | 1888 |
| Operating Floor..... | 17.76 | 178 | 1902 |
| #7 Sturtevant Blower... | 6.35 | 19 | 1909 |
| #7 Sturtevant Blower... | 6.45 | 19 | 1909 |
| #1 Root Blower..... | 3.55 | 39 | 1901 |
| #8 Sturtevant Turbo-Blower ..... | 40.08 | 160 | 1908 |
| #8 Sturtevant Blower... | 13.98 | 42 | 1909 |
| #6 Root Exhauster..... | 20.60 | 453 | 1890 |
| 5″ x 5″ Sturtevant Engine & #6 Exhauster..... | 14.75 | 59 | 1908 |
| 10″ McKenzie Exhauster. | 10.63 | 213 | 1892 |
| 4″ x 5″ Greenfield Engine | 6.63 | 99 | 1897 |
| 7″ x 6″ Sturtevant Engine | 8.93 | 27 | 1909 |
| 40 H. P. Motor..... | 7.50 | 60 | 1904 |
| 35 H. P. Motor..... | 16.05 | 128 | 1904 |
| Countershafting, etc..... | 2.31 | 49 | 1891 |

| | | | |
|---|---|---|---|
| 3 Benches of 6's ½ Depth | 211.02 | 4,220 | 1892 |
| 3 Benches of 6's ¾ Depth | 229.02 | 2,519 | 1901 |
| Charging Floor..... | 24.08 | 361 | 1897 |
| 4½′ x 25′ Condenser..... | 14.58 | 321 | 1890 |
| 5½′ x 31′ Scrubber..... | 7.98 | 175 | 1890 |
| 4½′ x 5 Rotary Scrubber. | 53.45 | 1,336 | 1887 |
| 1—20′ x 24′ x 4′ Purifying Box..... | 38.40 | 461 | 1900 |
| 3—20′ x 24′ x 4′ Purifying Boxes ..... | 115.20 | 2,304 | 1892 |
| 10′ Station Meter..... | 98.50 | 1,281 | 1892<br>1907 |

614 Age & Depreciation of Lincoln Gas Plant as of Jan. 1, 1913—Continued.

| Plant items. | $ Annual depreciation. | $ Total depreciation. | Year built. |
|---|---|---|---|
| Works Equipment—cont. | | | |
| 6′ Station Meter..... | 31.25 | 938 | 1882 |
| 500,000 Cu. Ft. Gas Holder ..... | 623.06 | 2,492 | 1908 |
| 200,000 Cu. Ft. Gas Holder ..... | 270.00 | 5,940 | 1890 |
| 50,000 Cu. Ft. Gas Holder | 120.00 | 3,600 | 1882 |
| 20″ Connelly Governor.. | 17.20 | 378 | 1890 |
| 12″ Reynolds Governor.. | 7.60 | 23 | 1909 |
| 6″x10″x5″x10″ Knowles Pump ..... | 16.72 | 167 | 1902 |
| 3″ x 4″ Vertical Pump.. | 7.44 | 149 | 1892 |
| 3½″ x 4″ x 6″ Gardner Pump ..... | 4.16 | 25 | 1906 |
| 4½″ x 3¾″ x 4″ Worthington Pump..... | 4.64 | 9 | 1910 |
| 4½″ x 2¾″ x 4″ Gardner Pump ..... | 4.40 | 18 | 1908 |
| 4½″ x 2¾″ x 4″ Worthington Pump..... | 4.40 | 18 | 1908 |
| 3″ x 2″ x 3″ Worthington Pump ..... | 3.96 | 4 | 1911 |
| 6″x4″x6″ Warren Pump | 7.44 | 149 | 1892 |
| 2½″x3″x4″ Marsh Pump | 3.72 | 15 | 1908 |
| Otis Platform Elevator... | 28.95 | 116 | 1908 |
| Fairbanks Scale..... | 1.80 | 9 | 1907 |
| Photometer ..... | 9.00 | 171 | 1893 |
| Calarimeter ..... | 8.00 | 24 | 1909 |
| Shop Tools..... | 18.48 | 129 | 1905 |
| Four Tar Tanks 63′ x 16′ | 9.83 | 197 | 1892 |
| Tar Separator ..... | 4.48 | 31 | 1905 |
| Tar Well, 3¼′ x 3¼′ x 10′ | 1.56 | 31 | 1892 |

| | | | |
|---|---|---|---|
| Tar Well, 6′ x 20′ x 12′.. | 7.08 | 99 | 1898 |
| 2 Steel Tar Tanks, 10½′ x 29¼′ ..... | 15.84 | 32 | 1910 |
| 2 Steel Oil Tanks 10¾′ x 29½′ ..... | 17.40 | 52 | 1909 |
| 2 Steel Oil Tanks, One 8′ x 24′ & one 8½ x 30′ | 9.36 | 84 | 1903 |
| | 3.42 | 48 | 1898 |
| Brick Oil Tank 10′ x 10′. | 24.63 | 222 | 1892 to 1912 |
| Water Piping..... | 42.08 | 421 | " " " |
| Drain Piping..... | 13.29 | 80 | " " " |
| Oil Piping..... | 75.12 | 901 | " " " |
| Gas Piping in Yard..... | 106.28 | 850 | " " " |
| Steam Piping..... | 14.65 | 176 | " " " |
| Tar Piping ..... | 46.20 | 139 | " " " |
| Works Tools..... | 2,318.93 | 37,275 | |
| Furniture and Fixtures.. | 260.76 | 782 | |
| | 2,579.69 | 38,057 | |

615 Age & Depreciation of Lincoln Gas Plant as of Jan. 1, 1913—Continued.

| Plant items. | $ Annual depreciation. | $ Total depreciation. | Year built. |
|---|---|---|---|
| Distribution System: | | | |
| Cast Iron Mains..... | 718 | 13,865 | 1875-1912 |
| Steel Mains..... | 1,180 | 14,369 | " " |
| Service Pipes..... | 1,748 | 19,013 | 1872- " |
| Meters ..... | 1,414 | 20,429 | " " |
| Paving over C. I. Mains.. | 252.54 | 4,848 | |
| Paving over Steel Mains. | 185.28 | 2,251 | |
| Paving over Service Pipes | 266.25 | 2,886 | |
| Distribution Tools..... | ..... | 1,677 | |
| Service Boxes and Cocks | 61.80 | 618 | |
| Service Governors..... | 334.13 | 668 | |
| | 6,160.00 | 80,624 | |

616 *Cost and Value of Lincoln Gas Plant as of Jan. 1, 1913.*

| Plant Items. | $ Cost. | $ Value. |
|---|---|---|
| Land: | | |
| Lots numbered 1 to 12, inclusive, Block 79, Original Plat of City of Lincoln, 300 Feet by 300 Feet, 90,000 square feet used for Gas Works, at 2.5 cents per square foot | 2,250 | 2,250 |
| One half of M Street in front of Block 79, 50'x 300' equals 15,000 sq. feet at 2.5 cents per foot | 375 | 375 |
| | 2,625 | 2,625 |
| Buildings: | | |
| Purifying House | 12,577 | 8,427 |
| Generator House | 3,261 | 3,016 |
| Retort House | 6,088 | 4,079 |
| Meter Shop & Booster House | 2,049 | 1,895 |
| Coal Shed | 1,657 | 746 |
| Oil Tank House | 1,107 | 858 |
| Oxide Shed, per Lea | 60 | 53 |
| Stable & Blacksmith Shop, per Lea | 818 | 327 |
| District Holder Booster House | 518 | 502 |
| | 28,135 | 19,903 |
| Less Dist. Holder Booster House | 27,617 | 19,401 |
| Works equipment: | | |
| 7½ Foot Water Gas Set | 7,506 | 6,605 |
| 7½ Foot Water Gas Set | 7,506 | 7,506 |
| Water Gas Condenser & Scrubber | 1,206 | 1,061 |
| Operating Floor for 7½ Ft. Sets | 1,319 | 1,279 |
| 6½ Foot Water Gas Set, WGC | 5,808 | 4,066 |
| 6½ Foot Water Gas Set, Springer | 2,904 | 813 |
| Operating Floor for 6½ Foot Sets | 1,184 | 1,006 |
| #7 Sturtevant Blower | 254 | 235 |
| #7 Sturtevant Blower | 258 | 239 |
| #1 Roots Blower | 142 | 103 |
| #8 Sturevant Turbo-Blower | 1,336 | 1,176 |
| #8 Sturtevant Blower | 559 | 517 |
| #6 Roots Exhauster | 824 | 371 |
| 5"x5" Sturtevant Eugine & #6 Exhauster | 590 | 531 |
| 10" McKenzie Exhauster | 425 | 212 |
| 4"x5" Greenfield Engine | 265 | 166 |
| 7"x6" Sturtevant Engine | 357 | 330 |
| 40 H. P. Motor | 250 | 190 |
| 35 H. P. Motor | 535 | 407 |
| Countershafting, etc. | 77 | 28 |
| 3 Benches of 6's | 7,034 | 2,814 |

617 *Cost and Value of Lincoln Gas Plant as of Jan. 1, 1913.*

| Plant items. | $ Cost. | $ Value. |
|---|---|---|
| Works equipment—(Con't.): | | |
| 3 Benches of 6's | 7,634 | 5,115 |
| Charging Floor | 1,605 | 1,244 |
| 4½'x25' Condenser | 583 | 262 |
| 5½'x31' Scrubber | 319 | 144 |
| 4½'x5' Rotary Scrubber | 2,138 | 802 |
| 1—20'x24'x4' Purifying Box | 1,920 | 1,459 |
| 3—20'x24'x4' Purifying Boxes | 5,760 | 3,456 |
| 10' Station Meter | 3,940 | 2,659 |
| 6' Station Meter | 1,250 | 312 |
| 500,000 Cu. Ft. Gas Holder | 41,537 | 39,045 |
| 200,000 Cu. Ft. Gas Holder | 18,000 | 12,060 |
| 50,000 Cu. Ft. Gas Holder | 8,000 | 4,400 |
| 20" Connelly Governor | 860 | 378 |
| 12" Reynolds Governor | 380 | 357 |
| 6"x10"x5"10" Knowles Pump, Per Lea | 418 | 251 |
| 3"x4" Vertical Pump, Per Lea | 186 | 37 |
| 3½"x4"x6" Gardner Pump, Per Lea | 104 | 79 |
| 4½"x3¾"x4" Worthington Pump, Per Lea | 116 | 107 |
| 4½"x2¾"x4" Gardner Pump, Per Lea | 110 | 92 |
| 4½"x2¾"x4" Worthington Pump, Per Lea | 110 | 92 |
| 3"x2"x3" Worthington Pump, Pea Lea | 99 | 95 |
| 6"x4"x6" Warren Pump, Per Lea | 186 | 37 |
| 2½"x3"x4" Marsh Pump, Per Lea | 93 | 78 |
| Otis Platform Elevator | 965 | 849 |
| Fairbanks Scale | 60 | 51 |
| Photometer | 300 | 129 |
| Calarimeter | 200 | 176 |
| Shop Tools, Per Lea | 462 | 333 |
| Four Tar Tanks, 63'x16' | 393 | 196 |
| Tar Separator, Per Lea | 179 | 148 |
| Tar Well, 3¼'x3¼'x10', Per Lea | 104 | 73 |
| Tar Well, 6'x20'x12', Per Lea | 472 | 373 |
| 2 Steel Tar Tanks, 10½'x29¼' | 1,056 | 1,024 |
| 2 Steel Oil Tanks, Each 10¾'x29¼' | 1,160 | 1,108 |
| 2 Steel Oil Tanks, one 8'x24' & one 8½'x30' | 624 | 540 |
| Brick Oil Tank, 10'x10', Per Lea | 228 | 180 |
| Water Piping, Per Lea | 821 | 599 |
| Drain Piping, Per Lea | 1,683 | 1,262 |
| Oil Piping, Per Lea | 443 | 363 |
| Gas Piping in Yard | 5,008 | 4,107 |
| Steam Piping, Per Lea | 2,657 | 1,807 |
| Tar Piping, Per Lea | 586 | 410 |
| Works Tools, Per Lea | 462 | 323 |
| | 153,550 | 116,267 |
| One half of Furniture & Fixtures, Per Lea | 6,519 | 5,737 |
| | 160,069 | 122,004 |

618 *Cost and Value of Lincoln Gas Plant as of Jan.* 1, 1913.

| Plant items. | $ Cost. | $ Value. |
|---|---|---|
| Distribution system: | | |
| Cast Iron Mains | 71,892 | 58,027 |
| Steel Mains | 59,021 | 44,652 |
| Service Pipes | 69,939 | 50,926 |
| Meters | 56,592 | 36,163 |
| Paving over C. I. Mains | 25,254 | 20,406 |
| Paving over Steel Mains | 9,264 | 7,013 |
| Paving over Service Pipes | 10,650 | 7,764 |
| Distribution Tools | 6,210 | 4,533 |
| Service Boxes and Cocks | 2,472 | 1,854 |
| Service Governors | 13,365 | 12,677 |
| | 324,659 | 244,015 |

619 Lincoln Gas & Electric Lt. Co.

*Detail Cost of Buildings as of Jan.* 1, 1913.

Purifying House.

| | |
|---|---|
| Excavation & removal, 453.6 cu. yds. at 40¢ per cu. yd. | $1,814.40 |
| Stone Foundation 505.9 cu. yds. at $7.00 | 3,541.30 |
| 198.155 Brick laid at $15 per M | 2,972.33 |
| Total of above | 8,328.03 |
| Total Cost Purifying House per Lea | $16,620.00 |
| Deduct Cost of Excavation, Foundations, Brick & Tile per Lea | 12,371.00 |
| | 4,249.00 |
| Add Cost of Excavation, Foundations, Brick & Tile, per Adams | 8,328.03 |
| Total Cost | 12,577.03 |

Generator House.

| | |
|---|---|
| Excavation & Removal, 247.9 cu. yds. @40¢ | $99.16 |
| Foundation—Concrete 82.5 cu. yds.@$7 | 577.50 |
| Brick laid 41.978 M@$15 | 629.67 |
| Tile—Hollow 13.270 M@$15 | 199.05 |
| Total of Above | 1,505.38 |

| | |
|---|---|
| Total Cost Generator House, per Lea | $3,739.00 |
| Deduct Cost of Excavation, Foundations, Brick & Tile, per Lea | 1,983.00 |
| | 1,756.00 |
| Add Cost of Excavation, Foundations, Brick & Tile, per Adams | 1,505.38 |
| Total Cost | 3,261.38 |

Retort House.

| | |
|---|---|
| Excavations & removal 1,244.5 cu. yds.@40¢ | $497.80 |
| Foundation—Stone 206.4 cu. yds.@$7 | 1,444.80 |
| Brick laid 160.540 M@$15 | 2,408.10 |
| Total of Above | 4,350.70 |
| Total Cost Retort House per Lea | $7,689.00 |
| Deduct Cost of Excavations, Foundations, Tile & Brick, per Lea | 5,951.00 |
| | 1,738.00 |
| Add Cost of Excavation, Foundations, Brick & Tile, per Adams | 4,350.70 |
| Total Cost | 6,088.70 |

620 Lincoln Gas & Electric Lt. Co.

*Detail Cost of Buildings as of Jan.* 1, 1913.

Meter Shop & Booster House.

| | |
|---|---|
| Excavation & Removal 386.0 cu. yds.@40¢ per cu. yd. | $154.40 |
| Foundation—Concrete 38.0 cu. yds.@$7 per cu. yd. | 266.00 |
| Brick laid 51.128 M@$15 per M | 766.92 |
| Total of above | 1,187.32 |
| Total Cost Meter Shop & Booster House per Lea | $2,616.00 |
| Deduct Cost of Excavation, Foundations, Brick & Tile, per Lea | 1,754.00 |
| | 862.00 |
| Add Cost of Excavation, Foundations, Brick & Tile, per Adams | 1,187.32 |
| Total Cost | $2,049.32 |

Coal Shed.

| | |
|---|---|
| Excavation & Removal 146.4 cu. yds.@40¢ | $58.56 |
| Foundation—Stone 63.1 cu. yds.@$7 | 441.70 |
| Brick laid 3.593 M@$15 | 53.90 |
| Total of Above | 554.16 |
| Total Cost Coal Shed, per Lea | $1,793.00 |
| Deduct Cost of Excavation, Foundation, Brick & Tile, per Lea | 690.00 |
| | 1,103.00 |
| Add Cost of Excavation, Foundations, Brick & Tile, per Adams | 554.16 |
| Total Cost | 1,657.16 |

Oil Tank House.

| | |
|---|---|
| Excavation & Removal 428.9 cu. yds.@40¢ | 171.56 |
| Foundations—Stone 65.5 cu. yds.@$7 | 458.50 |
| Brick Laid 5.851 M@$15 | 87.77 |
| Total of above | 717.83 |
| Total Cost of Oil Tank House, per Lea | 1,558.00 |
| Deduct Cost of Excavation, Foundations, Brick & Tile, per Lea | 1,168.00 |
| | 390.00 |
| Add Cost Excavation, Foundation, Brick & Tile, per Adams | 717.83 |
| Total Cost | $1,107.83. |

621 Lincoln Gas & Electric Lt. Co.

*Detail Cost of Buildings as of Jan.* 1, 1913.

Booster House at Storage Plant.

| | |
|---|---|
| Excavation & Removal 155.4 cu. yds.@40¢ per cu. yd. | $62.16 |
| Brick laid 16.136M@$15 per M | 242.04 |
| Total of above | 304.20 |
| Total Cost Booster House at Storage Plant, per Lea | $721.00 |
| Deduct Cost of Excavation, Foundation, Brick & Tile, per Lea | 507.00 |
| | 214.00 |
| Add Cost of Excavation, Foundation, Brick & Tile, per Adams | 304.20 |
| Total Cost | 518.20 |

Oxide Shed.

Total Cost Assumed of Oxide Shed, per Lea..... $60.00

Stable & Blacksmith Shop.

Total Cost Assumed of Stable & Blacksmith Shop, per Lea ..... $818.00

622 Lincoln Gas & Electric Light Company.

Distribution System. 2.

*Cost of C. I. Mains Laid Each Year as of Jan. 1, 1913.*

| Year. | Inch size. | Feet laid. | $ Cost per foot. | $ Total cost. |
|---|---|---|---|---|
| Before 1903.... | 3 | 406 | 0.301 | 122.20 |
| | 4 | 69,260 | 0.367 | 25,418.42 |
| | 6 | 20,451 | 0.562 | 11,493.46 |
| | 8 | 896 | 0.740 | 663.04 |
| | 10 | 9,810 | 0.906 | 8,887.86 |
| | 12 | 3,613 | 1.235 | 4,462.05 |
| | 16 | 1,269 | 1.722 | 2,185.21 |
| | 20 | 1,472 | 2.529 | 3,722.68 |
| | | 107,177 | | 56,954.92 |
| 1903.... | 4 | 1,237 | 0.367 | 453.97 |
| 1904.... | 4 | 2,005 | 0.367 | 735.83 |
| | 6 | 1,094 | 0.562 | 613.02 |
| | 8 | 938 | 0.740 | 694.12 |
| | | 4,037 | | 2,042.97 |
| 1905.... | 4 | 8,514 | 0.367 | 3,124.63 |
| | 8 | 2,734 | 0.740 | 2,023.16 |
| | | 11,248 | | 5,147.79 |
| 1906.... | 4 | 1,909 | 0.367 | 700.60 |
| | 6 | 1,605 | 0.562 | 902.01 |
| | | 3,514 | | 1,602.61 |

623 Lincoln Gas & Electric Light Company.

Distribution System. 3.

*Cost of C. I. Mains Laid Each Year as of Jan. 1, 1913.*

| Year. | Inch size. | Feet laid. | $ Cost per foot. | $ Total cost. |
|---|---|---|---|---|
| 1908.... | 4 | 494 | 0.367 | 181.29 |
| 1909.... | 4 | 80 | 0.367 | 29.36 |
| | 6 | 240 | 0.562 | 134.88 |
| | | 320 | | 164.24 |
| 1910.... | 4 | 8,288 | 0.367 | 3,041.69 |
| | 6 | 2,435 | 0.562 | 1,368.47 |
| | | 10,723 | | 4,410.16 |
| 1911.... | 4 | 2,434 | 0.367 | 893.27 |
| 1912.... | 4 | 53 | 0.367 | 19.45 |
| | 6 | 48 | 0.562 | 26.97 |
| | | 101 | | 46.42 |
| Total.. | | 141,285 | | 71,897.64 |

624 Lincoln Gas & Electric Light Company.

Distribution System. 4.

*Cost of Steel Mains Laid Each Year as of Jan. 1, 1913.*

| Year. | Inch size. | Feet laid. | $ Cost per foot. | $ Total cost. |
|---|---|---|---|---|
| Before 1903.... | 1¼+1½ | 2,258 | 0.135 | 304.83 |
| | 2 | 131,380 | 0.186 | 24,436.68 |
| | | 133,638 | | 24,741.51 |
| 1903.... | 2 | 23,558 | 0.186 | 4,381.78 |
| 1904.... | 2 | 7,055 | 0.186 | 1,312.23 |
| 1905.... | 2 | 16,787 | 0.186 | 3,122.38 |
| 1906.... | 2 | 20,126 | 0.186 | 3,743.43 |
| 1907.... | 2 | 15,403 | 0.186 | 2,864.95 |
| 1908.... | 2 | 12,653 | 0.186 | 2,353.45 |
| 1909.... | 2 | 34,533 | 0.186 | 6,423.13 |
| 1910.... | 2 | 22,870 | 0.186 | 4,253.82 |
| 1911.... | 2 | 15,377 | 0.186 | 2,860.12 |
| 1912.... | 2 | 15,966 | 0.186 | 2,969.67 |
| Total.. | | 317,966 | | 59,026.47 |

625 Lincoln Gas & Electric Light Company.

Distribution System. 5.

*Cost & Value Lincoln C. I. Gas Mains as of Jan.* 1, 1913.

| Year laid. | $ New cost, Jan. 1, 1913. | Yrs. old. | % Dep. | $ Depreciation, Jan. 1, 1913. | $ Value, Jan. 1, 1913. |
|---|---|---|---|---|---|
| Before 1903.... | 56,954 | 13+10 | 23 | 13,099 | 43,955 |
| 1903.... | 453 | 9 | 9 | 40 | 413 |
| 1904.... | 2,042 | 8 | 8 | 163 | 1,879 |
| 1905.... | 5,147 | 7 | 7 | 360 | 4,787 |
| 1906.... | 1,602 | 6 | 6 | 96 | 1,506 |
| 1908.... | 181 | 4 | 4 | 7 | 174 |
| 1909.... | 164 | 3 | 3 | 4 | 160 |
| 1910.... | 4,410 | 2 | 2 | 88 | 4,322 |
| 1911.... | 893 | 1 | 1 | 8 | 885 |
| 1912.... | 46 | 0 | 0 | 0 | 46 |
| Total.. | 71,892 | | 19.2 | 13,865 | 58,027 |

626 Lincoln Gas & Electric Light Company.

Distribution System. 6.

*Cost & Value Lincoln Steel Gas Mains as of Jan.* 1, 1913.

| Year. | $ New cost. Jan. 1, 1913. | Yrs. old. | % Dep. | $ Depreciation, Jan. 1, 1913. | $ Value, Jan. 1, 1913. |
|---|---|---|---|---|---|
| Before 1903.... | 24,741 | 13+10 | 46 | 11,380 | 13,361 |
| 1903.... | 4,381 | 9 | 18 | 788 | 3,593 |
| 1904.... | 1,312 | 8 | 16 | 209 | 1,103 |
| 1905.... | 3,122 | 7 | 14 | 437 | 2,685 |
| 1906.... | 3,743 | 6 | 12 | 469 | 3,274 |
| 1907.... | 2,864 | 5 | 10 | 286 | 2,578 |
| 1908.... | 2,353 | 4 | 8 | 188 | 2,165 |
| 1909.... | 6,423 | 3 | 6 | 385 | 6,038 |
| 1910.... | 4,253 | 2 | 4 | 170 | 4,083 |
| 1911.... | 2,860 | 1 | 2 | 57 | 2,803 |
| 1912.... | 2,969 | 0 | 0 | 0 | 2,969 |
| Total.. | 59,021 | | 24.3 | 14,369 | 44,652 |

627 Lincoln Gas & Electric Light Company.

Distribution System. 11.

*Cost in Cents per Foot of Gas Mains in Lincoln, as of Jan.* 1, 1913.

| Inch. | Steel. 1¼ | Steel. 2 | C. I. 3 | C. I. 4 | C. I. 6 |
|---|---|---|---|---|---|
| Trenching & Filling.. | 6.30 | 7.20 | 7.42 | 7.87 | 8.88 |
| Carting & Laying.... | 1.12 | 1.80 | 2.50 | 3.40 | 6.00 |
| Total Labor .. | 7.42 | 9.00 | 9.92 | 11.27 | 14.88 |
| Joining Materials & Incidentals ..... | .50 | .50 | .88 | .88 | 1.13 |
| All Except Iron. | 7.92 | 9.50 | 10.80 | 12.15 | 16.01 |
| Pipe & 3% for Specials. | 5.63 | 9.06 | 19.21 | 24.51 | 40.17 |
| Total Cost Laid. | 13.55 | 18.56 | 30.11 | 36.66 | 56.18 |
| Used ..... | 13.5 | 18.6 | 30.1 | 36.7 | 56.2 |

| Inch. | C. I. 8 | C. I. 10 | C. I. 12 | C. I. 16 | C. I. 20 |
|---|---|---|---|---|---|
| Trenching & Filling.. | 11.11 | 12.00 | 13.86 | 15.84 | 19.03 |
| Carting & Laying.... | 8.00 | 10.00 | 14.00 | 20.00 | 30.00 |
| Total Labor .. | 19.11 | 22.00 | 27.86 | 35.84 | 49.03 |
| Joining Materials & Incidentals ..... | 1.35 | 1.60 | 1.90 | 2.50 | 3.00 |
| All Except Iron. | 20.46 | 23.60 | 29.76 | 38.34 | 52.03 |
| Pipe & 3% for Specials. | 53.56 | 66.95 | 93.73 | 133.90 | 200.85 |
| Total Cost Laid. | 74.02 | 90.55 | 123.49 | 172.24 | 252.88 |
| Used ..... | 74.0 | 90.6 | 123.5 | 172.2 | 252.9 |

628 Lincoln Gas & Electric Light Company.

Distribution System. 12.

*Size of Trenches & Cost per Linear Foot of Trenching and Filling for Gas Mains, as of Jan. 1, 1913.*

| Inch pipe. | Feet size trench. | | | Cost per linear foot at 1.5 cts. per cu. ft. |
|---|---|---|---|---|
| | Feet wide. | Feet deep. | Cu ft. per ft. | |
| 1¼ | 1.4 | 3.0 | 4.2 | 6.30 |
| 2 | 1.5 | 3.2 | 4.80 | 7.20 |
| 3 | 1.5 | 3.3 | 4.95 | 7.42 |
| 4 | 1.5 | 3.5 | 5.25 | 7.87 |
| 6 | 1.6 | 3.7 | 5.92 | 8.88 |
| 8 | 1.9 | 3.9 | 7.41 | 11.11 |
| 10 | 2.0 | 4.0 | 8.0 | 12.00 |
| 12 | 2.2 | 4.2 | 9.24 | 13.86 |
| 16 | 2.4 | 4.4 | 10.56 | 15.84 |
| 20 | 2.7 | 4.7 | 12.69 | 19.03 |

629 Lincoln Gas & Electric Light Company.

Distribution System. 13.

*Cost of C. I. Pipe for Gas Mains at Lincoln, as of Jan. 1, 1913.*

| Inch size. | Pounds per foot. | $ Per ton of 2,000 pounds. | Cents cost per foot. | Cents cost per foot plus 3% for specials. |
|---|---|---|---|---|
| 3 | 12.5 | 30 | 18.75 | 19.31 |
| 4 | 17 | 28 | 23.80 | 24.51 |
| 6 | 30 | 26 | 39.00 | 40.17 |
| 8 | 40 | 26 | 52.00 | 55.56 |
| 10 | 50 | 26 | 65.00 | 66.95 |
| 12 | 70 | 26 | 91.00 | 93.73 |
| 16 | 100 | 26 | 130.00 | 133.90 |
| 20 | 150 | 26 | 195.00 | 200.85 |

630 *Total Gas Mains in Lincoln Jan.* 1, 1913, *per Testimony of Mr. Brodnax, Minus Mains Laid in Lincoln During* 1903 *to* 1912, *Inclusive, per Reports of Gas Company, Showing Mains in January,* 1903.

| Inch size. | Feet, Jan. 1, 1913, per testimony of Broadnax. | Feet laid in Lincoln, 1903-1912, per reports and Lea. | Feet, January 1, 1903. |
|---|---|---|---|
| 1¼ & 1½ | 2,258 | ..... | 2,258 |
| 2 | 315,708 | 184,328 | 131,380 |
| 3 | 406 | ..... | 406 |
| 4 | 94,274 | 25,014 | 69,260 |
| 6 | 25,873 | 5,422 | 20,451 |
| 8 | 4,568 | 3,672 | 896 |
| 10 | 9,810 | ..... | 9,810 |
| 12 | 3,613 | ..... | 3,613 |
| 16 | 1,269 | ..... | 1,269 |
| 20 | 1,472 | ..... | 1,472 |
| | 459,251 | | 240,815 |

631 Lincoln Gas & Electric Lt. Co.

*Cost of Paving Over Mains Relaid.*

| Inch size. | Earth trench feet wide. | Paving cut feet wide & square feet per foot of mains. | Cents cost cutting & repaving per linear foot main at 25 cts. per sq. foot paving. |
|---|---|---|---|
| 1¼ | 1.4 | 1.8 | 45.0 |
| 2 | 1.5 | 1.9 | 47.5 |
| 3 | 1.5 | 1.9 | 47.5 |
| 4 | 1.5 | 1.9 | 47.5 |
| 6 | 1.6 | 2.0 | 50.0 |
| 8 | 1.8 | 2.2 | 55.0 |
| 10 | 2.0 | 2.4 | 60.0 |
| 12 | 2.2 | 2.6 | 65.0 |
| 16 | 2.4 | 2.8 | 70.0 |
| 20 | 2.7 | 3.1 | 77.5 |

## Feet of Mains To Be Relaid under Paving in 1913.

| Inch size. | Feet under paving per Lea. | Feet to be relaid under paving in business district. | Per cent to be relaid under paving. | Total feet to be relaid under paving. |
|---|---|---|---|---|
| 1 ..... | 1,740 | .... | 20 | 348 |
| 2 ..... | 95,884 | .... | 20 | 19,176 |
| 3 ..... | 406 | .... | 20 | 81 |
| 4 ..... | 61,023 | 9555 | 32.5 | 19,848 |
| 6 ..... | 19,275 | 19,275 | 100 | 19,275 |
| 8 ..... | 3,993 | 3,993 | 100 | 3,993 |
| 10 ..... | 3,263 | 3,263 | 100 | 3,263 |
| 12 ..... | 2,131 | 2,131 | 100 | 2,131 |
| 16 ..... | 863 | 863 | 100 | 863 |
| | 188 | 39,080 | | 68,978 |

## Cost to Cut and Relay Paving Over Mains 1913.

| Inch size main. | Feet of mains to be laid under paving. | Cents cost paving per foot of mains. | $ Total cost paving. |
|---|---|---|---|
| 1¼ ..... | 348 | 45.0 | 156 |
| 2 ..... | 19,176 | 47.5 | 9,108 |
| 3 ..... | 81 | 47.5 | 38 |
| 4 ..... | 19,848 | 47.5 | 9,427 |
| 6 ..... | 19,275 | 50.0 | 9,637 |
| 8 ..... | 3,993 | 55.0 | 2,196 |
| 10 ..... | 3,263 | 60.0 | 1,957 |
| 12 ..... | 2,131 | 65.0 | 1,385 |
| 16 ..... | 863 | 70.0 | 604 |
| | 68,978 | | 34,508 |

632 Lincoln Gas & Electric Light Company.

Distribution System. 10.

*Cost of Service Pipes Laid Each Year as of January* 1, 1913.

| Year. | Total number laid to meter. | $ Cost each. | $ Total cost. |
|---|---|---|---|
| Before 1903 | 2,911 | 8.13 | 23,666.43 |
| 1903 | 691 | 8.13 | 5,617.83 |
| 1904 | 576 | 8.13 | 4,682.88 |
| 1905 | 610 | 8.13 | 4,959.30 |
| 1906 | 554 | 8.13 | 4,504.02 |
| 1907 | 569 | 8.13 | 4,625.97 |
| 1908 | 468 | 8.13 | 3,784.84 |
| 1909 | 616 | 8.13 | 5,008.08 |
| 1910 | 584 | 8.13 | 4,747.92 |
| 1911 | 480 | 8.13 | 3,902.40 |
| 1912 | 487 | 8.13 | 3,959.31 |
| Total | | | 69,458.98 |

633 Lincoln Gas & Electric Light Company.

Distribution System. 10A.

*Depreciation & Value of Service Pipes.*

*Laid Each Year as of Jan.* 1, 1913.

| Year. | $ Total cost. | Yrs. old. | % Dep. | $ Depreciation. | $ Value. |
|---|---|---|---|---|---|
| Before 1903 | 23,666 | 13+10 | 57.5 | 13,607 | 10,059 |
| 1903 | 5,617 | 9 | 22.5 | 1,263 | 4,354 |
| 1904 | 4,682 | 8 | 20.0 | 936 | 3,746 |
| 1905 | 4,959 | 7 | 17.5 | 867 | 4,092 |
| 1906 | 4,504 | 6 | 15 | 675 | 3,829 |
| 1907 | 4,625 | 5 | 12.5 | 578 | 4,047 |
| 1908 | 3,784 | 4 | 10 | 378 | 3,406 |
| 1909 | 5,008 | 3 | 7.5 | 375 | 4,633 |
| 1910 | 4,747 | 2 | 5 | 237 | 4,510 |
| 1911 | 3,902 | 1 | 2.5 | 97 | 3,805 |
| 1912 | 3,959 | 0 | 0 | 0 | 3,959 |
| | 69,453 | | 27.1 | 19,013 | 50,440 |
| Stub Services* | 486 | | | | 486 |
| | 69,939 | | | | 50,926 |

*124 Stub Services @ $3.92 = $486.08.

634 Lincoln Gas & Electric Light Company.

Distribution System. 14.

*Cost of One 1¼-inch Service from Main to Meter as of Jan. 1, 1913*

| | |
|---|---|
| 50 ft. of 1¼ inch Pipe laid at 13.5 cts. per foot | $6.75 |
| One Street Tee | .09 |
| Two Street Elbows | .13 |
| Two Common Elbows | .09 |
| One Plug | .028 |
| One Meter Cock | .55 |
| Connecting to Main | .50 |
| Total | $8.138 |

*Cost of One 1¼-inch Service from Main to Curb as of Jan. 1, 1913.*

| | |
|---|---|
| 23 ft. of 1¼ inch Street Pipe laid at 13.5 cts. per foot | $3.105 |
| One Street Tee | .09 |
| Two Street Elbows | .13 |
| Two Plugs | .056 |
| Connecting To Main | .50 |
| Total | $3.926 |

635 Lincoln Gas & Electric Light Company.

Distribution System. 15.

*Reported Number of Service Pipes, Main to Curb Each Year as of January 1, 1913.*

| Year. | First of year. | Laid in year. | Extended curb to meter. | Main to curb end of year. | Discontinued. |
|---|---|---|---|---|---|
| 1903 | 0 | 0 | 0 | 0 | |
| 1904 | 0 | 77 | 41 | 77 | 0 |
| 1905 | 77 | 5 | 137 | 82 | 0 |
| 1906 | 82 | 34 | 75 | 116 | 0 |
| 1907 | 116 | 35 | 27 | 130 | 21 |
| 1908 | 130 | 40 | 28 | 170 | 0 |
| 1909 | 170 | 27 | 35 | 197 | 0 |
| 1910 | 197 | 80 | 10 | 277 | 0 |
| 1911 | 277 | 129 | 27 | 379 | 27 |
| 1912 | 379 | 115 | 48 | 447 | 47 |
| Total | | 542 | 428 | | 95 |

636 Lincoln Gas & Electric Light Co.

*Number Service Pipes Each Year per Gas Reports to Jan. 1, 1913.*

| Year. | Laid main to meter. | Laid curb to meter. | Total laid to meter. | Laid main to curb. | In use end of year. |
|---|---|---|---|---|---|
| 1902 ..... | ... | .. | ... | ... | 2,911 |
| 1903 ..... | 691 | .. | 691 | ... | 3,602 |
| 1904 ..... | 535 | 41 | 576 | 77 | 4,178 |
| 1905 ..... | 473 | 137 | 610 | 5 | 4,788 |
| 1906 ..... | 479 | 75 | 554 | 34 | 5,342 |
| 1907 ..... | 542 | 27 | 569 | 35 | 5,911 |
| 1908 ..... | 440 | 28 | 468 | 40 | 6,379 |
| 1909 ..... | 581 | 35 | 616 | 27 | 6,995 |
| 1910 ..... | 574 | 10 | 584 | 80 | 7,579 |
| 1911 ..... | 453 | 27 | 480 | 129 | 8,059 |
| 1912 ..... | 439 | 48 | 487 | 115 | 8,553 |
| | 5,207 | 428 | 5,635 | 542 | |

637 Number of Service Pipes Under Paving as of Jan. 1, 1913.

*Number of Service Pipes to be Relaid Under Paving as of Jan. 1, 1913.*

| | |
|---|---|
| Total Feet of Mains In Lincoln Per Broadnax..... | 459,254 |
| Feet of Mains not Paved in Lincoln Per Broadnax... | 269,217 |
| Total Feet Under Paving..... | 190,037 |
| Per Cent of Mains Under Paving..... | 41.4 |
| Total Service Pipes Services Under Paving, 8660 x 0.41. | 3,550 |

*Cost of Repaving Per Service.*

Average Area of Paving to be Relaid Per Service
6′ x 2′ = 12 sq. feet.
Cost per Service at 25 cents per square foot, 12 x 25 cts.= 3.00

*Cost, Depreciation and Value of Paving Over Services as of Jan. 1, 1913.*

| | |
|---|---|
| Paving over 3,550 Services at $3.00..... | 10,650 |
| Depreciation at 27.1 Per Cent as on Services..... | 2,886 |
| Value of Paving over Services..... | 7,764 |

638 Lincoln Gas & Electric Light Company

Distribution System 7.

*Cost of Meters Purchased Each Year as of Jan.* 1, 1913.

| Year. | Light of meters. | Number meters. | $ List each. | $ Total list. | Cost list, less 40%. |
|---|---|---|---|---|---|
| Before 1903.... | 3 | 2,831 | 7.50 | 21,232 | |
| | 5 | 1,714 | 9.50 | 16,283 | |
| | 10 | 9 | 12.50 | 112 | |
| | 1A, 2, 2A | 54 | 12.50 | 675 | |
| | 30 | 2 | 27.50 | 55 | |
| | 45 | 12 | 41.50 | 498 | |
| | 60 | 1 | 56.00 | 56 | |
| | 100 | | 87.50 | | |
| | 150 | | 145.00 | | |
| | | 4,623 | | 38,911 | 23,246 |
| 1903.... | 5 | 793 | 9.50 | 7,533 | 4,519 |
| 1904.... | 5 | 745 | 9.50 | 7,077 | 4,246 |
| 1905.... | 45 | 3 | 41.50 | 124 | |
| | 60 | 1 | 56.00 | 56 | |
| | 100 | 1 | 87.50 | 87 | |
| | 150 | 1 | 145.00 | 145 | |
| | | 6 | | 412 | 247 |
| 1906.... | 5 | 50 | 9.50 | 475 | 285 |
| 1907.... | 5 | 350 | 9.50 | 3,325 | |
| | 20 | 18 | 18.00 | 324 | |
| | | 368 | | 3,649 | 2,189 |

639 Lincoln Gas & Electric Light Company.

Distribution System 8.

*Cost of Meters Purchased Each Year as of Jan.* 1, 1913.

| Year. | Light of meters. | Number meters. | $ List each. | $ Total list. | Cost list, less 40%. |
|---|---|---|---|---|---|
| 1908.... | 5 | 475 | 9.50 | 4,512 | |
| | 20 | 12 | 18.00 | 216 | |
| | | 487 | | 4,728 | 2,836 |
| 1909.... | 5 | 554 | 9.50 | 5,263 | |
| | 10 | 10 | 12.50 | 125 | |
| | 20 | 16 | 18.00 | 288 | |
| | 30 | 2 | 27.50 | 55 | |
| | | 582 | | 5,731 | 3,438 |
| 1910.... | 3 | 41 | 7.50 | 307 | |
| | 5 | 325 | 9.50 | 3,087 | |
| | 10 | 25 | 12.50 | 312 | |
| | 20 | 12 | 18.00 | 216 | |
| | | 403 | | 3,922 | 2,353 |
| 1911.... | 5 | 100 | 9.50 | 950 | |
| | 10 | 6 | 12.50 | 75 | |
| | 20 | 3 | 18.00 | 54 | |
| | | 109 | | 1,079 | 647 |
| 1912.... | 5 | 150 | 9.50 | 1,425 | |
| | 20 | 10 | 12.50 | 125 | |
| | | 160 | | 1,550 | 930 |
| Total.. | | 8,326 | | | 44,936 |

640 Lincoln Gas & Electric Light Company.

Distribution System 9.

*Cost & Value as of Jan. 1, 1913, of Lincoln Gas Meters Owned Before 1903 & Meters Since Bought.*

| Year. | $ Cost meters. | Yrs. old, Jan. 1, 1913. | $ Dep. | $ Depreciation. | $ Value, Jan. 1, 1913. |
|---|---|---|---|---|---|
| Before 1903.... | 23,246 | 10+13 | 57.5 | 13,366 | 9,880 |
| 1903.... | 4,519 | 9 | 22.5 | 1,016 | 3,503 |
| 1904.... | 4,246 | 8 | 20.0 | 849 | 3,397 |
| 1905.... | 247 | 7 | 17.5 | 43 | 204 |
| 1906.... | 285 | 6 | 15 | 42 | 243 |
| 1907.... | 2,189 | 5 | 12.5 | 273 | 1,916 |
| 1908.... | 2,836 | 4 | 10 | 283 | 2,553 |
| 1909.... | 3,438 | 3 | 7.5 | 257 | 3,181 |
| 1910.... | 2,353 | 2 | 5 | 117 | 2,236 |
| 1911.... | 647 | 1 | 2.5 | 16 | 631 |
| 1912.... | 930 | 0 | 0 | 0 | 830 |
| Total.. | 44,936 | | 36.1 | 16,262 | 28,674 |

| | |
|---|---|
| Above Cost of Meters | $44,936 |
| Freight, Setting Of 8,326 Meters At $1.40 Each | 11,656 |
| Cost Of Meters & Connections | $56,592 |
| Depreciation On Meters And Connections | 20,429 |
| Value Of Meters & Connections | $36,162 |

641 Lincoln Gas & Electric Lt. Co.

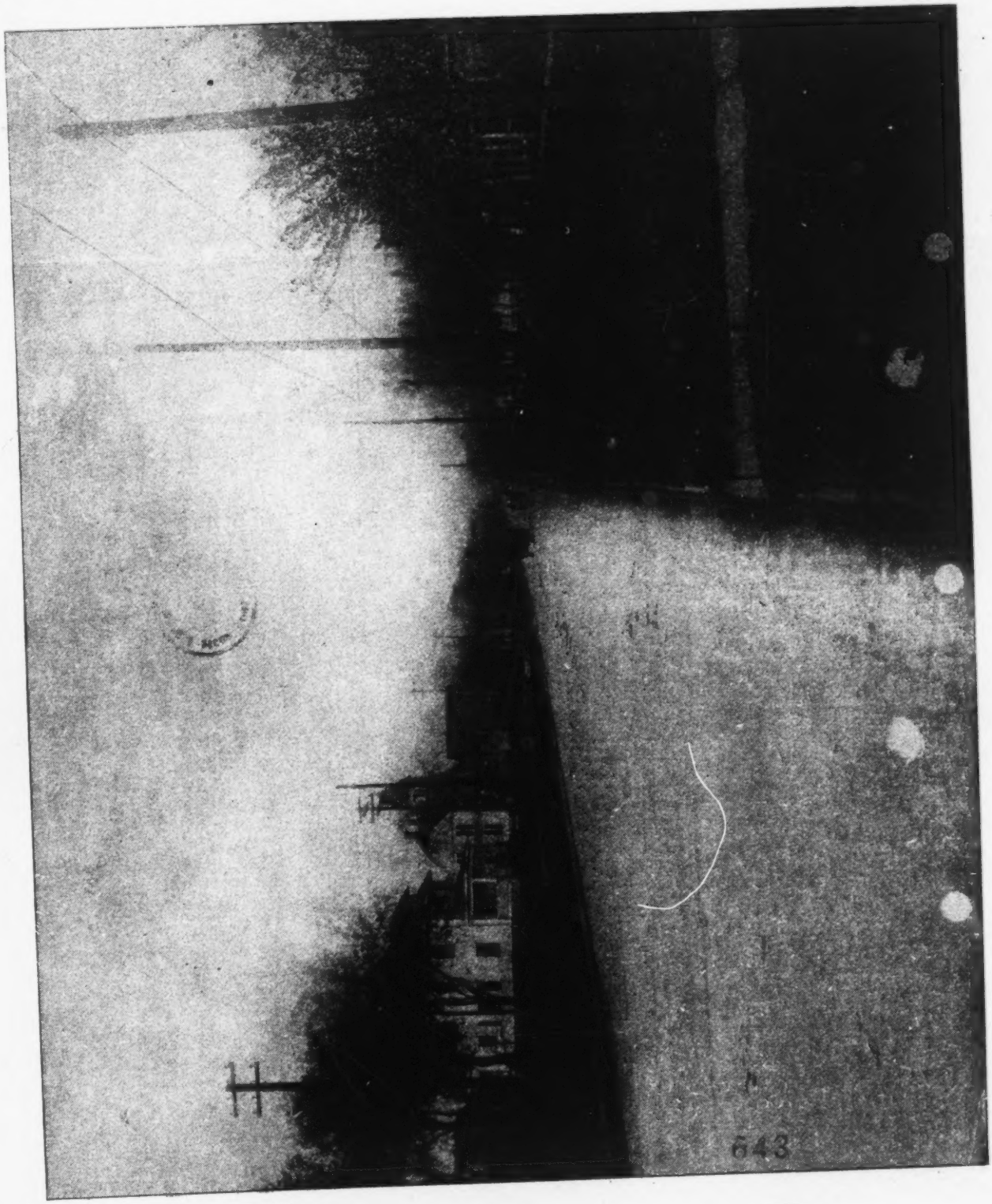
*Feet, Labor & Material Cost for Service Pipes Laid in 1904, 1907, 1908, 1909 & 1912 Per Gas Reports.*

| Years. | Total feet of service pipes. | $ Total cost materials. | $ Total cost labor. | Cents cost per foot. Materials. | Labor. | Total. |
|---|---|---|---|---|---|---|
| 1904.. | 49,786 | 3,699.10 | 4,257.26 | 7.43 | 8.55 | 15.98 |
| 1907.. | 43,521 | 4,155.33 | 3,908.27 | 9.55 | 8.98 | 18.53 |
| 1908.. | 31,741 | 3,036.47 | 2,828.40 | 9.57 | 8.91 | 18.48 |
| 1909.. | 42,083 | 2,909.97 | 3,797.80 | 6.91 | 9.02 | 15.94 |
| 1912.. | 33,883 | 3,071.34 | 3,430.40 | 6.11 | 10.12 | 16.24 |
| | 201,014 | 15,872.21 | 18,222.13 | 7.89 | 9.06 | 16.95 |

*Cost of Setting Meters Per Gas Reports.*

| Year. | Number meters removed. | Number meters set. | $ Cost setting meters. | $ Cost per meter. |
|---|---|---|---|---|
| 1907..... | 3,451 | 3,607 | 2,011.93 | .558 |
| 1908..... | 3,960 | 4,319 | 1,330.72 | .308 |
| 1909..... | 5,147 | 5,497 | 1,341.12 | .244 |
| 1910..... | 3,837 | 4,392 | 2,178.67 | .496 |
| 1911..... | 3,928 | 4,186 | 2,873.49 | .686 |
| 1912..... | 6,656 | 6,921 | 2,852.48 | .412 |
| | 26,979 | 28,922 | 12,588.41 | .435 |

(Here follow diagrams marked pp. 642 to 647, inclusive.)

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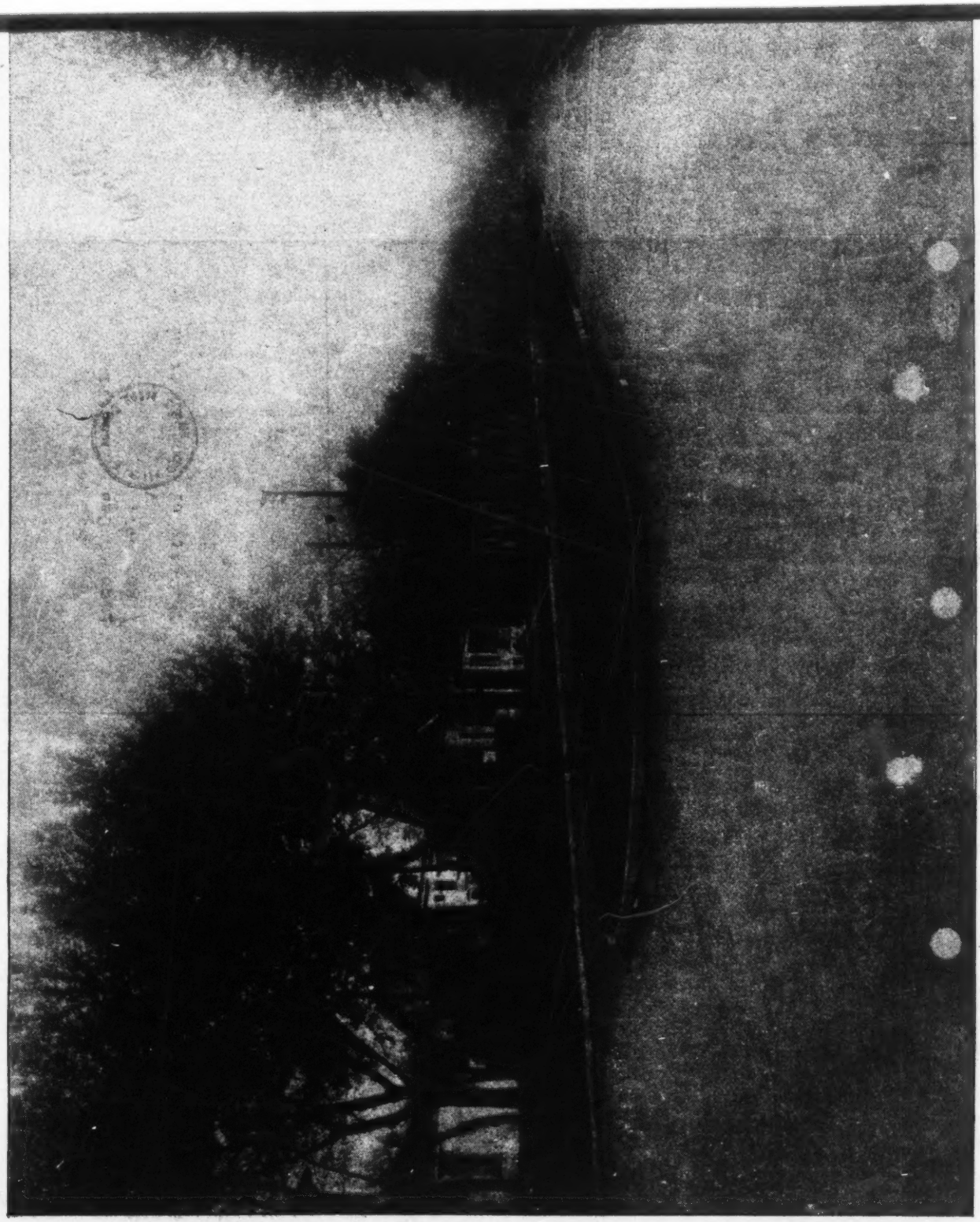

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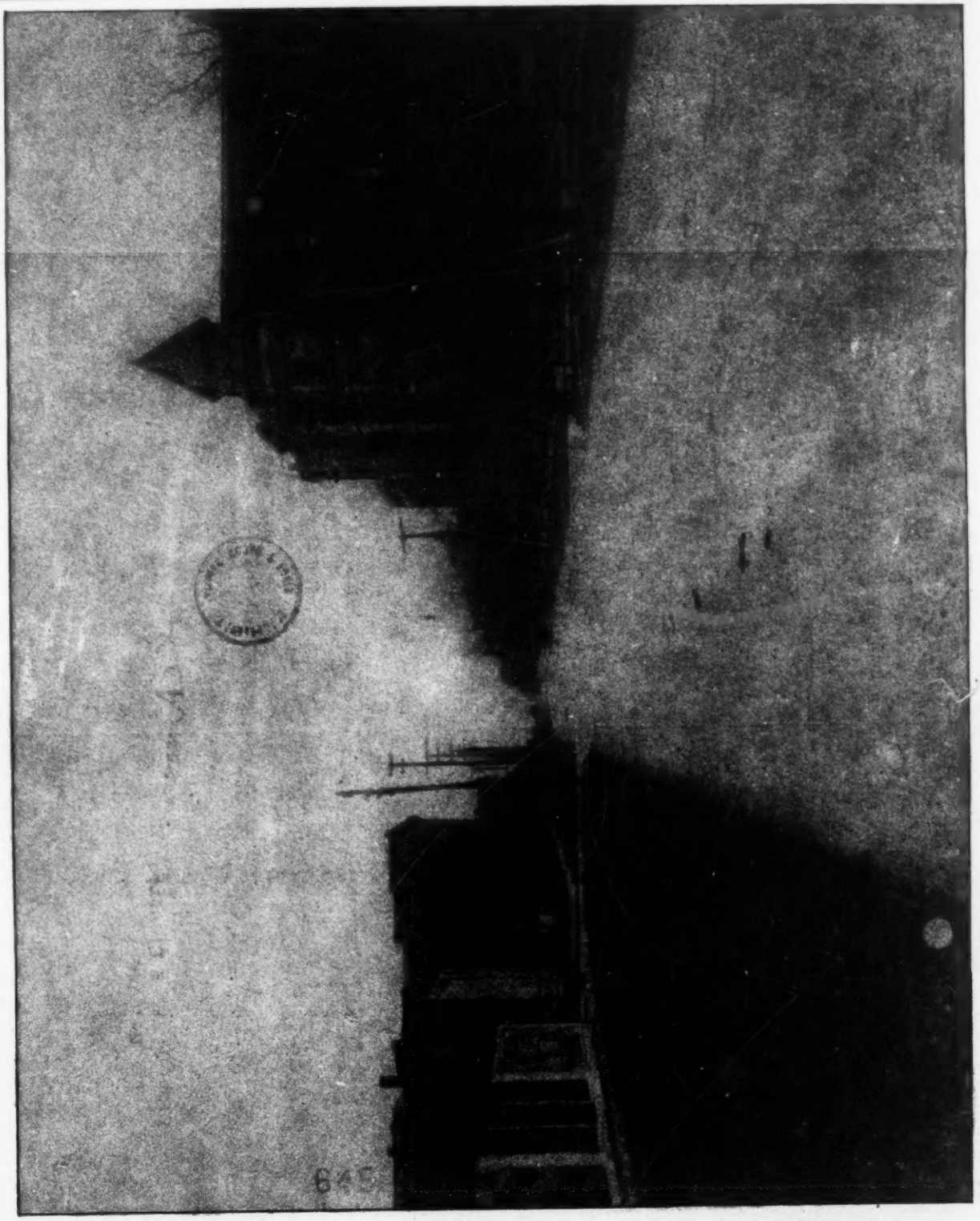

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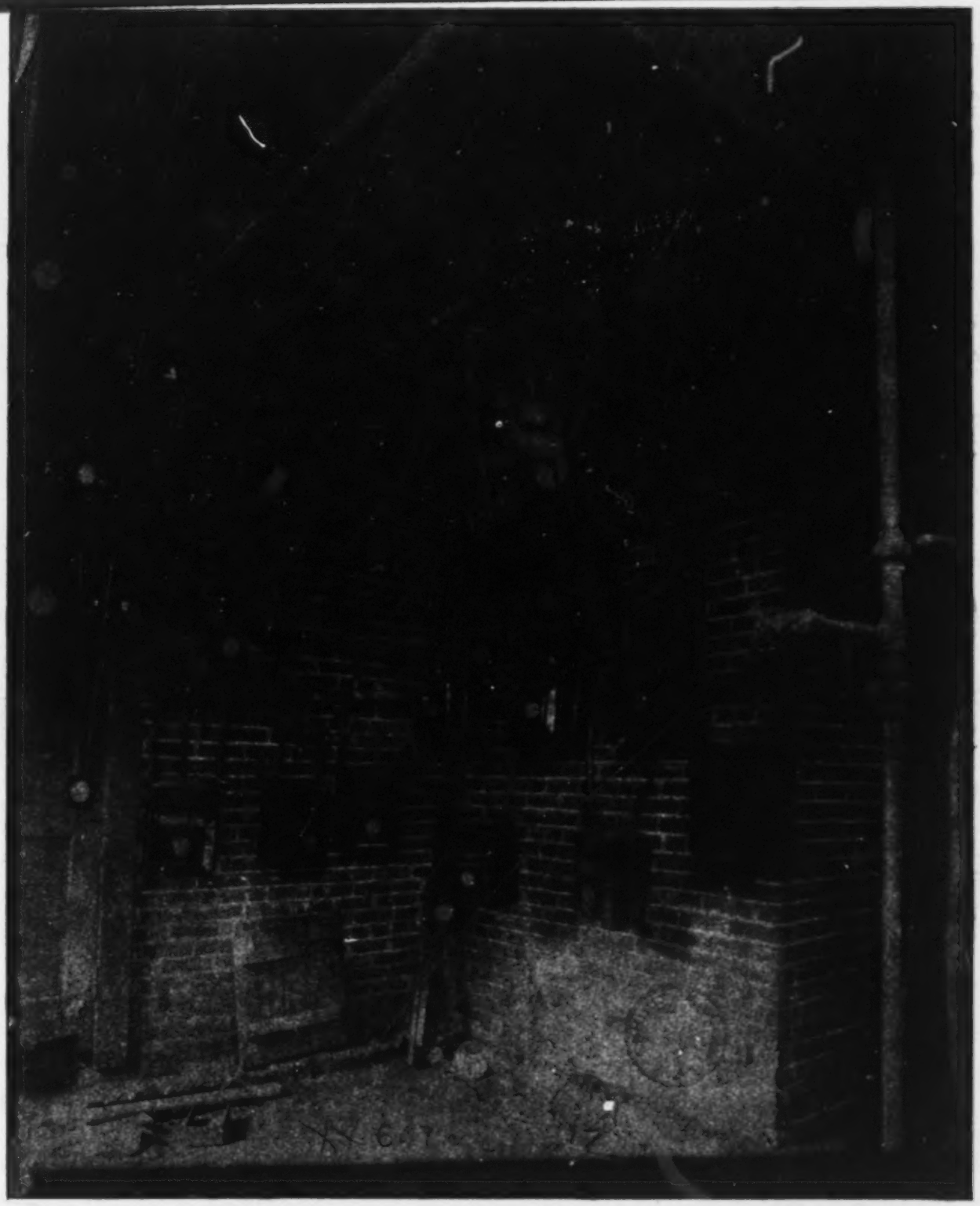

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647½ Lincoln Gas & Electric Light Co.

*Income & Expense per Gas Reports and Estimated Income & Expense.*

Alton D. Adams, Natick, Massachusetts.

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651 Lincoln Gas & Electric Lt. Co.

*Expense for Material & Labor Making Gas Per Report of* 1905 *M Feet of Gas Sold* 143,690.

| Expense Items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized | 31,091.85 | | |
| Enricher—Royalty | 171.53 | | |
| Coal for Bench Fuel | 1,475.19 | | |
| Steam for Coal Gas | 1,500.00 | | |
| Steam for Water Gas Generator | 3,794.56 | | |
| Steam for water Gas | 480.00 | | |
| Purifying Material C. Gas | 90.00 | | |
| Purifying Material W. Gas | 210.00 | | |
| Generator Fuel W. Gas | ..... | | |
| Enricher for Water Gas | 17,455.65 | | |
| Works Expense & Supplies C. G. | 874.68 | | |
| Works Expense & Supplies W. G. | 1,483.60 | | |
| Retort House Expense | 331.46 | | |
| Water Gas House Expense | 39.99 | | |
| Expense Material | | 58,998.51 | 41.06 |
| Purifying Labor C. G. | 160.94 | | |
| Sundry Labor C. G. | 838.66 | | |
| Retort House Labor C. G. | 3,113.26 | | |
| Gas Making W. G. | 2,147.24 | | |
| Purifying Labor W. G. | 157.58 | | |
| Sundry Labor W. G. | 1,271.42 | | |
| Expense Labor | | 7,689.10 | 5.35 |
| Total Material & Labor | | 66,687.61 | 46.41 |

652 Lincoln Gas & Electric Lt. Co.

*Expense for Materials & Labor Making Gas Per Report of* 1906 *M Feet of Gas Sold* 153,663.

| Expense Items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized | 43,033.89 | | |
| Enricher—Royalty | 230.74 | | |
| Coal for Bench Fuel | 4,536.84 | | |
| Steam for Coal Gas | 1,500.00 | | |
| Steam for Water Gas Generator | 4,107.16 | | |
| Steam for Water Gas | 480.00 | | |
| Purifying Material C. Gas | 279.11 | | |
| Purifying Material W. Gas | 226.50 | | |
| Generator Fuel W. Gas | ..... | | |
| Enricher for Water Gas | 17,587.74 | | |
| Works Expense & Supplies, C. G. | 824.32 | | |
| Works Expense & Supplies W. G. | 1,453.89 | | |
| Retort House Expense | 269.12 | | |
| Water Gas House Expense | 73.79 | | |
| Expense Material | | 74,603.10 | 48.55 |
| Purifying Labor C. G. | 460.92 | | |
| Sundry Labor C. G. | 1,163.90 | | |
| Retort House Labor C. G. | 4,790.97 | | |
| Gas Making Labor W. G. | 2,919.50 | | |
| Purifying Labor W. G. | 621.24 | | |
| Sundry Labor W. G. | 1,494.95 | | |
| Expense Labor | | 11,451.48 | 7.45 |
| Total Material & Labor | | 86,054.58 | 56.00 |

653 Lincoln Gas & Electric Lt. Co.

*Expense for Material & Labor Making Gas Per Report of* 1907 *M Feet of Gas Sold* 179,366.

| Expense Items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized | 42,844.46 | | |
| Enricher—Royalty | 178.41 | | |
| Coal for Bench Fuel | 2,495.39 | | |
| Steam for Coal Gas | 1,649.97 | | |
| Steam for Water Gas Generator | 4,183.74 | | |
| Steam for Water Gas | 880.78 | | |
| Purifying Material C. G. | 389.13 | | |
| Purifying Material W. G. | 392.04 | | |
| Generator Fuel W. G. | ..... | | |
| Enricher for Water Gas | 20,632.74 | | |

| | | | |
|---|---|---|---|
| Works Expense & Supplies C. G.... | 878.50 | | |
| Works Expense & Supplies W. G... | 1,662.97 | | |
| Retort House Expense ..... | 201.54 | | |
| Water Gas House Expense..... | 24.03 | | |
| Expense Material ..... | | 76,413.70 | 42.60 |
| Purifying Labor C. G..... | 386.68 | | |
| Sundry Labor C. G..... | 1,303.51 | | |
| Retort House Labor C. G..... | 5,708.18 | | |
| Gas Making Labor W. G..... | 3,737.66 | | |
| Purifying Labor W. G..... | 799.10 | | |
| Sundry Labor W. G..... | 2,266.18 | | |
| Expense Labor ..... | | 14,201.31 | 7.92 |
| Total Material & Labor..... | | 90,615.01 | 50.52 |

654 Lincoln Gas & Electric Lt. Co.

*Expense for Material & Labor Making Gas Per Report of* 1908 *M Feet of Gas Sold* 195,391.

| Expense Items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized ..... | 32,437.01 | | |
| Enricher, Royalty ..... | ..... | | |
| Coal for Bench Fuel..... | 3,479.84 | | |
| Steam for Coal Gas..... | 1,456.76 | | |
| Steam for Water Gas Generator.... | 3,577.33 | | |
| Steam for Water Gas..... | 2,421.07 | | |
| Purifying Material C. G..... | 200.47 | | |
| Purifying Material W. G..... | 503.34 | | |
| Generator Fuel W. G..... | 685.08 | | |
| Enricher for Water Gas..... | 22,713.06 | | |
| Works Expense & Supplies C. G.... | 746.37 | | |
| Works Expense & Supplies W. G.... | 2,109.35 | | |
| Retort House Expense ..... | 195.39 | | |
| Water Gas House Expense..... | 107.74 | | |
| Expense Material ..... | | 70,632.81 | 36.15 |
| Purifying Labor C. G..... | 210.87 | | |
| Sundry Labor C. G..... | 806.71 | | |
| Retort House Labor C. G..... | 5,167.13 | | |
| Gas Making Labor W. G..... | 4,603.71 | | |
| Purifying Labor W. G..... | 574.26 | | |
| Sundry Labor W. G..... | 2,079.02 | | |
| Expense Labor ..... | | 13,441.70 | 6.88 |
| Total Material & Labor..... | | 84,074.51 | 43.03 |

655 Lincoln Gas & Electric Lt. Co.

*Expense for Material & Labor Making Gas Per Report of* 1910 *M Feet of Gas Sold* 204,284.

| Expense items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized | 11,264.75 | | |
| Enricher—Royalty | ..... | | |
| Coal for Bench Fuel | 1,109.30 | | |
| Steam for Coal Gas | 365.36 | | |
| Steam for Water Gas Generator | 2,245.00 | | |
| Steam for Water Gas | 4,509.04 | | |
| Purifying Material C. Gas | 50.00 | | |
| Purifying Material W. Gas | 550.00 | | |
| Generator Fuel W. G | 19,469.24 | | |
| Enricher for Water Gas | 22,186.12 | | |
| Works Expense & Supplies C. G | 278.55 | | |
| Works Expense & Supplies W. G | 2,157.76 | | |
| Retort House Expense | 63.68 | | |
| Water Gas House Expense | 153.37 | | |
| Expense Material | | 64,402.17 | 31.53 |
| Purifying Labor C. G | 135.85 | | |
| Sundry Labor C. G | 255.33 | | |
| Retort House Labor C. G | 1,475.44 | | |
| Gas Making Labor W. G | 4,082.41 | | |
| Purifying Labor W. G | 375.86 | | |
| Sundry Labor W. G | 2,156.75 | | |
| Expense Labor | | 8,481.64 | 4.15 |
| Total Material & Labor | | 72,883.81 | 35.68 |

656 Lincoln Gas & Electric Lt. Co.

*Expense for Material & Labor Making Gas Per Report of* 1910 *M Feet of Gas Sold* 210,169.

| Expense items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized | ..... | | |
| Enricher—Royalty | ..... | | |
| Coal for Bench Fuel | ..... | | |
| Steam for Coal Gas | ..... | | |
| Steam for Water Gas Generator | 3,020.00 | | |
| Steam for Water Gas | 4,514.47 | | |
| Purifying Material C. Gas | ..... | | |
| Purifying Material W. Gas | 575.00 | | |
| Generator Fuel, W. Gas | 26,281.76 | | |
| Enricher for Water Gas | 22,960.89 | | |

| | | | |
|---|---|---|---|
| Works Expense & Supplies C. G.... | ..... | | |
| Works Expense & Supplies W. G... | 3,392.80 | | |
| Retort House Expense..... | ..... | | |
| Water Gas House Expense..... | 111.67 | | |
| Expense Material ..... | | 60,856.59 | 28.96 |
| Purifying Labor C. G..... | ..... | | |
| Sundry Labor C. G..... | ..... | | |
| Retort House Labor C. G..... | ..... | | |
| Gas Making Labor W. G..... | 3,956.04 | | |
| Purifying Labor, W. G..... | 412.82 | | |
| Sundry Labor W. G..... | 3,050.66 | | |
| Expense Labor ..... | | 7,419.52 | 3.53 |
| Total Material & Labor..... | | 68,276.11 | 32.49 |

657 Iincoln Gas & Electric Lt. Co.

*Expense for Material & Labor Making Gas Per Report of* 1911 *M Feet of Gas Sold* 227,268.

| Expense Items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized ..... | ..... | | |
| Enricher—Royalty ..... | ..... | | |
| Coal for Bench Fuel..... | ..... | | |
| Steam for Coal Gas..... | ..... | | |
| Steam for Water Gas Cenerator.... | 4,297.75 | | |
| Steam for Water Gas..... | 3,357.05 | | |
| Purifying Material C. Gas..... | ..... | | |
| Purifying Material W. Gas..... | 600.00 | | |
| Generator Fuel, W. Gas..... | 25,973.02 | | |
| Enricher for Water Gas..... | 22,336.86 | | |
| Works Expense & Supplies C. G.... | ..... | | |
| Works Expense & Supplies W. G... | 3,640.26 | | |
| Retort House Expense..... | ..... | | |
| Water Gas House Expense..... | 167.38 | | |
| Expense Material ..... | | 60,372.32 | 26.56 |
| Purifying Labor C. G..... | ..... | | |
| Sundry Labor C. G..... | ..... | | |
| Retort House Labor C. G..... | ..... | | |
| Gas Making Labor W. G..... | 3,884.79 | | |
| Purifying Labor W. G..... | 130.76 | | |
| Sundry Labor W. G..... | 2,523.98 | | |
| Expense Labor ..... | | 6,539.53 | 2.88 |
| Total Material & Labor..... | | 66,911.85 | 29.44 |

658 Lincoln Gas & Electric Lt. Co.

*Expense for Material & Labor Making Gas Per Report of* 1912 *M Feet of Gas Sold* 234,386.

| Expense Items. | $ Items. | $ Total. | Cents per M. feet sold. |
|---|---|---|---|
| Coal Carbonized | ..... | | |
| Enricher—Royalty | ..... | | |
| Coal for Bench Fuel | ..... | | |
| Steam for Coal Gas | ..... | | |
| Steam for Water Gas Generator | 3,910.00 | | |
| Steam for Water Gas | 4,889.59 | | |
| Purifying Material C. Gas | ..... | | |
| Purifying Material W. Gas | 615.26 | | |
| Generator Fuel W. Gas | 28,407.02 | | |
| Enricher for Water Gas | 27,905.07 | | |
| Works Expense & Supplies C. G. | ..... | | |
| Works Expense & Supplies W. G. | 5,585.00 | | |
| Retort House Expense | ..... | | |
| Water Gas House Expense | 394.63 | | |
| Expense Material | | 71,706.57 | 30.59 |
| Purifying Labor C. G. | ..... | | |
| Sundry Labor C. G. | ..... | | |
| Retort House Labor C. G. | ..... | | |
| Gas Making Labor W. G. | 3,823.62 | | |
| Purifying Labor W. G. | 291.11 | | |
| Sundry Labor W. G. | 3,332.54 | | |
| Expense Labor | | 7,447.27 | 3.18 |
| Total Material & Labor | | 79,153.84 | 33.77 |

659 Lincoln Gas & Electric Lt. Co.

*Value of Net Residuals Each Year.*

| Year. | Net residuals. | Tons or gallons. | $ Unit value. | $ Total value. |
|---|---|---|---|---|
| 1905. | Coke | 909.03 | 6.00 | 5,454.18 |
| | Breeze | 19.30 | 2.50 | 48.25 |
| | C. G. Tar | 54,185. | .028 | 1,517.18 |
| | W. G. Tar | 14,335. | .02 | 286.70 |
| | Total | | | 7,306.31 |
| 1906. | Coke | 1,541.00 | 6.00 | 9,246.00 |
| | Breeze | 240.19 | 2.50 | 600.48 |

| | | | | |
|---|---|---|---|---|
| | C. G. Tar..... | 65,848. | .028 | 1,843.94 |
| | W. G. Tar..... | ..... | ..... | ..... |
| | Total ..... | | | 11,690.42 |
| 1907. | Coke ..... | 947.15 | 7.13 | 6,753.18 |
| | Breeze ..... | 443.63 | 2.50 | 1,109.08 |
| | C. G. Tar..... | 57,413. | .028 | 1,607.56 |
| | W. G. Tar..... | 45,809. | .02 | 916.18 |
| | Total ..... | | | 10,386.00 |
| 1908. | Breeze ..... | 372.14 | 2.50 | 930.35 |
| | C. G. Tar..... | 49,418. | .039 | 1,927.30 |
| | W. G. Tar..... | 96,906. | .02 | 1,938.12 |
| | | | | 4,795.77 |
| 1909. | Breeze ..... | 128.40 | 2.50 | 321.00 |
| | C. G. Tar..... | 19,754. | .039 | 770.41 |
| | W. G. Tar..... | 119,983. | .02 | 2,399.66 |
| | | | | 3,491.07 |
| 1910. | W. G. Tar..... | 136,385. | .02 | 2,727.70 |
| 1911. | W. G. Tar..... | 146,550. | .027 | 3,956.85 |
| 1912. | W. G. Tar..... | 115,564. | .028 | 3,235.79 |

660 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1903.

All Expenses Except Materials & Labor Making Gas Repairs, Renewals & Taxes.

98,343 M Feet of Gas Sold.

| Expense items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters ..... | 524.29 | | |
| Collection Clerical Salaries... | 2,479.77 | | |
| Collection Office Expense.... | 639.80 | | |
| Delivery Bills ..... | 125.29 | | |
| Outside Collections ..... | 373.28 | | |
| General Clerical Salaries..... | 895.35 | | |
| General Office Expense..... | 489.02 | | |
| Executive Salaries ..... | 3,470.88 | | |
| General Supervision C. Gas.. | 359.70 | | |
| General Supervision W. Gas.. | 687.57 | | |
| Promoting New Business.... | 5,578.97 | | |
| Total Salaries & Office..... | | 15,623.92 | 15.89 |

| | | | |
|---|---|---|---|
| Street Dep't Expense..... | 691.14 | | |
| Meter Dep't Expense..... | 541.00 | | |
| Gratuitous Work ..... | 1,219.43 | | |
| Legal Expense ..... | 727.48 | | |
| Incidental Expense ..... | 2,091.05 | | |
| Rent Collection Office..... | 455.33 | | |
| Rent Executive Office..... | 307.67 | | |
| Total Distribution & General..... | | 6,033.10 | 6.13 |
| Total Above Expense..... | | 21,657.02 | 22.02 |

661 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1904.

All Expenses Except Materials & Labor Making Gas Repairs, Renewals & Taxes.

117,429 M Feet of Gas Sold.

| Expense Items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters ..... | 563.58 | | |
| Collection Clerical Salaries... | 2,850.57 | | |
| Collection Office Expense.... | 557.20 | | |
| Delivering Bills ..... | 113.18 | | |
| Outside Collections ..... | 500.74 | | |
| General Clerical Salaries..... | 626.25 | | |
| General Office Expense..... | 450.56 | | |
| Executive Salaries ..... | 2,080.88 | | |
| General Supervision C. Gas.. | 623.88 | | |
| General Supervision W. Gas.. | 1,306.36 | | |
| Promoting New Business..... | 16,400.65 | | |
| Total Salaries & Office..... | | 26,073.85 | 22.20 |
| Street Dep't Expense..... | 496.54 | | |
| Water Dep't Expense..... | 354.25 | | |
| Gratuitous Work ..... | 1,379.45 | | |
| Legal Expense ..... | 831.25 | | |
| Incidental Expense ..... | 1,596.58 | | |
| Rent Collection Office..... | 620.43 | | |
| Rent Executive Office..... | 387.98 | | |
| Total Distribution & General..... | | 5,666.48 | 4.83 |
| Total Above Expense..... | | 31,740.33 | 27.03 |

662 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1905.

All Expenses Except Materials & Labor Making Gas Repairs, Renewals & Taxes.

143,690 M Feet of Gas Sold.

| Expense items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 699.38 | | |
| Collection Clerical Salaries | 3,153.27 | | |
| Collection Office Expense | 677.01 | | |
| Delivering Bills | 155.82 | | |
| Outside Collections | 461.54 | | |
| General Clerical Salaries | 484.00 | | |
| General Office Expense | 337.32 | | |
| Executive Salaries | 2,446.68 | | |
| General Supervision C. Gas | 983.36 | | |
| General Supervision W. Gas | 1,744.74 | | |
| Promoting New Business | 15,919.73 | | |
| Total Salaries and Office | | 27,062.85 | 18.83 |
| Street Dep't Expense | 716.51 | | |
| Meter Dep't Expense | 404.20 | | |
| Gratuitous Work | 1,820.32 | | |
| Legal Expense | 652.87 | | |
| Incidental Expense | 1,621.85 | | |
| Rent Collection Office | 554.08 | | |
| Rent of Executive Office | 356.48 | | |
| Total Distribution & General | | 6,126.31 | 4.26 |
| Total Above Expense | | 33,189.16 | 23.10 |

663 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1906.

All Expenses Except Materials & Labor Making Gas Repairs, Renewals & Taxes.

153,663 M Feet of Gas Sold.

| Expense Items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 980.55 | | |
| Collection Clerical Salaries | 3,670.97 | | |
| Collection Office Expense | 702.68 | | |
| Delivering Bills | 141.37 | | |
| Outside Collections | 659.73 | | |
| General Clerical Salaries | 493.62 | | |
| General Office Expense | 340.30 | | |
| Executive Salaries | 2,804.70 | | |
| General Supervision C. Gas | 1,034.78 | | |
| General Supervision W. Gas | 1,857.98 | | |
| Promoting New Business | 13,432.41 | | |
| Total Salaries & Office | | 26,119.09 | 17.00 |
| Street Dep't Expense | 608.38 | | |
| Meter Dep't Expense | 353.11 | | |
| Gratuitous Work | 1,906.52 | | |
| Legal Expense | 757.43 | | |
| Incidental Expense | 2,137.77 | | |
| Rent Collection Office | 537.31 | | |
| Rent Executive Office | 485.38 | | |
| Total Distribution & General | | 6,785.90 | 4.42 |
| Total Above Expense | | 32,904.99 | 21.41 |

664 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1907.

All Expenses Except Materials & Labor Making Gas Repairs, Renewals & Taxes.

179,366 M Feet of Gas Sold.

| Expense Items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 952.10 | | |
| Collection Clerical Salaries | 5,355.20 | | |
| Collection Office Expense | 770.14 | | |
| Delivering Bills | 176.26 | | |
| Outside Collections | 709.63 | | |
| General Clerical Salaries | 394.80 | | |
| General Office Expense | 478.25 | | |
| Executive Salaries | 3,215.52 | | |
| General Supervision C. Gas | 1,052.67 | | |
| General Supervision W. Gas | 2,084.52 | | |
| Promoting New Business | 13,394.04 | | |
| Total Salaries & Office | | 28,583.13 | 15.94 |
| Street Dep't Expense | 797.48 | | |
| Meter Dep't Expense | 458.60 | | |
| Gratuitous Work | 1,891.53 | | |
| Legal Expense | 2,160.31 | | |
| Incidental Expense | 1,723.38 | | |
| Rent Collection Office | 634.42 | | |
| Rent Executive Office | 664.04 | | |
| Total Distribution & General | | 8,329.76 | 4.64 |
| Total Above Expense | | 36,912.89 | 20.58 |

665 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1908.

All Expenses Except Materials & Labor Making Gas Repairs, Renewals & Taxes.

195,391 M Feet of Gas Sold.

| Expense items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 914.30 | | |
| Collection Clerical Salaries | 6,315.51 | | |
| Collection Office Expenses | 966.96 | | |
| Delivering Bills | 218.86 | | |
| Outside Collections | 856.52 | | |
| General Clerical Salaries | 513.00 | | |
| General Office Expense | 663.38 | | |
| Executive Salaries | 5,001.41 | | |
| General Supervision C. Gas | 800.90 | | |
| General Supervision W. Gas | 2,366.13 | | |
| Promoting New Business | 11,634.96 | | |
| Total Salaries & Office | | 30,252.02 | 15.48 |
| Street Dep't Expense | 1,410.59 | | |
| Meter Dep't Expense | 1,165.72 | | |
| Gratuitous Work | 1,376.36 | | |
| Legal Expense | 1,796.33 | | |
| Incidental Expense | 2,679.81 | | |
| Rent Collection Office | 660.96 | | |
| Rent of Executive Office | 724.94 | | |
| Total Distribution & General | | 9,814.71 | 5.02 |
| Total Above Expense | | 40,066.73 | 20.51 |

666 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1909.

All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes.

204,284 M Feet of Gas Sold.

| Expense Items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 1,044.84 | | |
| Collection Clerical Salaries | 5,495.54 | | |
| Collection Office Expense | 1,590.45 | | |
| Delivering Bills | 216.27 | | |
| Outside Collections | 1,010.67 | | |
| General Clerical Salaries | 748.00 | | |
| General Office Expense | 978.43 | | |
| Executive Salaries | 6,113.06 | | |
| General Supervision C. Gas | 234.64 | | |
| General Supervision W. Gas | 2,698.21 | | |
| Promoting New Business | 14,019.36 | | |
| Total Salaries & Office | | 34,149.47 | 16.72 |
| Street Dep't Expense | 1,671.98 | | |
| Meter Dep't Expense | 1,294.05 | | |
| Gratuitous Work | 2,299.17 | | |
| Legal Expense | 1,858.53 | | |
| Incidental Expense | 3,715.44 | | |
| Rent Collection Office | 747.30 | | |
| Rent of Executive Office | 1,101.12 | | |
| Total Distribution & General | | 12,687.59 | 6.21 |
| Total Above Expense | | 46,837.06 | 22.93 |

667 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1910.

All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes.

210,169 M Feet of Gas Sold.

| Expense Items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 1,241.08 | | |
| Collection Clerical Salaries | 5,771.39 | | |
| Collection Office Expense | 1,770.41 | | |
| Delivering Bills | 268.41 | | |
| Outside Collections | 1,588.64 | | |
| General Clerical Salaries | 804.40 | | |
| General Office Expense | 970.10 | | |
| Executive Salaries | 9,806.31 | | |
| General Supervision C. Gas | ..... | | |
| General Supervision W. Gas | 3,260.41 | | |
| Promoting New Business | 16,152.75 | | |
| Total Salaries & Office | | 41,633.90 | 19.81 |
| Street Dep't Expense | 2,042.21 | | |
| Meter Dep't Expense | 1,551.43 | | |
| Gratuitous Work | 2,658.62 | | |
| Legal Expense | 5,911.70 | | |
| Incidental Expense | 2,878.32 | | |
| Rent Collection Office | 774.56 | | |
| Rent of Executive Office | 1,484.45 | | |
| Total Distribution & General | | 17,301.29 | 8.23 |
| Total Above Expense | | 58,935.19 | 28.04 |

668 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1911.

All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes.

227,268 M Feet of Gas Sold.

| Expense Items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 1,388.76 | | |
| Collection Clerical Salaries | 6,519.95 | | |
| Collection Office Expense | 1,757.15 | | |
| Delivering Bills | 283.68 | | |
| Outside Collections | 1,646.49 | | |
| General Clerical Salaries | 1,066.85 | | |
| General Office Expense | 1,202.12 | | |
| Executive Salaries | 9,454.17 | | |
| General Supervision C. Gas | ..... | | |
| General Supervision W. Gas | 3,412.26 | | |
| Promoting New Business | 18,985.52 | | |
| Total Salaries & Office | | 45,716.95 | 20.12 |
| Street Dep't Expense | 2,162.94 | | |
| Meter Dep't Expense | 1,584.38 | | |
| Gratuitous Work | 2,904.17 | | |
| Legal Expense | 8,279.48 | | |
| Incidental Expense | 5,162.84 | | |
| Rent Collection Office | 729.27 | | |
| Rent of Executive Office | 1,569.22 | | |
| District Holder | 1,581.37 | | |
| Total Distribution & General | | 23,973.67 | 10.55 |
| Total Above Expense | | 69,690.62 | 30.66 |

669 Lincoln Gas & Electric Lt. Co.

*Gas Report for Year* 1912.

All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes.

234,386 M Feet of Gas Sold.

| Expense items. | $ Items. | $ Totals. | Cents per M. feet sold. |
|---|---|---|---|
| Reading Meters | 1,390.24 | | |
| Collection Clerical Salaries | 6,975.16 | | |
| Collection Office Expense | 1,839.87 | | |
| Delivering Bills | 307.17 | | |
| Outside Collection | 1,470.36 | | |
| General Clerical Salaries | 1,209.05 | | |
| General Office Expense | 1,173.41 | | |
| Executive Salaries | 8,917.30 | | |
| General Supervision C. Gas | ..... | | |
| General Supervision W. Gas | 3,554.00 | | |
| Promoting New Business | 19,692.64 | | |
| Total Salaries & Office | | 46,529.20 | 19.85 |
| Street Dep't Expense | 2,611.20 | | |
| Meter Dep't Expense | 1,751.35 | | |
| Gratuitous Work | 3,264.13 | | |
| Legal Expense | 7,954.73 | | |
| Incidental Expense | 4,775.01 | | |
| Rent Collection Office | 897.17 | | |
| Rent of Executive Office | 1,737.73 | | |
| District Holder | 3,424.47 | | |
| Total Distribution & General | | 26,415.79 | 11.27 |
| Total Above Expense | | 72,944.99 | 31.12 |

670 Lincoln Gas & Electric Lt. Co.

*Feet of Coal & Water Gas Made Yearly Per Gas Reports.*

| Year. | Coal gas made. | Water gas made. | Total gas made. | % Coal gas. |
|---|---|---|---|---|
| 1905 | 49,427,300 | 107,612,100 | 167,039,400 | 35.58 |
| 1906 | 70,581,200 | 115,336,500 | 185,917,700 | 37.96 |
| 1907 | 69,789,600 | 132,930,600 | 202,720,200 | 34.43 |
| 1908 | 55,647,100 | 161,516,450 | 217,163,550 | 25.60 |
| 1909 | 19,747,110 | 200,082,640 | 219,827,750 | 8.98 |
| 1910 | ..... | 227,439,593 | 227,439,593 | 0.0 |
| 1911 | ..... | 244,251,700 | 224,251,700 | 0.0 |
| 1912 | ..... | 258,205,600 | 258,205,600 | 0.0 |

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|---|---|---|
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| | Original. | Print |
|---|---|---|
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| | Original. | Print |
|---|---|---|
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*Coke Residual & Bench & Generator Fuel, Per Gas Reports.*

| Year. | Tons coke residual. | Tons breeze residual. | Tons coke bench fuel. | Tons coke generator fuel. | Tons net coke residual. |
|---|---|---|---|---|---|
| 1905.... | 3,760.0075 | 19.3 | 405.775 | 2,445.195 | 909.03 |
| 1906.... | 4,507.57 | 240.19 | 327.91 | 2,638.66 | 1,541.00 |
| 1907.... | 4,143.82 | 443.63 | 498.49 | 2,698.18 | 947.15 |
| 1908.... | 3,177.11 | 372.14 | 64.86 | 3,312.77 | ..... |
| 1909.... | 1,155.62 | 128.40 | ..... | 4,280.70 | ..... |
| 1910.... | ..... | ..... | ..... | 3,653.34 | ..... |
| 1911.... | ..... | ..... | ..... | 3,773.20 | ..... |
| 1912.... | ..... | ..... | ..... | 3,930.14 | ..... |

671 Lincoln Gas & Electric Lt. Co.

*Cost of Coke Purchased for Water Gas.*

| Year. | Tons coke in generator, less tons made. | $ Price per ton. | $ Cost. |
|---|---|---|---|
| 1905..... | ..... | ..... | ..... |
| 1906..... | ..... | ..... | ..... |
| 1907..... | ..... | ..... | ..... |
| 1908..... | 135.66 | 5.05 | 685.08 |
| 1909..... | 3,125.08 | 6.23 | 19,469.24 |
| 1910..... | 3,653.34 | 7.19 | 26,281.76 |
| 1911..... | 3,773.20 | 6.88 | 25,973.02 |
| 1912..... | 3,930.14 | 7.23 | 28,407.02 |

*Coke Used in Water Gas Generator Per Reported Expense.*

| Year. | Tons coke. | $ Total expense. | $ Per ton expense. |
|---|---|---|---|
| 1905..... | 2,445.19 | ..... | ..... |
| 1906..... | 2,638.66 | 13,985.51 | 5.30 |
| 1907..... | 2,698.18 | 14,491.19 | 5.37 |
| 1908..... | 3,312.77 | 16,742.07 | 5.05 |
| 1909..... | 4,280.70 | 26,665.24 | 6.229 |
| 1910..... | 3,653.34 | 26,281.76 | 7.19 |
| 1911..... | 3,773.20 | 25,973.02 | 6.88 |
| 1912..... | 3,930.14 | 28,407.02 | 7.227 |

672 Lincoln Gas & Electric Lt. Co.

*Cost of Coal Received Per Gas Reports.*

| Year. | Bituminous coal. | | Steam coal. | |
|---|---|---|---|---|
| | $ Total cost. | $ Per ton. | $ Total cost. | $ Per ton. |
| 1905..... | ..... | ..... | ..... | 2.50–3.60 |
| 1906..... | 50,019.25 | 5.47 | ..... | ..... |
| 1907..... | 50,525.69 | 5.49 | ..... | ..... |
| 1908..... | 29,948.49 | 5.51 | 2,177.00 | 2.78 |
| 1909..... | 10,112.84 | 5.47 | 632.24 | 2.52 |

*Coal Gas Tar Made, Expense Credits & Price Received, Per Gas Reports.*

| Year. | Gallons C. G. tar. | $ Credited C. G. T. | Cents credited per gallon. | Cents received per gallon. |
|---|---|---|---|---|
| 1905..... | 54,185 | ..... | ..... | 3.88–10.0 |
| 1906..... | 65,848 | 1,316.96 | 2.00 | ..... |
| 1907..... | 57,413 | 1,248.26 | 2.17 | 2.83 |
| 1908..... | 49,418 | 988.36 | 2.00 | 3.92 |
| 1909..... | 19,754 | 395.08 | 2.00 | 3.97 |
| 1910..... | ..... | ..... | ..... | 3.97 |
| 1911..... | ..... | ..... | ..... | ..... |
| 1912..... | ..... | ..... | ..... | ..... |

673 Lincoln Gas & Electric Lt. Co.

*Water Gas Tar Made & Expense Credits Per Gas Reports.*

| Year. | Gallons W. G. tar. | $ Credited W. G. tar. | Cents credited per gallon. |
|---|---|---|---|
| 1905..... | ..... | ..... | ..... |
| 1906..... | ..... | ..... | ..... |
| 1907..... | 45,809 | 916.14 | 2.00 |
| 1908..... | 96,906 | 1,938.12 | 2.00 |
| 1909..... | 119,983 | 2,399.66 | 2.00 |
| 1910..... | 136,385 | 2,727.71 | 2.00 |
| 1911..... | 146,550 | 4,028.44 | 2.74 |
| 1912..... | 115,564 | 3,319.72 | 2.87 |

*Coke & Oil Used for Water Gas Per Expense Reports.*

| Year. | Tons coke. | Gallons oil. | Per M. feet W. G. made. | |
|---|---|---|---|---|
| | | | Pounds coke. | Gallons oil. |
| 1905..... | 2,445.19 | ..... | 45.444 | ..... |
| 1906..... | 2,638.66 | 430,498 | 45.756 | 3.73 |
| 1907..... | 2,698.18 | 495,024 | 40.595 | 3.72 |
| 1908..... | 3,312.77 | 608,176 | 41.0209 | 3.76 |
| 1909..... | 4,280.70 | 734,148 | 42.789 | 3.669 |
| 1910..... | 3,653.34 | 831,725 | 32.125 | 3.658 |
| 1911..... | 3,773.20 | 826,351 | 30.896 | 3.383 |
| 1912..... | 3,930.14 | 851,273 | 30.442 | 3.296 |

674 Lincoln Gas & Electric Light Co.

*Expense for Material & Labor Making Gas.*

| Year. | $ Materials. | $ Labor. | $ Value net residuals. | $ Materials & labor, less residuals. |
|---|---|---|---|---|
| 1905.... | 58,998.51 | 7,689.10 | 7,306.31 | 59,381.30 |
| 1906.... | 74,603.10 | 11,451.48 | 11,690.42 | 74,364.16 |
| 1907.... | 76,413.70 | 14,201.31 | 10,386.00 | 80,229.01 |
| 1908.... | 70,632.81 | 13,441.70 | 4,795.77 | 79,278.74 |
| 1909.... | 64,402.17 | 8,481.64 | 3,491.07 | 69,392.74 |
| 1910.... | 60,856.59 | 7,419.52 | 2,727.70 | 65,548.41 |
| 1911.... | 60,372.32 | 6,539.53 | 3,956.85 | 62,955.00 |
| 1912.... | 71,706.57 | 7,447.27 | 3,235.79 | 75,918.05 |

*Expense for Materials & Labor Making Gas in Cents Per M Feet Sold.*

| Year. | M. feet gas sold. | Cents materials. | Cents labor. | Cents value net residuals. | Cents Materials & labor, less residuals. |
|---|---|---|---|---|---|
| 1905.... | 143,690 | 41.06 | 5.35 | 5.08 | 41.33 |
| 1906.... | 153,663 | 48.55 | 7.45 | 7.61 | 48.39 |
| 1907.... | 179,366 | 42.60 | 7.92 | 5.79 | 44.73 |
| 1908.... | 195,391 | 36.15 | 6.88 | 2.45 | 40.57 |
| 1909.... | 204,284 | 31.53 | 4.15 | 1.71 | 33.97 |
| 1910.... | 210,169 | 28.96 | 3.53 | 1.30 | 31.19 |
| 1911.... | 227,268 | 26.56 | 2.88 | 1.74 | 27.70 |
| 1912.... | 234,386 | 30.59 | 3.18 | 1.38 | 32.39 |

675 Lincoln Gas & Electric Lt. Co.

*Total Expense as Stated in Gas Reports and as Determined from Gas Reports by Adams.*

| Year. | $ Stated expense. | $ Expense per Adams. | $ Excess of stated expense. |
|---|---|---|---|
| 1905..... | 105,421.95 | 104,643.53 | 778.42 |
| 1906..... | 127,049.24 | 125,515.30 | 1,533.94 |
| 1907..... | 141,924.37 | 137,147.61 | 4,776.76 |
| 1908..... | 137,090.35 | 135,690.42 | 1,399.93 |
| 1909..... | 134,708.24 | 133,320.05 | 1,388.19 |
| 1910..... | 143,670.45 | 143,539.84 | 130.61 |
| 1911..... | 158,374.11 | 158,123.76 | 250.35 |
| 1912..... | 175,573.49 | 175,835.64 | 262.15 |

676 Lincoln Gas & Electric Lt. Co.

*All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1903..... | 15,623.92 | 6,033.10 | 21,657.02 |
| 1904..... | 26,073.85 | 5,666.48 | 31,740.33 |
| 1905..... | 27,062.85 | 6,126.31 | 33,189.16 |
| 1906..... | 26,119.09 | 6,785.90 | 32,904.99 |
| 1907..... | 28,583.13 | 8,329.76 | 36,912.89 |
| 1908..... | 30,252.02 | 9,814.71 | 40,066.73 |
| 1909..... | 34,149.47 | 12,687.59 | 46,837.06 |
| 1910..... | 41,633.90 | 17,301.29 | 58,935.19 |
| 1911..... | 45,716.95 | 23,973.67 | 69,690.62 |
| 1912..... | 46,529.20 | 26,415.79 | 72,944.99 |

677 Lincoln Gas & Electric Light Co.

*All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes in Cents Per M Feet of Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1903..... | 98,343 | 15.89 | 6.13 | 22.02 |
| 1904..... | 117,429 | 22.20 | 4.83 | 27.03 |
| 1905..... | 143,690 | 18.83 | 4.26 | 23.10 |
| 1906..... | 153,663 | 17.00 | 4.42 | 21.41 |
| 1907..... | 179,366 | 15.94 | 4.64 | 20.58 |
| 1908..... | 195,391 | 15.48 | 5.02 | 20.51 |
| 1909..... | 204,284 | 16.72 | 6.21 | 22.93 |
| 1910..... | 210,169 | 19.81 | 8.23 | 28.04 |
| 1911..... | 227,268 | 20.12 | 10.55 | 30.66 |
| 1912..... | 234,386 | 19.85 | 11.27 | 31.12 |

678 Lincoln Gas & Electric Lt. Co.

*Expense of Operation Per Gas Reports.*

| Year. | $ Net materials & labor making gas. | $ Salaries, office & general expense. | $ Total, except repairs & taxes. |
|---|---|---|---|
| 1905..... | 59,381.30 | 33,189.16 | 92,570.46 |
| 1906..... | 74,364.16 | 32,904.99 | 107,269.15 |
| 1907..... | 80,229.01 | 36,912.89 | 117,141.90 |
| 1908..... | 79,278.74 | 40,066.73 | 119,345.47 |
| 1909..... | 69,392.74 | 46,837.06 | 116,229.80 |
| 1910..... | 65,548.41 | 58,935.19 | 124,483.60 |
| 1911..... | 62,955.00 | 69,690.62 | 132,645.62 |
| 1912..... | 75,918.05 | 72,944.99 | 148,863.04 |

*Expense of Operation Per Gas Reports.*

| Year. | $ Repairs & renewals. | $ Taxes. | $ Total expense. |
|---|---|---|---|
| 1905..... | 9,961.07 | 2,112.00 | 104,643.53 |
| 1906..... | 11,555.67 | 6,690.48 | 125,515.30 |
| 1907..... | 12,920.67 | 7,085.04 | 137,147.61 |
| 1908..... | 8,915.99 | 7,428.96 | 135,690.42 |
| 1909..... | 9,104.01 | 7,986.24 | 133,320.05 |
| 1910..... | 10,721.04 | 8,335.20 | 143,539.84 |
| 1911..... | 14,898.14 | 10,580.00 | 158,123.76 |
| 1912..... | 11,712.60 | 15,260.00 | 175,835.64 |

679 Lincoln Gas & Electric Lt. Co.

*Expense of Operation Per Gas Reports in Cents Per M Feet of Gas Sold.*

| Year. | M feet gas sold. | Net materials & labor making gas. | Salaries, office & general expense. | Total, except repairs & taxes. |
|---|---|---|---|---|
| 1905..... | 143,690 | 41.33 | 23.10 | 64.42 |
| 1906..... | 153,663 | 48.39 | 21.41 | 69.81 |
| 1907..... | 179,366 | 44.73 | 20.58 | 65.31 |
| 1908..... | 195,391 | 40.57 | 20.51 | 61.08 |
| 1909..... | 204,284 | 33.97 | 22.93 | 56.90 |
| 1910..... | 210,169 | 31.19 | 28.04 | 59.23 |
| 1911..... | 227,268 | 27.70 | 30.66 | 58.36 |
| 1912..... | 234,386 | 32.39 | 31.12 | 63.51 |

*Expense of Operation Per Gas Reports in Cents Per M Feet of Gas Sold.*

| Year. | M feet gas sold. | Cents repairs & renewals. | Cents taxes. | Cents total expense. |
|---|---|---|---|---|
| 1905..... | 143,690 | 6.93 | 1.47 | 72.83 |
| 1906..... | 153,663 | 7.52 | 4.35 | 81.68 |
| 1907..... | 179,366 | 7.20 | 3.95 | 76.46 |
| 1908..... | 195,391 | 4.56 | 3.80 | 69.45 |
| 1909..... | 204,284 | 4.46 | 3.91 | 65.26 |
| 1910..... | 210,169 | 5.10 | 3.97 | 68.30 |
| 1911..... | 227,268 | 6.56 | 4.66 | 69.58 |
| 1912..... | 234,386 | 5.00 | 6.51 | 75.02 |

680 Lincoln Gas & Electric Lt. Co.

*Gas Income and Expenses Per Gas Reports.*

| Year. | $ Gas income. | $ Total expense. | $ Net earnings. |
|---|---|---|---|
| 1905..... | 173,619.03 | 104,643.53 | 68,975.50 |
| 1906..... | 185,778.26 | 125,515.30 | 60,262.96 |
| 1907..... | 215,776.20 | 137,147.61 | 78,628.59 |
| 1908..... | 234,347.51 | 135,690.42 | 98,657.09 |
| 1909..... | 245,124.74 | 133,320.05 | 111,804.69 |
| 1910..... | 251,942.37 | 143,539.84 | 108,402.53 |
| 1911..... | 274,292.95 | 158,123.76 | 116,169.19 |
| 1912..... | 282,162.11 | 175,835.64 | 106,326.47 |

681 Lincoln Gas & Electric Lt. Co.

*Expense, Repairs & Renewals Per Gas Reports.*

| Year. | M feet gas sold. | $ Total repairs & renewals. | Cents per M feet sold. |
|---|---|---|---|
| 1903..... | 98,343 | 5,912.21 | 6.01 |
| 1904..... | 117,429 | 8,544.68 | 7.26 |
| 1905..... | 143,690 | 9,961.07 | 6.93 |
| 1906..... | 153,663 | 11,555.67 | 7.52 |
| 1907..... | 179,366 | 12,920.67 | 7.20 |
| 1908..... | 195,391 | 8,915.99 | 4.56 |
| 1909..... | 204,284 | 9,104.01 | 4.46 |
| 1910..... | 210,169 | 10,721.04 | 5.10 |
| 1911..... | 227,268 | 14,898.14 | 6.56 |
| 1912..... | 234,386 | 11,712.60 | 5.00 |
| | 1,763,989 | 104,246.08 | 5.91 |

682 *Repairs and Renewals, Lincoln Gas Plant.*

| Year. | Buildings. | Gas benches. | Water gas generators. | Other machinery. | Mains. |
|---|---|---|---|---|---|
| 1903.. | 696.93 | 701.68 | 418.23 | 1,305.36 | 471.92 |
| 1904.. | 303.68 | 970.72 | 1,113.69 | 2,162.29 | 515.04 |
| 1905.. | 267.86 | 1,255.62 | 1,953.28 | 1,672.24 | 949.45 |
| 1906.. | 724.47 | 1,976.39 | 2,312.47 | 2,077.87 | 638.00 |
| 1907.. | 1,065.43 | 4,022.24 | 1,045.53 | 1,904.78 | 1,147.28 |
| 1908.. | 192.29 | 2,425.77 | 1,151.24 | 1,003.68 | 795.75 |
| 1909.. | 143.75 | 817.21 | 1,487.94 | 1,042.00 | 788.26 |
| 1910.. | 235.75 | ..... | 809.53 | 1,719.90 | 1,727.15 |
| 1911.. | 819.22 | ..... | 548.28 | 5,000.46 | 909.75 |
| 1912.. | 237.55 | ..... | 1,438.53 | 429.03 | 1,133.54 |
| Total. | 4,686.93 | 12,169.63 | 12,278.72 | 18,317.61 | 9,076.14 |

683 *Repairs and Renewals, Lincoln Gas Plant.*

| Year. | Service pipes. | Meter maintenance. | Total exclusive of setting & removing meters. | Meters setting & removing. | Total. |
|---|---|---|---|---|---|
| 1903.. | 293.00 | 794.28 | 4,681.40 | 1,230.81 | 5,912.21 |
| 1904.. | 450.36 | 1,208.93 | 6,724.71 | 1,819.97 | 8,544.68 |
| 1905.. | 1,060.36 | 868.70 | 8,027.51 | 1,933.56 | 9,961.07 |
| 1906.. | 396.60 | 1,037.36 | 9,163.16 | 2,392.51 | 11,555.67 |
| 1907.. | 385.17 | 1,338.31 | 10,908.74 | 2,011.93 | 12,920.67 |
| 1908.. | 293.52 | 1,723.02 | 7,585.27 | 1,330.72 | 8,915.99 |
| 1909.. | 519.32 | 2,964.41 | 7,762.89 | 1,341.12 | 9,104.01 |
| 1910.. | 424.05 | 3,625.99 | 8,542.37 | 2,178.67 | 10,721.04 |
| 1911.. | 566.74 | 4,180.20 | 12,024.65 | 2,873.49 | 14,898.14 |
| 1912.. | 1,414.37 | 4,207.10 | 8,860.12 | 2,852.48 | 11,712.60 |
| Total. | 5,803.49 | 21,948.30 | 84,280.82 | 19,965.26 | 104,246.08 |

684 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1903.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Coal Gas Bldgs..... | 210.46 | ..... | ..... | ..... |
| Water " " ..... | 486.47 | ..... | ..... | ..... |
| Gas Benches ..... | ..... | 701.68 | ..... | ..... |
| Water Gas Gen. Appar.... | ..... | 418.23 | ..... | ..... |
| General Apparatus Repairs C. G. ..... | ..... | 436.94 | ..... | ..... |
| General Apparatus Repairs W. G. ..... | ..... | 868.42 | ..... | ..... |
| Street Main Maintenance.. | ..... | ..... | 471.92 | ..... |
| Service Maintenance ..... | ..... | ..... | 293.00 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 794.28 |
| Setting and Removing Meters ..... | ..... | ..... | ..... | 1,230.81 |
| | 696.93 | 2,425.27 | 764.92 | 2,025.09 |
| Total for Year 1903..... | | | 5,912.21 | |

685 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1904.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Coal Gas Bldgs..... | 183.27 | ..... | ..... | ..... |
| Water " " ..... | 120.41 | ..... | ..... | ..... |
| Gas Benches ..... | ..... | 970.72 | ..... | ..... |
| Water Gas Gen. Appar.... | ..... | 1,113.69 | ..... | ..... |
| General Apparatus Repairs C. G. ..... | ..... | 1,221.84 | ..... | ..... |
| General Apparatus Repairs W. G. ..... | ..... | 940.45 | ..... | ..... |
| Street Main Maint'n'c.... | ..... | ..... | 515.04 | ..... |
| Service Maintenance ..... | ..... | ..... | 450.36 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 1,208.93 |
| Setting & Rem. Meters.... | ..... | ..... | ..... | 1,819.97 |
| | 303.68 | 4,246.70 | 965.40 | 3,028.90 |
| Total for Year 1904..... | | | 8,544.68 | |

686 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1905.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Coal Gas Bldgs. | 141.77 | ..... | ..... | ..... |
| Water " " | 126.09 | ..... | ..... | ..... |
| Gas Benches | ..... | 1,255.62 | ..... | ..... |
| Water Gas Gen. Appar. | ..... | 1,953.28 | ..... | ..... |
| General Apparatus Repairs C. G. | ..... | 916.31 | ..... | ..... |
| General Apparatus Repairs W. G. | ..... | 755.93 | ..... | ..... |
| Street Main Maint'n'c | ..... | ..... | 949.45 | ..... |
| Service Maintenance | ..... | ..... | 1,060.36 | ..... |
| Meter Maintenance | ..... | ..... | ..... | 868.70 |
| Setting & Rem. Meters | ..... | ..... | ..... | 1,933.56 |
| | 267.86 | 4,885.14 | 2,009.81 | 2,802.26 |

Total for Year 1905 ..... 9,961.07

687 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1906.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Coal Gas Bldgs. | 397.36 | ..... | ..... | ..... |
| Water " " | 327.11 | ..... | ..... | ..... |
| Gas Benches | ..... | 1,976.39 | ..... | ..... |
| Water Gas Gen. Appar. | ..... | 2,312.47 | ..... | ..... |
| General Apparatus Repairs C. G. | ..... | 1,125.61 | ..... | ..... |
| General Apparatus Repairs W. G. | ..... | 952.26 | ..... | ..... |
| Street Main Maint'n'c | ..... | ..... | 638.00 | ..... |
| Service Maintenance | ..... | ..... | 396.60 | ..... |
| Meter Maintenance | ..... | ..... | ..... | 1,037.36 |
| Setting & Rem. Meters | ..... | ..... | ..... | 2,392.51 |
| | 724.47 | 6,366.73 | 1,034.60 | 3,429.87 |

Total for Year 1906 ..... 11,555.67

688 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1907.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Coal Gas Bldgs..... | 812.40 | ..... | ..... | ..... |
| Water " " ..... | 253.03 | ..... | ..... | ..... |
| Gas Benches ..... | ..... | 4,022.24 | ..... | ..... |
| Repairs to W. Gas Gen. Apparatus ..... | ..... | 1,045.53 | ..... | ..... |
| General Apparatus Repairs C. G. ..... | ..... | 908.62 | ..... | ..... |
| General Apparatus Repairs W. G. ..... | ..... | 996.16 | ..... | ..... |
| Street Main Maint'n'c..... | ..... | ..... | 1,147.28 | ..... |
| Service Maintenance ..... | ..... | ..... | 385.17 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 1,338.31 |
| Setting & Rem. Meters.... | ..... | ..... | ..... | 2,011.93 |
| | 1,065.43 | 6,972.55 | 1,532.45 | 3,350.24 |

Total for Year 1907..... 12,920.67

689 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1908.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Coal Gas Bldgs..... | 85.76 | ..... | ..... | ..... |
| Water " " ..... | 106.53 | ..... | ..... | ..... |
| Gas Benches ..... | ..... | 2,425.77 | ..... | ..... |
| Repairs to W.Gas Apparatus | ..... | 1,151.24 | ..... | ..... |
| General Apparatus Repairs C. G. ..... | ..... | 334.67 | ..... | ..... |
| General Apparatus Repairs W. G. ..... | ..... | 669.01 | ..... | ..... |
| Street Main Maint'n'c..... | ..... | ..... | 795.75 | ..... |
| Service Maintenance ..... | ..... | ..... | 293.52 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 1,723.02 |
| Setting & Rem. Meters.... | ..... | ..... | ..... | 1,330.72 |
| | 192.29 | 4,580.69 | 1,089.27 | 3,053.74 |

Total for Year 1908..... 8,915.99

690 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1909.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Coal Gas Bldgs..... | 2.91 | ..... | ..... | ..... |
| Water " " ..... | 140.84 | ..... | ..... | ..... |
| Gas Benches ..... | ..... | 817.21 | ..... | ..... |
| Water Gas Gen. Appar.... | ..... | 1,487.94 | ..... | ..... |
| General Appar. C. G..... | ..... | 97.54 | ..... | ..... |
| General Appar. W. G..... | ..... | 944.46 | ..... | ..... |
| Street Main Maint'n'c.... | ..... | ..... | 788.26 | ..... |
| Service Maintenance ..... | ..... | ..... | 519.32 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 2,964.41 |
| Setting & Rem. Meters.... | ..... | ..... | ..... | 1,341.12 |
| | 143.75 | 3,347.15 | 1,307.58 | 4,305.53 |
| Total for Year 1909..... | | | 9,104.01 | |

691 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1910.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Water Gas Bldgs..... | 235.75 | ..... | ..... | ..... |
| Water Gas Gen. Appar.... | ..... | 809.53 | ..... | ..... |
| General Appar. W. G..... | ..... | 1,719.90 | ..... | ..... |
| Street Main Maint'n'c.... | ..... | ..... | 1,727.15 | ..... |
| Service Maintenance ..... | ..... | ..... | 424.05 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 3,625.99 |
| Setting & Rem. Meters.... | ..... | ..... | ..... | 2,178.67 |
| | 235.75 | 2,529.43 | 2,151.20 | 5,804.66 |
| Total for Year 1910..... | | | 10,721.04 | |

692 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1911.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Water Gas Bldgs..... | 819.22 | ..... | ..... | ..... |
| Water Gas Gen. Appar.... | ..... | 548.28 | ..... | ..... |
| General Apparatus W. G... | ..... | 5,000.46 | ..... | ..... |
| Street Main Maint'n'c..... | ..... | ..... | 909.75 | ..... |
| Service Maintenance ..... | ..... | ..... | 566.74 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 4,180.20 |
| Setting & Rem. Meters.... | ..... | ..... | ..... | 2,873.49 |
| | 819.22 | 5,548.74 | 1,476.49 | 7,053.69 |

Total for Year 1911..... 14,898.14

693 *Reported Cost of Repairs and Maintenance, Lincoln Gas Plant.*

Year 1912.

| | Buildings. | Machinery. | Mains & service pipes. | Meters. |
|---|---|---|---|---|
| Water Gas Bldgs..... | 237.55 | ..... | ..... | ..... |
| Water Gas Gen. Appar..... | ..... | 1,438.53 | ..... | ..... |
| General Appar. W. G..... | ..... | 429.03 | ..... | ..... |
| Street Main Maint'n'c..... | ..... | ..... | 1,133.54 | ..... |
| Service Maintenance ..... | ..... | ..... | 1,414.37 | ..... |
| Meter Maintenance ..... | ..... | ..... | ..... | 4,207.10 |
| Setting & Rem. Meters.... | ..... | ..... | ..... | 2,852.48 |
| | 237.55 | 1,867.56 | 2,547.91 | 7,059.58 |

Total for Year 1912..... 11,712.60

694 A/c No. 497. 1913—#1.

*Traveling Expense—Operation.*

| | | | |
|---|---|---|---|
| 1913. | | | |
| Jan. | B. C. Adams, exp. B. C. A. & E. C. S..... | 80.00 | |
| | Tr. Vo. 1676, exp. of B. C. A. & E. C. S. to N. Y. ($575.00) ..... | & 92.00 | |
| | | | 172.00 |
| Feb. | H. L. Doherty & Co., exp. B. C. S. to N. Y. | 80.00 | |
| | Tr. Vo. 1700, B. C. A. & E. C. S. exp. to N. Y. ..... | 92.00 | |
| | L. G. & E. L. Co., cont'g..... | 28.65 | |
| | | | 200.65 |

| | | | |
|---|---|---|---|
| M'c'h. | Tr. Vo. 1720, exp. B. C. A. & E. C. S. to N. Y. | 92.00 | 92.00 |
| Apr. May. | J. E. Shuff, exp. to Fremont | 9.60 | |
| | " " " " " Burlington, Ia. | 58.00 | |
| | C. Kennedy, " " " " | 70.00 | 137.60 |
| July. | Fred Walt, R. R. fare Rotary Club to Omaha. | 3.52 | |
| Aug. | Tr. Vo. 1846, B. C. A. to N. Y. ($175) | 28.00 | |
| Sept. | Tr. Vo. 1872, " " " | 28.00 | |
| Oct. | Tr. Vo. 1898, " " " | 28.00 | |
| Nov. | Tr. Vo. 1924, " " " | 28.00 | |
| Dec. | Tr. Vo. 1952, " " " | 28.00 | |
| | | 143.52 | |

695 A/c 1502*a*. 1912—#1.

*General Office Expense.*

| | | | |
|---|---|---|---|
| Jan'y 31. | Tr. Vo. 1382—Stationery | 15.90 | |
| | " " 1389—Proportion of surety bond cap. | .65 | |
| | Pay Roll | 6.00 | |
| | Tr. Vo. 1397, closing out special off. exp. a/c. | 4.74 | |
| | | | 27.29 |
| Feb'y 29. | Tr. Vo. 1404—Stationery | 15.90 | |
| | " " 1409, Surety bond | .65 | |
| | Pay Roll | 6.00 | |
| | Tr. Vo. 1421, special office exp. | .68 | |
| | | | 23.23 |
| March 30. | Tr. Vo. 1423, stationery & printing | 15.90 | |
| | " " —8, surety bond | .65 | |
| | Pay Roll | 6.00 | |
| | Tr. Ve. 1440, Closing out special off. exp. a/c. | 15.14 | |
| | | | 37.69 |
| April 30. | Tr. Vo. 1445, stationery & printing | 11.20 | |
| | " " 1450, surety bond | .65 | |
| | Pay Roll | 6.00 | |
| | Tr. Vo. 1464, closing out special off. exp. a/c. | 35.07 | |
| | | | 52.92 |

| | | |
|---|---|---|
| May 31. | Tr. Vo. 1467, stationery & printing a/c | 11.20 |
| | " " 1472, surety bond | .65 |
| | Pay Roll | 6.00 |
| | Tr. Vo. 1482, closing out spec. off. exp. a/c | 42.55 |
| | | 60.40 |
| June 29. | Tr. Vo. 1488, stationery & printing | 11.20 |
| | " " 1493, surety bond | .65 |
| | Pay Roll | 6.00 |
| | Tr. Vo. 1508, closing out spec. off. exp. a/c | 40.53 |
| | | 58.38 |
| July 31. | Tr. Vo. 1513, stationery & printing | 11.20 |
| | " " 1517, surety bond | .65 |
| | Geo. Bros. Griffiths Co., seal—13546 | 1.25 |
| | Pay Roll | 6.00 |
| | Tr. Vo. 1533, spec. off. exp. a/c | 47.67 |
| | | 66.77 |

696 A/c #1502*a*. 1912—#2.

*General Office Expense.*

| | | |
|---|---|---|
| 1912. | | |
| Aug. 31. | Tr. Vo. 1544, stationery & printing a/c | 11.20 |
| | " " 1546, surety bond | .65 |
| | Pay Roll | 6.00 |
| | Tr. Vo. 1564, spec. off. exp. a/c | 42.85 |
| | | 60.70 |
| Sept. 30. | Tr. Vo. 1569, stationery & printing a/c | 11.20 |
| | " " 1571, surety bond | .65 |
| | Pay Roll | 6.00 |
| | Tr. Vo. 1589, spec. off. exp. a/c | 43.50 |
| | | 61.35 |
| Oct. 31. | Tr. Vo. 1595, stationery & printing a/c | 11.20 |
| | " " 1598, surety bond | .61 |
| | " " 1614, spec. off. exp. a/c | 10.88 |
| | | 22.69 |
| Nov. 30. | Tr. Vo. 1620, stationery & printing a/c | 8.00 |
| | " " 1622, surety bond | .61 |
| | " " 1641, spec. off. exp. a/c | 16.25 |
| | | 24.86 |

| | | | |
|---|---|---|---|
| Dec. 31. | Tr. Vo. 1647, stationery & printing a/c | | 8.00 |
| | " " 1649, surety bond | | .46 |
| | " " 1666, spec. off. exp. a/c | | 22.09 |
| | | | 30.55 |

697 A/c #1503. 1912—#1.

*Incidental Expense.*

| 1912. | | Reg. or Vo. No. | |
|---|---|---|---|
| Jan'y 5. | Charity Organization, donation | 12449 | 20.00 |
| 8. | W. F. Jones, exp. a/c C. Jones' death | 12453 | 60.00 |
| 8. | H. H. Hehley, exp. a/c C. Jones' death | 4 | 7.00 |
| 9. | Castle, Roper & Mathews, undertakers, C. Jones' death | 12457 | 227.00 |
| 11. | G. R. Wolfe & Co., cigars | 12463 | 9.60 |
| 20. | George Bros., proxies | 12473 | 11.31 |
| 31. | B. C. Adams, Jan. exp. | 12480 | 40.00 |
| 31. | Tr. Vo. 1386, Windsor Trust Co. for handling notes (650) | 1836 | 16.25 |
| 20. | Savoy Hotel, cafe services | 12501 | 11.28 |
| 31. | Jacob North & Co., directories | 12566 | 8.00 |
| | O. B. Clark, sec'y, dues | 12512 | 8.00 |
| | Iowa Dist. Gas Asso., dues | 12527 | 3.00 |
| | L. G. & E. L. Co., contg. | 11710<br>12567 | 52.65 |
| | L. G. & E. L. Co., rebates | 12568 | 51.40 |
| | Lincoln Commercial Club, dues | 12534 | 12.92 |
| | Lincoln Candy Kitchen, candy | 12532 | 2.40 |
| | Nebraska Telephone Co., phones | 12505 | 1.60 |
| | Nat'l Com. Gas Ass'n, dues | 12544 | 10.00 |
| | Lincoln Tel. & Tel. Co., phones | 12588 | 1.60 |
| | Savoy Hotel, cafe | 12592 | 11.32 |
| | | | 565.33 |
| Feb'y 29. | B. C. Adams, Feb'y exp. | 12638 | 40.00 |
| 29. | Nebr. Tel. Co., services | 12663 | 1.60 |
| " | Tr. Vo. 1406, 1836 Windsor Trust Co., note exp. | ..... | 16.25 |
| " | Tr. Vo. 1411, (Adams & Strode N. Y. trip $250.00) closes with this entry | ..... | 50.00 |
| " | L. G. & E. L. Co., contg. | 12685 | 32.65 |
| " | B. C. Adams, exp. Mgrs. Meeting N. Y. | 12686 | 280.00 |
| " | L. G. & E. L. Co., rebates | 12687 | 34.64 |
| " | Am. Gas Lt. Journal, sub. | 9 | 3.00 |
| " | Lincoln Commercial Club, dues | 12724 | 40.00 |
| " | Lincoln Tel. & Tel. Co., phones | 12728 | 1.60 |
| " | Savoy Hotel, cafe | 12742 | 20.92 |
| " | H. J. Gorden, sub. | 12750 | 1.60 |
| | | | 522.26 |

| | | | | |
|---|---|---|---|---|
| Mch. | 30. | Tr. Vo. 1426, 1836 Exp. handling notes. | ..... | 16.25 |
| | " | Nick Arrigo, cigars | 12804 | 2.00 |
| | | B. C. Adams, Mch. exp. | 12806 | 40.00 |
| | | H. L. Doherty & Co., exp. Winans | 12816 | 18.23 |
| | | Fremont Tribune, sub. | 12826 | 2.40 |
| | | Lincoln Tel. Co., service | 12852 | 1.60 |
| | | " " " " | 3 | 1.60 |
| | | Lincoln Commercial Club, dues | 8 | 50.68 |

698 A/c #1503. 1912—#2.

*Incidental Expense.*

| 1912. | | Reg. or Vo. No. | |
|---|---|---|---|
| Mch. | (Cont.) L. G. & E. L. Co., rebates | 9 | 28.45 |
| | L. G. & E. L. Co., contg. | 12861 | 12.80 |
| | Neb. State Journal, sub. | 12871 | 6.00 |
| | Savoy Hotel, cafe | 12882 | 14.90 |
| | | | 194.91 |
| Apr. | 13. Frank D. Eager, donation | 12913 | 40.00 |
| | 15. B. C. Adams, Exp. to N. Y. | 23 | 48.50 |
| | 19. Neb. Credit Co., blue book | 33 | 20.00 |
| | 20. B. C. Adams, exp. for April | 69 | 40.00 |
| | 30. O. B. Clark, Sec'y, dues | 999 | 8.00 |
| | " Financial World, sub. | 13008 | 3.20 |
| | L. G. & E. L. Co., contg. | 13030 | 58.80 |
| | L. G. & E. L. Co., rebates | 1 | 33.02 |
| | Lin. Tel. Co., service | 13036 | 3.20 |
| | Lin. Daily Star, sub. | 9 | 6.40 |
| | 30. Tr. Vo. 1448, Exp. handling notes | ..... | 15.67 |
| | " Tr. Vo. 1454, Exp. G. A. Montgomery to Lincoln | ..... | 41.20 |
| | | | 317.99 |
| May | 13. Neb. Weslyn. Uni., donation | 13141 | 80.00 |
| | 22. Lincoln Telephone Co., service | 13162 | 3.20 |
| | 31. Savoy Hotel, cafe | 13185 | 20.04 |
| | " Wisc. Gas Ass'n, dues | 9 | 3.00 |
| | 21. B. C. Adams, exp. for May | 13195 | 40.00 |
| | 29. J. E. Shuff, Exp. Iowa Dist. Gas Ass'n | 13207 | 239.10 |
| | 31. Tr. Vo. 1470, Exp. handling notes | ..... | 15.67 |
| | Tr. Vo. 1476, Montgomery's exp. to Lincoln | ..... | 41.20 |
| | " Amer. C. & C. Co., hats for Iowa Dist. Gas | 13214 | 20.75 |
| | " E. E. Brown, directory | 7 | 5.30 |
| | L. G. & E. L. Co., rebates | 13241 | 29.94 |
| | L. G. & E. L. Co., contg. | 2 | 26.50 |
| | Rudge & Guenzel Co., misc. hdw. | 13253 | 6.10 |
| | | | 530.80 |

| | | | |
|---|---|---|---|
| June 12. | F. O. Pierson, donation | 13283 | 20.00 |
| 17. | J. G. Bovey, Auto. Hire | 13295 | 4.80 |
| 29. | Tr. Vo. 1491, Exp. handling notes | ..... | 15.67 |
| 19. | Lincoln Carber Car Auto Co., auto. hire | 13302 | 1.20 |
| 29. | B. C. Adams, exp. for June | 13 | 40.00 |
| " | F. M. Andrus, surgical work | 19 | 2.40 |
| " | Chapin Bros., palms for office deco | 27 | 14.25 |
| " | Globe Delivery Co., del'y from Capital Beach | 35 | 1.25 |
| " | Iowa District Gas Ass'n, dues | 37 | 18.00 |

699 A/c No. 1503. 1912—#3.

*Incidental Expense.*

| 1912. | | Reg. or Vo. No. | |
|---|---|---|---|
| June—(cont.). | | | |
| | Joers Motor Co., auto hire | 38 | 13.20 |
| | Lincoln Tel. Co., service | 42 | 3.20 |
| | Lincoln Com. Club, dues | 43 | 8.00 |
| | Nat'l Com. Gas Ass'n, dues | 46 | 25.00 |
| | Harry Porter, supplies | 48 | 2.30 |
| | Savoy Hotel, Cafe | 58 | 27.96 |
| | D. Van Nostrand Co. "Foster valuation" | 60 | 1.50 |
| | Tr. Vo. 1500, entertaining Iowa Dist. Gas Ass'n ($150.00) | ..... | 25.00 |
| 27. | Y. M. C. A., donation | 13368 | 20.00 |
| 29. | George Bros., badges | 79 | 2.00 |
| " | Jacob North & Co., banquet soup & tickets | 86 | 9.35 |
| " | Sanitary Fruit Co., cigars | 436 | 5.00 |
| | L. G. & E. L. Co., contg | 446 | 10.20 |
| | L. G. & E. L. Co., rebates | 7 | 26.73 |
| | | | 297.01 |
| July 17. | L. J. Dunn, Treas., donation | 13464 | 20.00 |
| 22. | L. G. & E. L. Co., rebates | 78 | .50 |
| 31. | Tr. Vo. 1515, Exp. handling notes | ..... | 15.67 |
| 29. | Neb. Credit Co., blue book | 13492 | 20.00 |
| | Savoy Hotel, cafe | 6 | 9.80 |
| 31. | Lincoln Tel. Co. service | 7 | 3.20 |
| | Tr. Vo. 1522, entertaining Iowa Dist. Gas Ass'n | ..... | 25.00 |
| | Tr. Vo. 1524, Expense Manager's meeting at Denver, Adams, Shuff, Mallat, Montgomery & Phillips | ..... | 55.88 |
| | B. C. Adams, Inc., Exp. for July | 13507 | 40.00 |
| | G. R. De Ford, photos | 24 | 6.68 |
| | Lincoln Ad Club, dues | 56 | 3.20 |
| | L. G. & E. L. Co., rebates | 8 | 29.69 |

| | | | | |
|---|---|---|---|---|
| | | L. G. & E. L. Co., contg. | 9 | .40 |
| | | Lincoln Rotary Club, dues | 61 | 9.60 |
| | | Lincoln Commercial Club, dues | 65 | 60.60 |
| | | | | 300.22 |
| Aug. | 26. | Lincoln Tel. Co., service | 13677 | 3.20 |
| | 31. | Tr. Vo. 1546 1836—Notes exp. | ..... | 14.99 |
| | | Tr. Vo. 1552, entertaining Ia. Dist. Gas Ass'n | ..... | 25.00 |
| | | Tr. Vo. 1553, Denver trip | ..... | 55.88 |
| | 27. | H. L. Dougherty & Co., contribution | 13684 | 160.00 |
| | 30. | Savoy Hotel, meals | 92 | 7.84 |
| | 31. | B. C. Adams, Aug. exp. | 13701 | 40.00 |
| | " | Bus. Men's League, dues | 6 | 8.00 |
| | " | Denver Omnibus Co., service | 13724 | 2.40 |
| | | Enterprise Planing Mill, Mill Wk. | 7 | 2.36 |

700 A/c #1503. 1912—#4.

*Incidental Expense.*

| 1912. | | | Reg. or Vo. No. | |
|---|---|---|---|---|
| Aug.—(cont.)— | | | | |
| | | The Gas Industry | 32 | 2.00 |
| | | Joers Motor Co., auto hire | 46 | 11.20 |
| | | Lincoln Sanitorium, R. E. Phillips | 49 | 13.56 |
| | | L. G. & E. L. Co., contg. | 54 | 1.30 |
| | | L. G. & E. L. Co., rebates | 56 | 31.23 |
| | | Neb. Prison Ass'n, donation | 68 | 8.00 |
| | | Progressive Age, sub. | 74 | 2.40 |
| | | | | 389.36 |
| Sept. | 20. | Treas. Germ. Day Com., donation | 13850 | 40.00 |
| | 30. | Tr. Vo. 1571 1836 notes exp. | ..... | 14.99 |
| | 27. | Star Pub. Co., sub | 13859 | 6.40 |
| | 28. | Savoy Hotel, cafe | 60 | 16.20 |
| | 30. | Tr. Vo. 1576, Ia. Gas Ass'n entertainment | ..... | 25.00 |
| | " | Tr. Vo. 1577, Denver trip | ..... | 55.88 |
| | " | B. C. Adams, Sept. exp. | 13869 | 40.00 |
| | | Am. Gas Ins., dues | 70 | 10.00 |
| | | Joers Motor Co., auto hire | 13909 | 4.40 |
| | | L. G. & E. L. Co., contg. | 13915 | 2.80 |
| | | L. G. & E. L. Co., rebates | 6 | 26.43 |
| | | Lincoln Tel. Co., service | 48 | 1.60 |
| | | Savoy Hotel, meals | 49 | 15.10 |
| | | Sidles Motor Car Co., auto hire | 51 | 6.40 |
| | | | | 265.20 |

| | | | | |
|---|---|---|---|---|
| Oct. | 31. | Tr. Vo. 1597, notes exp. | ..... | 14.99 |
| | " | " " 1601 Ia. Gas entertainment. | ..... | 25.00 |
| | " | " " 1603 Denver trip. | ..... | 55.88 |
| | 28. | City Mission, Treas., sub. | 14029 | 40.00 |
| | 31. | H. L. Doherty & Co., trav. Exp. N. Y. | 14030 | 80.00 |
| | " | O. B. Clark, Sec'y, donation. | 43 | 8.00 |
| | | Chapin Bros., flowers. | 14044 | 8.00 |
| | | Harvard Uni. D. Wyman Pub. Serv. Co. | 14068 | 3.46 |
| | | Havelock Com'l Club, sub. | 14074 | 4.00 |
| | | The Herald Co., sub. | 14076 | 1.20 |
| | | L. G. & E. L. Co., rebates | 14081 | 49.95 |
| | | " contg. | 83 | 12.90 |
| | | Lin. Com. Club, sub. & dues. | 92 | 60.52 |
| | | Schmidt Motor Co., livery | 14112 | 4.00 |
| | | B. C. Adams, Oct. Exp. | 14130 | 40.00 |
| | | | | 407.90 |

701 A/c #1503. 1912—#5.

*Incidental Expense.*

| 1912. | | | Reg. or Vo. No. | |
|---|---|---|---|---|
| Nov. | 11. | W. T. Barstow, Sec'y, donation | 14146 | 80.00 |
| | 15. | Savoy Hotel, cafe | 55 | 11.10 |
| | 30. | B. C. Adams, Nov. exp. | 81 | 40.00 |
| | | Lincoln Ad. Club, dues | 98 | .80 |
| | | Tr. Vo. 1622, notes exp. | ..... | 14.99 |
| | | " " 1627, Denver trip. | ..... | 55.88 |
| | | " " 1632 | ..... | 92.00 |
| | | L. G. & E. L. Co., contg. | 14240 | 168.91 |
| | | " " rebates | 2 | 33.10 |
| | | Sanitary Fruit Store, cigars. | 62 | 2.40 |
| | | Tr. Vo. 1625, 1836. | ..... | 25.00 |
| | | | | 524.18 |
| Dec. | 31. | Tr. Vo. 1649, notes exp. | ..... | 14.99 |
| | | " " 1657 (Adams & Strode N. Y. trip $575.00) | ..... | 92.00 |
| | | B. C. Adams, Dec. Exp. | 14330 | 40.00 |
| | | The Gas Record, adv. | 60 | 2.00 |
| | | The Lincoln Herald, adv. | 73 | 1.60 |
| | | L. G. & E. L. Co., rebates | 75 | 35.63 |
| | | " " contg. | 74 | 109.42 |
| | | Neb. Man. Ass'n, sub. & dues. | 83 | 20.00 |
| | | Nebr. Credit Co., blue book. | 4 | 20.00 |
| | | Nat'l Com. Gas Ass'n, sub. & dues. | 14385 | 12.00 |
| | | Savoy Hotel, cafe | 14401 | 54.60 |
| | | Sanitary Fruit Store, cigars. | 14411 | 8.00 |

| | | |
|---|---|---|
| Woodruff Bank Note Co., Ptg. | 14417 | 8.00 |
| Lin. Com'l Club, dues | 14428 | 56.60 |
| | | 474.84 |

*Summary.*

| | |
|---|---|
| Jan'y | 565.33 |
| Feb'y | 522.26 |
| M'ch | 194.91 |
| April | 317.99 |
| May | 530.80 |
| June | 297.01 |
| July | 300.22 |
| Aug. | 389.36 |
| Sept. | 265.20 |
| Oct. | 407.90 |
| Nov. | 524.18 |
| Dec. | 474.84 |
| | 4,790.00 |

Average monthly inc. exp. ..... 399.16

*Cigars.*

9.60
2.00
5.00
2.40
8.00

27.00

702 Acct. No. 1503. 1907—#1.

*Certain Items Appearing in "Incidental Expense Accounts" of Lincoln Gas & Electric Light Company.*

1907.

| | | |
|---|---|---|
| January. | City Y. M. C. A., subscription | $50.00 |
| | National Electric Lt. Asso | 12.50 |
| | Homer Honeywell, Dec. & Jan. expenses | 50.00 |
| | O. Rector, candy | 4.20 |
| | F. J. Rehlaender, contg. Vo. #2618 missing from file | 6.50 |
| | F. J. Rehlaender, rebates and allowances Vo. #2616, G. & El. furnished to S. H. B., H. H., C. O. W. | 67.80 |
| | Trans. Vo. No. 305 | 6.92 |

| | | | |
|---|---|---|---|
| February. | Homer Honeywell, expenses | | 35.00 |
| | Trans. Vo. 322 | | 6.92 |
| | L. G. & E. L. Co., contg., ball tickets | | 7.50 |
| | H. G. Clements, donation | | 50.00 |
| | Lincoln Commercial Club, dues | | 6.20 |
| | Emerson McMillin Co. Vo. No. 3051 S. O. Appleck and postage | | 10.17 |
| March. | H. Honeywell, Mch. expenses | | 25.00 |
| | Prof. E. A. Davidson, donation | | 5.00 |
| | H. Honeywell, incidental expenses | | 12.50 |
| | " " " " | | 2.43 |
| | Lincoln G. & E. L. Co., contg. Vo. 2838: | | |
| | Ball tickets | 1.25 | |
| | B. of L. E. | 5.00 | |
| | Ball | 2.50 | |
| | J. K. H., G. & E. | 3.18 | |
| | S. H. B., G. & E. | 23.56 | |
| | Donation to Jewish School | 2.25 | |
| | | | 34.74 |
| | Lindell Hotel, expense | | 75.00 |
| April. | Lincoln Commercial Club, club membership | | 10.00 |
| | H. Honeywell, expense | | 49.80 |
| | Trans. Vo. 366 | | 125.00 |
| | H. Honeywell, expense | | 10.85 |
| | " " " | | 25.00 |
| | L. G. & E. L. Co., rebates—G. & J. K. H. & H. H. | | 38.62 |
| | Iowa Dist. Gas Asso | | 6.00 |
| | L. G. & E. L. Co., contg., Services Ben Kiffin | 2.00 | |
| | Notary Fee | .50 | |
| | Stuff, lunch & Billiards, Com. Club | .85 | |
| | Woodmen Ball ticket | .25 | |
| | | | 3.60 |
| | Lincoln Commercial Club, dues | | 2.63 |
| | Lindell Hotel | | 37.50 |
| | B. C. Adams, expenses Chicago | | 22.50 |

703 Acct. No. 1503. 1907—#2.

1907.

| | | |
|---|---|---|
| May. | Y. M. C. A. subscription | $25.00 |
| | Postal Reform League Donation | 7.50 |
| | Lincoln Commercial Club | 30.00 |
| | H. Honeywell, expenses Voucher No. 3072: | |
| | Expenses for May | $80.00 |

| | | | |
|---|---|---|---|
| | M. B. M. | 25.00 | |
| | O. D. H. | 25.00 | |
| | C. C. J. | 25.00 | |
| | A. T. Large | 100.00 | |
| | | | 255.00 |
| | L. G. & E. L. Co., rebates G. & El. furnished free to J. K. H., H. H., S. H. B., C. O. W. and T. H. P. | | 38.24 |
| | Lincoln Commercial Club | | 1.75 |
| | L. G. & E. L. Co., contg. | | 6.82 |
| | Lindell Hotel, expenses | | 37.50 |
| June. | Transfer Voucher 389 C. | | 6.92 |
| | W. H. O'Dell, donation | | 2.50 |
| | Lindell Hotel | | 3.25 |
| | H. Honeywell, expense | | 32.50 |
| | L. G. & E. L. Co., rebates G. & El. to S. H. B., J. K. H., H. H., and T. H. P. | | 18.99 |
| | L. G. & E. L. Co., contg., voucher 3271 "Counsel" | | 4.00 |
| | American Gas Inst., dues | | 5.00 |
| | Lincoln Commercial Club, dues | | 9.63 |
| July. | Y. M. C. A. subscription | | 25.00 |
| | Lewis Gregory, donation | | 12.50 |
| | Trans. Vo. 407 C | | 6.92 |
| | Lindell Hotel, expense | | 35.62 |
| | H. Honeywell, expense | | 25.00 |
| | Lin. G. & E. L. Co. rebates G. & El. to S. H. B., C. O. W., H. H., J. K. H. | | 20.80 |
| | L. G. & E. L. Co., contg. tickets labor banquet | | 2.50 |
| Aug. | L. G. & E. L. Co., rebates G. & El. furnished to S. H. B., H. H., J. K. H., C. O. W., and T. H. P. | | 26.24 |
| | L. G. & E. L. Co., contg., voucher 3586 street lighting | | .50 |
| | Trans. Vo. 419 C. | | 6.92 |
| Sept. | Homer Honeywell, expense | | 25.00 |
| | Am. Gas Inst., dues | | 5.00 |
| | Lincoln Commercial Club, dues | | 1.75 |

704 Acct. No. 1503. 1907—#3.

1907.

| | | |
|---|---|---|
| Oct. | J. P. Drieth, donation | $2.50 |
| | Salvation Army, donation | 2.50 |
| | Homer Honeywell, expenses | 25.00 |
| | Lincoln Commercial Club, dues | 6.12 |
| | C. A. Frueauff, expense Lincoln Vo. 6947 | 30.00 |

| | | |
|---|---|---|
| Nov. | Homer Honeywell, expense | 25.00 |
| | " " " Vo. 3846 | 100.00 |
| | " " commission—Vo. 3847 (on Garner & Greeley notes) | 20.00 |
| | Grace M. E. Church, donation | 10.00 |
| | L. G. & E. L. Co., Vo. 3883 Commission paid to C. R. Wigert on two years' notes | 20.00 |
| Dec. | Trans. Vo. 480 | 25.00 |
| | Sidles Auto Co., Auto services | 2.50 |
| | L. G. & E. L. Co., contg. | 2.50 |
| | Petty Journal, page 25 | 16.72 |
| | Lincoln Commercial Club, dues | 6.12 |
| 1908. | | |
| January. | Lincoln Commercial Club, subscription | 50.00 |
| | L. G. & E. L. Co., rebates Voucher 4165 G. & E. to W. L. D. | 2.95 |
| | Trans. Vo. 497 | 25.00 |
| February. | Trans. Vo. 507 | 25.00 |
| | L. G. & E. L. Co., contg. Vo. 4312 missing from files | 10.50 |
| March. | Y. M. C. A. donation | 25.00 |
| | L. G. & E. L. Co., rebates—G. & E. to C. O. W., S. H. B., J. K. H., H. H. | 226.44 |
| | Doherty Operating Co., expenses F. W. Frueauff, Vo. 5507 and 5508 | 81.50 |
| April. | Trans. Vo. 530 | 31.60 |
| | Lincoln Commercial Club, sub. & dues | 62.87 |
| | L. G. & E. L. Co., rebates, Vo. 4567 G. & E. to C. O. W., H. H., S. H. B. & J. K. H. | 60.80 |
| May. | T. P. Kennard, Vo. 4518 | 16.00 |
| | H. C. Porter, voucher 4528, exp. Omaha for Commercial Dept. | 24.00 |
| | Denver Gas & El. Co., expenses F. W. Freauff | 32.50 |
| | Lincoln Commercial Club, sub. & dues | 82.37 |
| | L. G. & E. L. Co., contg. Vo. 4692 Star for 1 yr. $8.00, donation 1.60 | 9.60 |
| | L. G. & E. L. Co., rebates, Vo. 4691, G. & E. to H. H., S. H. B., J. K. H. and C. O. W. | 46.68 |
| | Trans. Vo. 545, Doherty expenses | 31.60 |

705 Acct. No. 1503. 1907—#4.

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| 1908. | | |
| June. | Nebr. Prison Asso., donation | $8.00 |
| | Trans. Voucher 554, Doherty Purchases disct. on $6,000 2 yr. notes | 96.00 |

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| | H. Honeywell, expenses Omaha & Chicago..... | | 75.00 |
| | L. G. & E. L. Co. rebates, G. & E. to C. O. W., S. H. B., J. K. H. and H. H..... | | 39.99 |
| | Trans. Vo. 557, Doherty expenses..... | | 31.60 |
| July. | C. McKin, Treas., donation..... | | 4.00 |
| | Homer Honeywell, sub. to Acme Amusement Co. | | 40.00 |
| | Denver Gas & El. Co., expenses F. W. Frueauff.. | | 52.00 |
| | Lincoln Commercial Club, sub. & dues..... | | 87.8[illegible] |
| | L. G. & E. L. Co., contg. Vo. 4995 H. C. Porter, R. R. tickets to Omaha..... | $3.30 | |
| | H. Honeywell R. R. tickets to Omaha. | 1.10 | |
| | | | 4.40 |
| | L. G. & E. L. Co., Vo. 4997, rebates G. & E. to J. K. H., S. H. B., H. H. and E. B..... | | 70.93 |
| Aug. | F. W. Brown, donation to Bryan fund..... | | 5.00 |
| | Lincoln Ad. Club, membership..... | | 3.00 |
| Sept. | E. Y. Grupe, donation..... | | 20.00 |
| | Trans. Vo. 593, D sundry..... | | 40.00 |
| | " " 594 ..... | | 31.60 |
| | Am. Gas Inst., dues..... | | 10.00 |
| | Ia. Dist. Gas Asso., dues..... | | 6.00 |
| | Doherty Operating Co., Vo. 6937 Marston Time and Expense ..... | | 99.98 |
| | L. G. & E. L. Co., rebates Vo. 5285 G. & E. to E. B., H. H., J. K. H., S. H. B. and C. O. W. also gas range to 920 So. 16th (22.80)..... | | 91.41 |
| | L. G. & E. L. Co., contg., Vo. 5286: | | |
| | Lindell Hotel Cafe..... | $12.16 | |
| | " " " ..... | 4.08 | |
| | " " " ..... | 17.32 | |
| | " " " ..... | 2.64 | |
| | Ball ticket ..... | .80 | |
| | Magazine Sub. ..... | .40 | |
| | | | 37.40 |
| Oct. | Lincoln Commercial Club, dues..... | | 12.60 |
| | H. F. Rose, stenographic services..... | | 25.00 |
| | L. C. Oberlies, treas., donation..... | | 20.00 |
| | W. C. Jenkins, agt., sub. National Magazine.... | | 120.00 |
| | Tran. Vo. 606B Sundry, meter shop..... | | 40.00 |
| | " " 606D Doherty expenses..... | | 31.60 |
| | Lincoln Commercial Club, sub..... | | 80.00 |
| | Harley Drug Co., cigars Vo. 5404 B. C. A..... | | 3.50 |
| Nov. | L. G. & E. L. Co., contg. Vo. 5486 6 mo. State Journal ..... | $3.00 | |
| | Hack hire ..... | 2.60 | |
| | | | 5.60 |

706 Acct. No. 1503. 1908—#5.

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| 1908. | | | |
| Nov.(cont.) | Tr. Vo. 621D Sundry, meter shop rent..... | | $40.00 |
| | " " 622 ..... | | 31.60 |
| | L. G. & E. L. Co., rebates, Vo. 5512 G. & E. to J. K. H., S. H. B., H. H., E. B. and C. O. W. also rebates on coke to Rev. J. E. Marsh ($2.40) ..... | | 87.99 |
| | L. G. & E. L. Co., contg., Vo. 5487, damage to skirt ..... | $4.00 | |
| | C. W. James..... | 3.60 | |
| | | | 7.60 |
| Dec. | Savoy Hotel Cafe ..... | | 7.32 |
| | H. C. Porter, exp. to Chicago..... | | 60.10 |
| | Nat'l Com. Gas Asso., membership..... | | 5.00 |
| | Tr. Vo. 636, H. L. Doherty, expenses..... | | 31.30 |
| | Lindell Hotel Cafe ..... | | 5.68 |
| | H. Honeywell, inc. expense for Dec. Vo. 5668... | | 80.00 |
| | Tr. Vo. 635 D, meter shop rent..... | | 40.00 |
| | Ed. Young, cigars Vo. 5930: | | |
| | Adams ..... | $7.50 | |
| | Porter ..... | 4.00 | |
| | Honeywell ..... | 4.00 | |
| | | | 12.40 |
| | Lincoln Commercial Club, cigars & lunch for Warner Adams, Vo. 5844..... | | 7.27 |
| | L. G. & E. L. Co., contg.: | | |
| | Xmas gift for Rose..... | $2.00 | |
| | B. C. A., inc..... | 2.00 | |
| | Glen Marston ..... | 40.00 | |
| | | | 44.00 |
| | L. G. & E. L. Co., rebates, Vo. 5691 G. & E. to C. O. W., A. B. J., J. K. H., S. H. B. and H. H. ..... | | 68.36 |
| | Kelley's Bungalow, cigars, Vo. 5836 for | | |
| | W. S. Whitten ..... | 1.60 | |
| | Mr. Cascaden ..... | 1.60 | |
| | | | 3.20 |
| 1909. | | | |
| Jan. | J. R. Wolfe & Co., cigars..... | | 16.00 |
| | Charity Asso., donation..... | | 20.00 |
| | L. G. & E. L. Co., rebates, Vo. 5730 G. & E. to C. O. W., J. K. H., A. B. J., S. H. B. and H. H. | | 107.38 |
| | Tr. Vo. 651B..... | | 40.00 |

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| | Lindell Hotel Cafe, Vo. 5734 | 14.24 |
| | Tr. Vo. 652 | 11.24 |
| | B. C. Adams, inc. expenses | 40.00 |
| | Cole McKenna Co., cigars | 1.60 |
| | Dalrymple, candy | 4.20 |
| | Ia. Dist. Gas Asso. | 4.80 |
| | Lincoln Commercial Club, dues | 9.80 |
| | Nat'l El. Asso., dues | 20.00 |
| | Savoy Hotel Cafe | 5.28 |
| | G. R. Wolfe & Co., cigars | 1.40 |
| | Nat'l Com. Gas Asso., dues H. C. Porter | 5.00 |
| | Tr. Vo. 655 | 80.00 |

707 Acct. No. 1503. 1909—#6.

1909.

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| Feb. | John Hyder, donation B. B. of L. E. | $20.00 |
| | F. H. Hebbard, donation Linc. Typo. | 4.00 |
| | Salvation Army, donation | 16.00 |
| | W. H. Johnson, donation Lincoln Day | 4.00 |
| | Nebr. El. Asso., sub. | 80.00 |
| | Tr. Vo. 667D | 40.00 |
| | " " 668 | 11.24 |
| | B. C. Adams, inc. expenses | 40.00 |
| | Geo. M. Conway, cigars | 1.60 |
| | Delevan Hotel Cafe | 2.20 |
| | Ed. Young, cigars | 4.16 |
| | Lincoln Commercial Club, sub. and house account | 82.56 |
| | Lincoln Ad Club, membership—Adams | 1.20 |
| | L. G. & E. L. Co., rebates Vo. 5968 G. & E. to H. H. and J. K. H. | 17.40 |
| | Tr. Vo. 671 | 80.00 |
| | Kelley's Bungalow, cigars | 2.20 |
| March. | Phil. Item, donation | 8.00 |
| | B. C. Adams, expenses to Omaha | 3.20 |
| | J. D. Andrews, donation B. of R. T. | 4.00 |
| | L. G. & E. L. Co., contg. Vo. 5996: | |
| | Savoy Hotel $1.00 | |
| | Lindell .40 | |
| | | 1.40 |
| | Tr. Vo. 684 | 11.24 |
| | " " 683D | 40.00 |
| | " " 687 | 80.00 |
| | B. C. Adams, inc. expenses | 40.00 |
| | E. A. Brownell, copy gas decision | 5.00 |
| | Dalrymple, lunch | 3.08 |

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| | Doherty Operating Co., Vo. 6934: | | |
| | Scott's expense, etc | | 40.14 |
| | Kelley's Bungalow, cigars | | 3.20 |
| | Lincoln Commercial Club, dues | | 14.20 |
| | L. G. & E. L. Co., rebates Vo. 6063 G. & E. to C. O. W., J. K. H., H. H. and S. H. B. | | 19.32 |
| | Geo. M. Conway, cigars | | 6.00 |
| | Commercial Club, Vo. 6158, Adams meals | | 5.60 |
| | Savoy Hotel Cafe | | 10.68 |
| April. | Krug Candy Co., lunches, Vo. 6216 | | 2.96 |
| | Tr. Vo. 699D | | 40.00 |
| | " " 700 | | 11.24 |
| | " " 703 | | 80.00 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | Delevan Hotel Cafe | | 2.00 |
| | Lindell Hotel Cafe, etc | | 108.36 |
| | Lindell Hotel, Vo. 6272 B. C. Adams, Cafe | | 11.05 |
| | (Exp. John W. Smith | 120.40 | |
| | Bar | 7.40 | |
| | Cigars | 8.80) | |
| 708 | Acct. No. 1503. 1909—#7. | | |
| 1909. April. | L. G. & E. L. Co., contg. Vo. 6273: | | |
| | Savoy | 1.20 | |
| | Lindell | .20 | |
| | Savoy | .40 | |
| | Dinner & cigars at New Windsor | 2.65 | |
| | | | 4.45 |
| | L. G. & E. L. Co., rebates, Vo. 6275 G. & E. to S. H. B., C. O. W., J. K. H., E. B. and H. H. | | 58.32 |
| | Nebr. Auto Co., livery | | 6.00 |
| | Lincoln Commercial Club, house acct. Vo. 6860. | | 11.96 |
| | Savoy Hotel Cafe | | 10.28 |
| May. | J. W. Carter, donation | | 4.00 |
| | H. C. Porter, exp. to Omaha | | 29.96 |
| | Harry Warner, exp. to Omaha | | 16.00 |
| | B. C. Adams, exp. Atlantic City, Vo. 6311 | | 320.00 |
| | " " " inc. expenses & exp. to Omaha | | 46.00 |
| | Country Club, membership, Warner, Bradford and Porter | | 120.00 |
| | Doherty Operating Co., H. H. Scott, 3 da. Vo. 6936: | | |
| | H. H. Scott, 3 days | $75.00 | |
| | Hotel Exp. | 15.00 | |

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| | R. R. Fare | 25.00 | |
| | Telegrams | 12.85 | |
| | | | 102.28 |
| | H. L. Doherty, com. placing notes, Vo. 6946 | | 52.60 |
| | Dahlrymples, candy | | 2.80 |
| | Lindell Hotel Cafe | | 49.32 |
| | Lincoln Commercial Club, sub | | 80.00 |
| | Wis. Gas Asso., dues | | 3.00 |
| June. | City Improvement Soc | | 8.00 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | Doherty Operating Co., telegrams Vo. 6939 | | 13.87 |
| | L. G. & E. L. Co., rebates Vo. 6564 G. & E. to H. H., J. K. H., C. O. W., S. H. B. & E. B. ($108.96 charged off gas at 134 So. 11th) | | 73.68 |
| | Lincoln Commercial Club, dues | | 6.00 |
| | (Vo. 6861 dues, cigars and meals B. C. A. $17.35) | | 13.88 |
| July | Nebr. Auto Co., livery | | 6.00 |
| | E. C. Strode, Vo. 6513, ch. to H. C. Porter | | 49.32 |
| | Lindell Hotel Cafe | | 2.40 |
| | Y. M. C. A. donation | | 20.00 |
| | Neb. Prison Asso., donation | | 8.00 |
| | F. W. Brown, donation park fund | | 8.00 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | L. G. & E. L. Co., contg. Vo. 6697: | | |
| | Donation A. M. E. Church | 1.60 | |
| | " Vol. Am. | 1.60 | |
| | " | 11.00 | |
| | | | 14.20 |

709 Acct. No. 1503. 1909—#8.

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|---|---|---|---|
| 1909. | | | |
| Aug. | Lincoln Ad. Club | | 2.40 |
| | Tr. Vo. 768 | | 11.24 |
| | Savoy Hotel Cafe | | 18.70 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | H. L. Doherty Co. Vo. 6945, com. on $20,000 notes | | 40.00 |
| | Nebr. Auto Co., livery | | 19.00 |
| | Wis. Gas Asso., dues | | 2.40 |
| | Am. Gas Inst., dues | | 8.00 |
| Sept. | Tr. Vo. 782 | | 11.24 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | Ia. Dist. Gas Asso., dues | | 4.80 |

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| | L. G. & E. L. Co., rebates Vo. 7046 G. & E. to H. H., J. K. H., S. H. B. and E. B. | | 64.68 |
| | Savoy Hotel Cafe | | 12.80 |
| Oct. | W. C. T. U., donation | | 8.00 |
| | Tr. Vo. 800 | | 11.24 |
| | Wm. Bradford, exp. to Detroit, Vo. 7134 | | 58.80 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | Krug Candy Co., Vo. 7212 B. C. A. meals | | 2.16 |
| | Kelley's Bungalow, cigars Vo. 7213 | | 1.60 |
| | Lincoln Ad. Club, dues | | .80 |
| | Savoy Hotel Cafe | | 15.12 |
| Nov. | Y. W. C. A., subscription | | 20.00 |
| | L. G. & E. L. Co., rebates, Vo. 7272 G. & E. to S. H. B., H. H., J. K. H. & E. B. | | 50.64 |
| | Tr. Vo. 817 | | 11.24 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | Lincoln Commercial Club, mem. fee J. E. Shuff. | | 23.24 |
| | L. G. & E. L. Co., contg. Vo. 7323: | | |
| | Exp. C. Kennedy to Omaha | $8.00 | |
| | File Abst. & Deed to property in E. Lincoln | 1.60 | |
| | Donation to S. A. R. | 1.60 | |
| | Savoy | .25 | |
| | Filing Deeds Peck's Grove lots | .80 | |
| | Savoy | .40 | |
| | Donation World's Faith Mis. Asso. | 4.00 | |
| | | | 16.65 |
| | Nebr. Auto Livery | | 3.00 |
| | Savoy Hotel Cafe | | 21.96 |
| | Kelley's Bungalow, cigars | | 1.60 |
| | Lincoln Ad. Club, dues | | 1.60 |
| | H. L. Doherty & Co., com. & ins. bond | | 49.24 |
| 710 | Acct. No. 1503. 1909—#9. | | |
| 1909. | | | |
| Dec. | Labor Temple, donation | | 80.00 |
| | W. B. Stark, exp. to Des Moines | | 80.00 |
| | St. Elizabeth Hospital, donation | | 4.00 |
| | Tr. Vo. 833, adjustment entry as per auditor's report | | 11.24 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | C. W. Gleason, loss of clothes at Fremont | | 7.28 |
| | O. J. King & Sons, oysters, crackers, etc. | | 5.80 |
| | Lincoln Candy Kitchen, candy Vo. 7567 (5 boxes candy) | | 2.40 |

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| | Lincoln City Club, dues | | 4.00 |
| | Lincoln Commercial Club, sub. | | 80.00 |
| | Selling Electricities, sub. | | 4.80 |
| | Tr. Vo. 836 | | 20.00 |
| | Kelley's Bungalow, cigars, Vo. 7551 B. C. A. and for Lincoln Star | | 6.40 |
| | Geo. M. Conway, cigars, Vo. 7516 Adams $12.00, Shuff $4.00 | | 12.80 |
| | The Club House, Vo. 7517, cigars Shuff Xmas cigars | | 3.20 |
| 1910. | | | |
| Jan. | McGraw Pub. Co., sub. | | 1.60 |
| | Y. M. C. A. Bldg. fund | | 20.00 |
| | S. A. donation | | 20.00 |
| | Savoy Hotel Cafe | | 13.00 |
| | Tr. Vo. 852 | | 20.00 |
| | Coke McKenna Co., cigars Vo. 7518 | | 6.00 |
| | Frank Du Teil, cigars, Vo. 7528 | | 3.20 |
| | F. & M. Ins., sale of 2 shares of stock | | 40.00 |
| | Will H. Green, painting Club Room Floor | | 9.60 |
| | Lincoln Ad. Club, dues Adams & Shuff | | 6.40 |
| | L. G. & E. L. Co., contg., Vo. 7573: | | |
| | Houck's Cafe | $.95 | |
| | Cuspador | .80 | |
| | B. C. A. exp. to Omaha | 4.00 | |
| | | | 5.75 |
| | L. G. & E. L. Co., rebates, Vo. 7574 G. & E. to E. B., J. K. H., H. H., S. H. B. | | 72.82 |
| | Lincoln Commercial Club, sub. | | 80.00 |
| | Nat'l Com. Gas Asso., dues Shuff | | 4.00 |
| | Nat'l El. Lt. Asso., dues for 1910 | | 20.00 |
| | Progressive Age, sub. E. C. Strode | | 2.40 |
| | Rigg's Pharmacy, cigars | | 1.60 |
| | A. T. Seeley, 6 doz. sandwiches | | 2.88 |
| | Selling Electricity, sub. | | .80 |
| | Savoy Hotel Cafe | | 13.88 |
| Feb. | C. Kennedy, exp. to Omaha, Vo. 7481 | | 3.60 |
| | G. R. Wolfe & Co., cigars | | 7.60 |
| | Charity Organization, donation | | 20.00 |
| | Tr. Vo. 867, part of Armstrong's exp. to N. Y. | | 20.00 |

711 Acct. No. 1503. 1910—#10.

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| 1910. | | | |
| Feb. (cont.) | B. C. Adams, inc. expenses | | 40.00 |
| | H. L. Doherty & Co., com. on loans | | 39.00 |

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| | Light Pub. Co., sub. to Feb., 1911 | | 1.60 |
| | Electrical Review Pub. Co., sub. | | 2.40 |
| | Geo. M. Conway, cigars | | 1.60 |
| | Lincoln Commercial Club, dues | | 14.36 |
| Mar. | Volunteers of Am., donation | | 4.00 |
| | Savoy Hotel, cafe | | 10.20 |
| | Tr. Vo. 882 | | 20.00 |
| | B. C. Adams, inc. expenses | | 40.00 |
| | Roy McKinney, rent of piano | | 3.20 |
| | Am. Gas Light, sub. | | 2.40 |
| | Y. M. C. A., sub | | 40.00 |
| | H. J. Gonden, sub. Public Service | | 1.60 |
| | Lincoln Commercial Club, sub. | | 40.00 |
| | Riggs Pharmacy, cigars | | .80 |
| | L. G. & E. L. Co., Vo. 7820, rebates S. H. B.—67.19, E. B.—36.39 | | 103.58 |
| | Savoy Hotel Cafe | | 12.80 |
| | L. G. & E. L. Co., Vo. 7821, contg.: | | |
| | Wm. Bradford, ticket | 8.00 | |
| | " " " | 4.00 | |
| | " " " | 8.00 | |
| | Kennedy, trip to St. Joe & return | 20.00 | |
| | Shuff exp. to Fremont | 3.00 | |
| | Donation to Emanuel M. E. Church | 4.00 | |
| | Hammond (lineman) (no explanation.) | 8.00 | |
| | Ticket signed by Baxter for Clark (lineman) 2.00 (no explantion) | 1.60 | |
| | Bradford Exp. to Omaha | 4.00 | |
| | | | 60.60 |
| April. | Tr. Vo. 899, exp. Armstrong to N. Y. | | 20.00 |
| | B. C. Adams | | 40.00 |
| | Joers Gettier Co., livery | | 4.80 |
| | Roy McKinney, rent of piano | | 3.20 |
| | Nebr. Elect. Asso. dues 1909 | | 20.00 |
| | Doherty Operating Co., Exp. H. H. Scott for Dec. | | 32.00 |
| | Lincoln Commercial Club, sub. & dues | | 57.80 |
| | McGraw Pub. Co., sub. | | 1.60 |
| | V. Timitch, 6 meals | | 1.20 |
| | Y. W. C. A. Bldg. fund | | 20.00 |
| | G. R. Wolf & Co. | | 1.40 |
| | L. G. & E. L. Co., contg. Vo. 8066: | | |
| | Donation to Col. Baptist Ch. | 4.00 | |
| | Savoy | .70 | |
| | Magazine Sub. | .27 | |
| | | | 4.97 |

712 Acct. No. 1503. 1910—#11.

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| 1910. | | | |
| May. | Lincoln City Mission, donation | | 20.00 |
| | Tr. Vo. 916 | | 20.00 |
| | Savoy Hotel, Cafe | | 12.08 |
| | B. C. Adams, Inc. exp. | | 40.00 |
| | Roy McKinney, rent piano | | 3.20 |
| | Wis. Gas Ass'n dues | | 2.40 |
| | Savoy Hotel Cafe | | 11.88 |
| | L. G. & E. L. Co., contg. Vo. 8154: | | |
| | Savoy | .35 | |
| | Donation to May festival | 2.40 | |
| | | | 2.75 |
| June. | E. H. Holmes, donation colored church | | 8.00 |
| | Roy McKinney, rent of piano | | 3.20 |
| | Country Club, dues Bradford & Warner | | 56.00 |
| | Sub. Park Board Fund | | 40.00 |
| | B. C. Adams, inc. exp. | | 40.00 |
| | O. E. Houck, meals | | .92 |
| | Ia. Dist. Gas Asso., dues Adams & Shuff | | 7.20 |
| | Lincoln Commercial Club, sub | | 40.00 |
| | Savoy Hotel, cafe | | 10.72 |
| | L. G. & E. L. Co., contg. Vo.: | | |
| | Vol. of Am. | 1.60 | |
| | Bradford exp. to Om | 3.60 | |
| | Donation to Ger. Evang. Luther-n Ch. | .80 | |
| | | | 6.00 |
| | Tr. Vo. 934, B. C. Adams, ex. to St. Louis. (Adams Vo. 8353 & 8407.) | | 27.44 |
| July. | O. B. Clark, Sec'y Mem. fee Business Men's League | | 4.00 |
| | Joers Gettier Co., auto livery | | 2.40 |
| | B. C. Adams, inc. exp. | | 40.00 |
| | Tr. Vo. 949 | | 27.44 |
| | Tr. Vo. 950, Honeywell Tr. Vo. 949 | | 27.44 |
| | (Adams $30.00 appearing months of July, 1910, to Dec., 1910, cover chg. in acct. No. 1936, spl. inc. exp. under date of Jan. 15, 1909, See. Vo. 5710. H. Honeywell (no explanation is given on vo. & chg. is O. K.'d by H. L. D.) | | 30.00 |

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| | Ia. Dist. Gas Asso., dues Bradford | 2.40 |
| | Lincoln Commercial Club, sub. & dues | 15.36 |
| | Nat'l Elect. Lt. Asso., dues Bradford, Adams, Warner | 12.00 |
| | L. G. & E. L. Co., rebates, Vo. 8509 G. & E. to S. H. B., E. B., J. K. H. and H. H. | 91.60 |

713 Acct. No. 1503. 1910—#12.

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| 1910. | | |
| Aug. | Glenn Marston, exp. | 40.00 |
| | Savoy Hotel, cafe | 9.96 |
| | Tr. Vo. 963, Traveling exp. | 27.44 |
| | Tr. Vo. 964, Honeywell | 30.00 |
| | B. C. Adams, inc. exp. | 40.00 |
| | Emerson McMillen Co., int. on delayed remittances | 35.99 |
| | Savoy Hotel, cafe | 5.60 |
| | Tr. Vo. 964, strike | 20.35 |
| Sept. | T. O. Kennedy, exp. | 40.00 |
| | Nebr. Prison Asso., donation | 8.00 |
| | O. B. Clark, Sec'y, Bus. Men's League dues | 8.00 |
| | Tr. Vo. 978, traveling exp. | 45.48 |
| | " " 979 | 30.00 |
| | " " 979 | 20.35 |
| | B. C. Adams, inc. exp. | 40.00 |
| | Am. Gas Inst., dues | 8.00 |
| | Joers-Gettier Co., livery | 4.80 |
| | Lincoln Commercial Club, dues | 10.80 |
| | Nebr. Elect. Asso., dues | 20.00 |
| | Progressive Age, does | 4.80 |
| | L. G. & E. L. Co., contg. Vo.: | |
| | Donation to Col. Bapt. Ch. .80 | |
| | Use of Boat during flood 4.00 | |
| | | 4.80 |
| | Savoy Hotel, cafe. | 11.80 |
| | (Vo. 8560, Aug. 22, 1910, A. H. Armstrong $200.00, no explanation on voucher, but amount is charged to traveling expense in months of Sept., Oct., Nov., Dec., 1910, and Jan. & Feb., 1911.) | |
| Oct. | Tr. Vo. 999, traveling exp. | 45.48 |
| | " " " strike acct. | 20.35 |
| | " " " Honeywell | 30.00 |
| | B. C. Adams | 40.00 |

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| | L. G. & E. L. Co., contg., Decorating Bldg. for German Day | | 12.00 |
| | L. G. & E. L. Co., rebates, G. & E. to E. B. 24.77, J. K. H. 30.18 | | 54.95 |
| | Frey & Frey, flowers Holmes baby | | 1.60 |
| | Lincoln Commercial Club, sub | | 40.00 |
| Nov. | Donation Ger. Evang. Ch | | 4.00 |
| | " Mrs. White | | 4.00 |
| | Tr. Vo. 1022, traveling exp | | 45.48 |
| | " " 1032, strike | | 20.35 |
| | " " 1022 | | 30.00 |
| | B. C. Adams, Nov. salary | | 40.00 |
| | Savoy Hotel, cafe | | 11.52 |
| | Joers-Gettier Co., auto livery | | 10.80 |
| | L. G. & E. L. Co., rebates, G. & E. to J. K. H. 24.53, S. H. B. 45.95 | | 70.48 |
| 714 | Acct. No. 1503. 1910—#13. | | |
| 1910. | | | |
| Nov. (cont.) | L. G. & E. L. Co., contg. Vo. 8949: | | |
| | Donation St. Eliz. Hosp | 4.00 | |
| | Savoy | .25 | |
| | | | 4.25 |
| Dec. | Savoy Hotel, cafe | | 12.48 |
| | B. C. Adams, inc. exp | | 40.00 |
| | Kelley's Bungalow, cigars | | 3.20 |
| | L. G. & E. L. Co., contg. Vo. 9096: | | |
| | Donation W. C. T. U. fund | 4.00 | |
| | Savoy | .95 | |
| | Donation St. Thomas' Orp | 4.00 | |
| | | | 8.95 |
| | Progressive Age, dues | | 2.40 |
| | G. R. Wolfe & Co., cigars | | 27.85 |
| | Tr. Vo. 1039 | | 45.48 |
| | " " 1039, strike | | 20.35 |
| | " " 1039 Honeywell | | 30.00 |
| 1911. | | | |
| Jan. | Y. M. C. A. Bldg. Fund, sub | | 40.00 |
| | Savoy Hotel, cafe bill | | 12.40 |
| | B. C. Adams, Jan. exp | | 40.00 |
| | O. B. Clark, Sec'y Bus. Men's League, dues | | 16.00 |
| | Tr. Vo. 1059, traveling exp. Armstrong | | 45.48 |
| | " " 1059 special strike exp | | 20.35 |
| | " " 1059 Dollar Gas Agreement Exp | | 126.62 |

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| | L. G. & E. L. Co., rebates, Vo. 9241 G. & E. to.. | | 125.12 |
| | L. G. & E. L. Co., contg. Vo. 9243 Exp. | | |
| | Tecumseh & return..... | 2.80 | |
| | (R. R. J.) | | |
| | Savoy ..... | .40 | |
| | | | 3.20 |
| | Lincoln Commercial Club, sub..... | | 35.00 |
| | Lincoln Candy Kitchen, candy..... | | 2.40 |
| | Nat'l Elect. Lt. Asso., mem. dues..... | | 24.00 |
| Feb. | Denver G. & E. Lt. Co..... | | 63.82 |
| | C. Kennedy, cafe bill Vo. 9229..... | | 39.20 |
| | A. G. Barker, Treas., dues..... | | 3.20 |
| | Savoy Hotel, cafe..... | | 17.00 |
| | B. C. Adams, expense..... | | 40.00 |
| | Tr. Vo. 1085, traveling expenses..... | | 45.48 |
| | " " " special strike expense..... | | 20.35 |
| | " " 1096, Dollar Gas Agreement Exp..... | | 126.62 |
| | " " 1085*a*, traveling expense ..... | | 13.33 |
| | Progressive Age, dues..... | | 6.40 |
| | " " " ..... | | 9.60 |
| | Tr. Vo. 1098, traveling exp. of Shuff to Chicago, Convention ..... | | 8.00 |
| | L. G. & E. L. Co., contg., Vo. 9463 (missing)... | | 8.20 |
| | L. G. & E. L. Co., rebates, Vo. 9462, G. & E. to— | | 140.64 |
| | Lincoln Hotel, cafe..... | | 1.60 |
| | Nat'l Com. Gas Asso., dues..... | | 10.00 |

715 Acct. No. 1503. 1911—#14.

1911.

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|---|---|---|---|
| Mar. | Charity Organization, donation..... | | 20.00 |
| | H. J. Gondon, sub..... | | 2.00 |
| | R. E. Phillips, Vo. 9537, donation H. E. Gooch. | | 20.00 |
| | B. C. Adams, exp..... | | 40.00 |
| | City Mission, donation ..... | | 20.00 |
| | Savoy Hotel, cafe ..... | | 15.48 |
| | Tr. Vo. 1111, traveling expenses..... | | 21.33 |
| " | " " " special strike expense..... | | 20.35 |
| | " " 1121 Dollar Gas Agreement exp..... | | 126.62 |
| | H. L. Doherty & Co., prem. & ins..... | | 40.00 |
| | L. G. & E. L. Co., rebates, Vo. 1006A..... | | 51.20 |
| | L. G. & E. L. Co., contg., Vo. 10068: | | |
| | Ticket Musicians Ball..... | 2.40 | |
| | Car Fare T. O. Kennedy..... | 1.00 | |
| | Ball tickets B. of L. T..... | 3.20 | |
| | | | 6.60 |

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| Apr. | Tr. Vo. 1138, traveling expenses | 21.33 |
| " | " " " special strike expense | 20.35 |
| | " " 1149 Dollar Gas Agreement Expense | 126.62 |
| | Savoy Hotel Cafe | 10.05 |
| | Tr. Vo. 1151, Traveling expenses | 20.00 |
| | B. C. Adams, Inc. exp. for Apr | 40.00 |
| | L. G. & E. L. Co., rebates Vo. 10220 G. & E. to— | 46.56 |
| | O. B. Clark, Sec'y Business Men's League, dues | 8.00 |
| | Lindell Hotel, cafe | 4.40 |
| | Lincoln Commercial Club | 48.96 |
| | National Com. Gas Asso., dues | 5.00 |
| May. | C. Kennedy, cafe Vo. 10213 (Raymer, beer—24.00, Cocktails 6.00, Waiter 10.00) | 32.00 |
| | B. C. Adams, inc. exp. for May | 40.00 |
| | Tr. Vo. 1166, traveling exp | 21.33 |
| | " " " special strike exp | 20.35 |
| | " " 1177 Dollar Gas Agreement Exp | 126.62 |
| | " " 1179, traveling expense | 20.00 |
| | H. L. Doherty & Co., inc. Exp | 5.60 |
| | L. G. & E. L. Co., rebates, Vo. 10346 G. & E. to— | 19.30 |
| | L. G. & E. L. Co., contg., Vo. 10345: | |
| | Donation Ger. Evang. Ch. 4.00 | |
| | Car tickets T. O. Kennedy 1.00 | |
| | | 5.00 |
| | L. G. & E. L. Co., check to H. L. Doherty acct | 6.76 |
| | Savoy Hotel, cafe | 11.04 |
| June. | B. C. Adams, Inc. Exp | 40.00 |
| | Tr. Vo. 1202, S. E.—traveling exp | 21.33 |
| | " " " special strike exp. acct | 20.35 |
| | " " 1210 dollar gas agr. acct | 126.62 |
| | " " 1212 traveling exp | 20.00 |
| | " " 1214 trav. exp. T. O. Kennedy to Central I. A. Ia. Gas Asso., meeting | 10.42 |



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| 1911. | | |
| June (cont.)—Savoy Hotel, cafe | | 14.00 |
| | Hebrew Relief Asso., dues | 2.40 |
| | H. L. Doherty & Co., exp | 40.00 |
| | Ia. Dist. Gas Asso., dues | 6.00 |
| | L. G. & E. L. Co., rebates, Vo. 10558 G. & E. to— | 38.44 |
| | L. G. & E. L. Co., contg. Vo. 10557 (missing) | 15.60 |
| | Lindell Hotel Cafe | 3.40 |
| | R. O. Castle, sec'y, dues | 4.80 |
| | Wis. Gas Asso., dues | 24.40 |

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| July. | Lincoln Ad Club, dues | | 2.40 |
| | The True Voice, donation | | 10.00 |
| | B. C. Adams, July exp | | 40.00 |
| | Joers Motor Co., livery | | 30.40 |
| | Savoy Hotel, cafe | | 24.20 |
| | Tr. Vo. 1235, S. E. traveling exp | | 21.33 |
| | " " " special strike acct. | | 20.35 |
| | " " 1240, Dollar Gas Agreement Acct. 1891 | | 126.62 |
| | " " 1241, S. E. traveling exp | | 20.00 |
| | " " 1243, T. O. Kennedy to Clinton, Ia., Gas Asso. | | 10.42 |
| | " " 1245, B. C. Adams, inc. exp. to Denver | | 11.40 |
| | " " 1245, B. C. Adams, trav. exp. to Denver | | 8.55 |
| | L. G. & E. L. Co., contg., Vo. 10723: | | |
| | B. C. A., trip to Fairbury | 5.82 | |
| | Shuff exp. to Omaha Ad Club | 8.00 | |
| | Band concert donation | 3.20 | |
| | Car tickets, T. O. Kennedy | 1.00 | |
| | Bd. of Directors, Sp. meeting July 27-11 | 32.00 | |
| | Donation to Col. ch | 3.20 | |
| | Att'y fees (B. C. A. by C. H. R. 2001) | 1.60 | |
| | | | 55.62 |
| | H. L. Doherty & Co., telegrams | | 2.72 |
| | L. G. & E. L. Co., rebates, Vo. 10724 G. & E. to— | | 32.47 |
| | Lincoln Commercial Club, dues, Vo. 10735 | | 69.88 |
| | Lincoln City Club | | 4.00 |
| | Progressive Age, sub | | 2.40 |
| Aug. | B. C. Adams, inc. exp | | 40.00 |
| | Tr. Vo. 1269 | | 126.62 |
| | " " 1270 | | 20.00 |
| | " " 1271 | | 10.42 |
| | " " 1271 | | 11.40 |
| | Savoy Hotel, cafe | | 82.68 |
| | Lincoln Hotel, cafe | | 80.80 |
| | O. B. Clarke, sec'y, dues | | 8.00 |
| | Chapin Bros., Flowers for Streyer | | 8.00 |
| | C. F. Harpham, donation | | 8.00 |

717 Acct. No. 1503. 1911—#16.

1911.

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|---|---|---|---|
| Aug. (cont.)—L. G. & E. L. Co., Vo. 10913: | | | |
| | Band | 2.40 | |
| | Donation to Bob Wolf of | .80 | |
| | | | 3.20 |

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| | L. G. & E. L. Co., rebates, Vo. 10911 | | 18.89 |
| | Lindell Hotel, cafe | | 4.40 |
| | Star Pub. Co., dues | | 6.40 |
| Sept. | W. A. Dorsey, donation | | 8.00 |
| | J. D. M. Buckner, donation | | 8.00 |
| | B. C. Adams, inc. exp. | | 40.00 |
| | Nat'l Com. Gas Asso., dues | | 15.00 |
| | Am. Gas Inst., dues | | 10.00 |
| | B. C. Adams, exp. to New York | | 152.00 |
| | Savoy Hotel, cafe | | 20.28 |
| | Tr. Vo. 1296 | | 126.62 |
| | " " 1297 | | 10.42 |
| | L. G. & E. L. Co., contg. Vo. 11137: | | |
| | Savoy | 1.20 | |
| | B. C. A. exp. to Omaha | 5.60 | |
| | Savoy | .40 | |
| | " | .40 | |
| | | | 7.60 |
| | L. G. & E. L. Co., rebates, Vo. 11136 G. & E. to— | | 28.58 |
| Oct. | L. Korsmeyer, donation Ger. Day Vo. 11185 | | 24.00 |
| | O. B. Clark, Sec'y, dues | | 8.00 |
| | Havelock Com. Club, dues | | 4.00 |
| | Savoy Hotel, cafe | | 46.96 |
| | B. C. Adams, inc. exp. | | 40.00 |
| | Tr. Vo., 1319, Dollar Gas Agreement Exp. | | 126.62 |
| | " " 1320 | | 10.42 |
| | " " 1323 | | 50.00 |
| | Joers Motor Co., livery | | 4.80 |
| | L. G. & E. L. Co., contg., Vo. 11261: | | |
| | Savoy | .40 | |
| | " | .40 | |
| | Rotary Club | .80 | |
| | Savoy | .40 | |
| | For Barnett, B. C. A. | 6.00 | |
| | B. C. A., exp. to Omaha | 5.40 | |
| | Savoy | .40 | |
| | Exp. Omaha, B. C. A. | 3.80 | |
| | | | 17.60 |
| | L. G. & E. L. Co., rebates, Vo. 11260 G. & E. to— | | 23.18 |
| | Lincoln Commercial Club, dues | | 70.56 |
| | Tr. Vo. 1334 | | 254.47 |

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| Nov. | Tr. Vo. 1343 | 10.40 |
| | " " 1344 | 50.00 |
| | " " " | 26.00 |
| | Crawford Kennedy, cafe Vo. 11270 Dinner to Harry Lindsay $25.00 | 20.00 |

718 Acct. No. 1503. 1911—#17.

1911.

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| Nov. (cont.) | —L. G. & E. L. Co., contg. Vo. 11355 Denver | 20.00 |
| | Savoy Hotel, cafe | 25.16 |
| | B. C. Adams, inc. exp. | 40.00 |
| | L. G. & E. L. Co., rebates, Vo. 11390 G. & E. to— | 58.09 |
| | L. G. & E. L. Co., contg., Vo. 11391: | |
| | Savoy .40 | |
| | Watch for Derge 1.60 | |
| | Dinner & Hotel, exp. Gardener 1.20 | |
| | Tickets to Eng. Ball 4.00 | |
| | Savoy .40 | |
| | " .40 | |
| | " .40 | |
| | " .40 | |
| | Exp. to Omaha, C. Kennedy 12.00 | |
| | Exp. B. C. A. to Fremont .60 | |
| | | 21.40 |
| Dec. | B. C. Adams, inc. exp. | 40.00 |
| | Tr. Vo. 1365 Adams & Strode exp. to N. Y. ($250.00) | 50.00 |
| | Tr. Vo. 1365, to Denver Convention (Shuff—$50, Kennedy—$100, Derge—45) | 26.00 |
| | Tr. Vo. 1366, exp. Windsor Invst. Co. handling notes $650.00 | 16.25 |
| | H. L. Doherty & Co., exp. & serv. W. H. Gardener | 33.23 |
| | D. G. & E. Co., exp. L. A. Ramsey & M. L. Derge | 40.00 |
| | Joers Motor Co., auto hire | 4.80 |
| | E. E. Mockett Auto Co., delivery | 3.60 |
| | Savoy Hotel, cafe | 25.28 |
| | A. G. Barber, Treas., dues Ad Club | 3.20 |
| | Geo. M. Conway, cigars | 6.88 |
| | Ia. Dist. Gas Asso., dues T. O. K. | 3.00 |
| | J. J. Kelley, cigars | 12.80 |
| | L. G. & E. L. Co., rebates G. & E. to S. H. B.—16.47, J. K. H.—8.69, J. H. H.—8.76 | 33.92 |
| | L. G. & E. L. Co., contg. Vo. 11542: | |
| | Donation Ladies Aid Soc. .50 | |
| | Savoy .40 | |

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| | Red Cross & Xmas Stamps | 4.00 | |
| | Savoy | .40 | |
| | " | .40 | |
| | Rotary Club, Malone exp. | 4.00 | |
| | Donation St. Eliz. Hosp. | 4.00 | |
| | Exp. to Omaha, B. C. A. | 8.00 | |
| | | | 21.70 |

719 Acct. No. 1503. 1912—#18.

1912.

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| Jan. | Charity Organization, donation | | 20.00 |
| | W. F. Jones, exp. a/c C. Jones' death | | 60.00 |
| | H. H. Heeley, a/c. C. Jones' death | | 7.00 |
| | Castle, Roper & Matthews, undertakers' bill, C. Jones | | 227.00 |
| | G. R. Wolfe & Co., cigars | | 9.60 |
| | B. C. Adams, Jan. exp. | | 40.00 |
| | Savoy Hotel, cafe service | | 11.28 |
| | O. B. Clark, dues | | 8.00 |
| | Ia. Dist. Gas Asso | | 3.00 |
| | L. G. & E. L. Co., contg. | | 52.65 |
| | Lincoln Candy Kitchen, candy | | 2.40 |
| | Lincoln Commercial Club, dues | | 12.92 |
| | National Com. Gas Asso. | | 10.20 |
| | Savoy Hotel, cafe | | 11.32 |
| Feb. | L. G. & E. L. Co., rebates, Vo. 11889, E. B., C. O. W., S. H. B., J. K. H. | | 59.85 |
| Feb. | B. C. Adams, Feb. exp | | 40.00 |
| | L. G. & E. L. Co., contg.: | | |
| | Kennedy exp. to Hastings | $12.00 | |
| | Rotary Club | 4.08 | |
| | Cigars B. C. A. | 2.00 | |
| | Savoy | .40 | |
| | " | .40 | |
| | I. A. of M. Ball | 1.60 | |
| | Savoy | .25 | |
| | Tickets Havelock Entertainment at Oliver | 2.40 | |
| | Exp. to Omaha, Shuff & Montgomery. | 9.40 | |
| | Messenger | .12 | |
| | | | 32.65 |
| | Lincoln Commercial Club, dues | | 40.00 |
| | B. C. Adams, exp. Mgrs. Meeting N. Y. | | 280.00 |
| | Savoy Hotel cafe | | 20.92 |

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| Mar. | Nick Arrigo, cigars | | 2.00 |
| | B. C. Adams, Mch. exp. | | 40.00 |
| | Lincoln Commercial Club, dues | | 50.68 |
| | L. G. & E. L. Co., contg., Vo. 12095: | | |
| | Tickets Ry. Trainmen's Ball | 3.20 | |
| | El. Workers' Ball | 8.00 | |
| | Savoy | .80 | |
| | Inc. Exp. B. C. A. | .80 | |
| | | | 12.80 |
| | Savoy Hotel, cafe | | 14.90 |
| | L. G. & E. L. Co., rebates, Vo. 12096 G. & E. to C. O. W., E. B., S. H. B., J. K. H. | | 28.45 |
| April. | Frank D. Eager, donation | | 40.00 |
| | B. C. Adams, exp. to N. Y. | | 48.50 |
| | B. C. Adams, exp. for April | | 40.00 |
| | O. B. Clark, sec'y, dues | | 8.00 |

720 Acct. No. 1503. 1912—#19.

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| 1912. | | | |
| Apr. (cont.) | —L. G. & E. L. Co., contg. Vo. 12278: | | |
| | Savoy | .40 | |
| | Rotary Club exp. | 2.40 | |
| | Savoy | .40 | |
| | Ad Club tickets | 4.00 | |
| | Savoy | .40 | |
| | Exp. to Omaha, Neb., El. Lt. Asso. | 15.20 | |
| | Christian Record | 4.00 | |
| | Savoy | .80 | |
| | Exp. to Omaha | 31.20 | |
| | | | 58.80 |
| | L. G. & E. L. Co., rebates, vo. 12274 G. & E. to J. K. H., H. H., E. B., S. H. B., C. O. W. | | 33.02 |
| May. | Neb. Wesleyen Uni., donation | | 80.00 |
| | Savoy Hotel, cafe | | 20.04 |
| | B. C. Adams, exp. for Mch | | 40.00 |
| | J. E. Shuff, exp. Dist. Gas Asso | | 239.10 |
| | Amer. C. & C. Co., Hats for Ia. Dist. Gas | | 20.75 |
| | L. G. & E. L. Co., contg.: | | |
| | Savoy | .40 | |
| | Baxter exp. to Omaha | 4.00 | |
| | Savoy | .40 | |
| | 2 trips to Omaha, Strode & Adams, $ gas case | 15.00 | |

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| | Filing app. for Notary | .80 | |
| | Extra Music Banquet 5/23/12 | 5.00 | |
| | Extra pkg. paper hats | .90 | |
| | | | 20.50 |
| | L. G. & E. L. Co., rebates, Vo. 12396 G. & E. to E. B., S. H. B., H. K. H., J. K. H., C. O. W. | | 29.94 |
| June. | F. O. Pierson, donation | | 20.00 |
| | B. C. Adams, inc. exp. & p. for June | | 40.00 |
| | Chapin Bros., palms for office | | 14.25 |
| | Ia. Dist. Gas Asso | | 18.00 |
| | Lincoln Commercial Club, dues | | 8.00 |
| | Nat'l Gas Asso. dues | | 25.00 |
| | Savoy Hotel, cafe | | 27.96 |
| | Y. M. C. A., donation | | 20.00 |
| | Sanitary Fruit Co., cigars | | 5.00 |
| | L. G. & E. L. Co., contg.: | | |
| | Cable & del. teleg. to F. W. Frueauff | 1.00 | |
| | Entertaining White & Porter | 5.20 | |
| | White & Horter | 4.00 | |
| | | | 10.20 |
| | L. G. & E. L. Co., rebates, Vo. 12599 G. & E. to C. O. W., S. H. B., E. B., H. H. and J. K. H. | | 26.73 |

721 Acct. No. 1503. 1912—#20.

1912.

| | | |
|---|---|---|
| July. | L. J. Dunn, Treas., donation | 20.00 |
| | Savoy Hotel, cafe | 9.80 |
| | B. C. Adams, inc. exp. for July | 40.00 |
| | G. R. De Ford, photos | 6.68 |
| | Lincoln Rotary Club, dues | 9.60 |
| | Lincoln Commercial Club, dues | 60.60 |
| Aug. | H. L. Doherty & Co., contribution | 160.00 |
| | B. C. Adams, inc. exp. & p. for Aug. | 40.00 |
| | Business Men's League | 8.00 |
| | Lincoln Sanitarium, R. E. Phillips | 13.56 |
| | Nebr. Prison Asso., donation | 8.00 |

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| L. G. & E. L. Co., contg., Vo. 12802: | | |
| Lincoln Commercial Club B. C. A., dues | 3.50 | |
| Cigars | .50 | |
| Meals | 2.45 | |
| H. L. D. | 1.75 | |
| G. H. Montgomery | 3.50 | |
| Shuff | 3.50 | |

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| | Cigars 20¢ meals 35¢ | .55 | |
| | Subscription | 50.00 | |
| | Sub. Sane Fourth of July | 10.00 | |
| | | | 75.75 |
| Sept. | Treas. Germ. Day Comm., donation | | 40.00 |
| | Savoy Hotel, cafe | | 16.20 |
| | B. C. Adams, inc. exp. | | 40.00 |
| | Am. Gas Inst., dues | | 10.00 |
| | Savoy Hotel, meals | | 15.00 |
| Oct. | City Mission Treas., sub | | 40.00 |
| | H. L. Doherty & Co., traveling exp. | | 80.00 |
| | O. B. Clark, donation | | 8.00 |
| | Chapin Bros., flowers | | 8.00 |
| | Havelock Commercial Club, dues | | 4.00 |
| | Lincoln Commercial Club, sub. & dues | | 60.52 |
| | B. C. Adams, Oct. exp. | | 40.00 |
| Nov. | Savoy Hotel, cafe | | 11.10 |
| | B. C. Adams, exp. for Nov | | 40.00 |
| | L. G. & E. L. Co., contg. Vo. 13496: | | |
| | Savoy | .80 | |
| | Exp. B. C. A. to Chicago | 38.27 | |
| | " " " " & E. C. Strode to N. Y. | 96.00 | |

722 Acct. No. 1503. 1912—#21.

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| 1912. | | | |
| Nov. (cont.) | Savoy | .40 | |
| | Cigars, Night meeting of employees | 1.60 | |
| | Exp. B. C. A. to N. Y. | 25.60 | |
| | Exp. Rotary Club | 3.36 | |
| | Exp. " " | 2.88 | |
| | | | 168.91 |
| | L. G. & E. L. Co., rebates, Vo. 13498 G. & E. to E. B., S. H. B., H. H., J. K. H. & C. O. W. | | 51.36 |
| Dec. | Sanitary Fruit Company, cigars | | 2.40 |
| | B. C. Adams, exp. for Dec. | | 40.00 |
| | L. G. & E. L. Co., contg. Vo. 13616 (missing from files) | | 109.42 |
| | Savoy Hotel, cafe | | 54.60 |
| | Sanitary Fruit Co., cigars | | 8.00 |
| | Lincoln Commercial Club, dues | | 56.60 |

723 A/c No. 496. 1913—#1.

*Legal Expense—Operation.*

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| 1913. | | | |
| Jan. | Olm & Butler—13712, Transcript, Alton D. Adams testimony, City of Racine vs. Racine Gas & Lt. Co. | 33.00 | |
| | H. L. Butler—13573, Legal exp. H. L. Butler, Madison, Wis. | 12.00 | |
| | Lincoln Daily Star—13692, adv. | 2.00 | |
| | G. A. Montgomery—13698, Legal exp. Hotel and traveling exp. to Madison, Wis., and return | 60.00 | |
| | Tr. Vo. 1669, $1 gas bond, last apport. | 136.36 | |
| | " " 1674, Stout and Rose " " | 260.20 | |
| | " " 1675, Frueauff & Robinson, last apportionment | 208.33 | |
| | " Vo. 1669, Cr. a/c #496—chg. op. a/c 59.09 Frueauff & Robinson—13715, sundry exp. 1912 | 43.41 | |
| | C. A. F., January salary | 40.00 | |
| | E. C. S., s " " | 200.00 | |
| | L. G. & E. L. Co., rebates, C. O. W | 13.61 | |
| | | | 1,008.91 |
| | Cr. | | 59.09 |
| | | | 949.82 |
| Feb. | Tr. Vo. 1693, correction entry—91.54. | | |
| | C. A. Frueauff, February salary | 40.00 | |
| | Strode & Root—13916, Trans. brief | 2.50 | |
| | E. C. S., February salary | 200.00 | |
| | | | 242.50 |
| | | | 91.54 |
| | | | 150.96 |
| Mar. | Tr. Vo. 1713, correction entry—91.54. | | |
| | C. A. Frueauff, March salary | 40.00 | |
| | Grover C. Hoyt, Decisions from Mass. | 12.00 | |
| | E. C. Strode, March salary | 200.00 | |
| | Tr. Vo. 1730—$1 gas election exp. monthly apportionment | 100.00 | |
| | Tr. Vo. 1730, Appraisement exp. $1 gas. | 100.00 | |
| | | | 452.00 |
| | | | 91.54 |
| | | | 360.46 |
| Apr. | Tr. Vo. 1739, correction entry—91.55. | | |
| | Tr. Vo. 1891, gas elect. | 100.00 | |
| | " " 1891*a*, special appraisement | 100.00 | |

| | | | |
|---|---|---|---|
| | C. A. Frueauff, April salary | 40.00 | |
| | E. C. S., April salary | 200.00 | |
| | | | 440.00 |
| | | | 91.55 |
| | | | 348.45 |

724 A/c No. 496. 1913—#2.

| | | | |
|---|---|---|---|
| 1913. | | | |
| May | Myron E. Wheeler, 14367, copy of court testimony, City of Lincoln vs. Co., Dist. Court. Apr. 1913 | 31.80 | |
| | Tr. Vo. 1776, $1 gas election | 100.00 | |
| | " " " special appraisement | 100.00 | |
| | " " 1763, Prem. on bond $1,500.00 | 125.00 | |
| | C. A. F., May salary | 40.00 | |
| | E. C. S., 14485, telephone & court costs mostly $1 gas | 26.50 | |
| | E. C. S., May salary | 200.00 | |
| | | | 623.30 |
| June | Tr. Vo. 1874 $1 gas bond | 125.00 | |
| | " " 1891, $1 gas election | 100.00 | |
| | " " 1891*a*, special app. | 100.00 | |
| | C. A. F., salary for June | 40.00 | |
| | E. C. S., " " " | 200.00 | |
| | | | 565.00 |
| July | Tr. Vo. 1812, $1 gas bond | 125.00 | |
| | " " 1822*a*, exp. taking testimony $1 gas, $450.00 | 75.00 | |
| | " " 1826, gas election | 100.00 | |
| | " " 1826, appraisement | 100.00 | |
| | C. A. F., July salary | 40.00 | |
| | E. C. S., July salary | 200.00 | |
| | | | 640.00 |
| Aug. | Tr. Vo. 1837, bond | 125.00 | |
| | " " 1848, $1 gas testimony | 75.00 | |
| | " " 1848 (14864) appeal bond $375.00 | 75.00 | |
| | " " 1851, gas election | 100.00 | |
| | " " 1851, appraisement | 100.00 | |
| | C. A. F., Aug. salary | 40.00 | |
| | E. C. S., Aug. salary | 200.00 | |
| | E. C. S., 14969, misc. exp. Telephone | 2.85 / .25 | |
| | Telegrams | 10.40 | |
| | Exp. to Omaha, $1 gas | 3.95 | |
| | Covers for testimony | 2.50 | |
| | | 23.96 | |
| | | | 738.96 |
| Sept. | C. A. F., September salary | 40.00 | |
| | E. C. S., 15133, Sept. salary & mis. exp. | 221.82 | |
| | Tr. Vo. 1862, $1 gas bond | 125.00 | |
| | " " 1875, $1 gas testimony | 75.00 | |

| | | | |
|---|---|---|---|
| | " " 1875, $1 gas appeal bond..... | 75.00 | |
| | " " 1878, $1 gas election..... | 100.00 | |
| | " " 1878, $1 gas appraisement..... | 100.00 | |
| | | | 736.82 |

725 & 726 A/c No. 496. 1913—#3.

| | | | |
|---|---|---|---|
| 1913. | | | |
| Oct. | H. L. Doherty, 15202, Services & Exp. of litigation (U. S. C. C.)..... | 23.80 | |
| | Tr. Vo. 1889, $1 gas bond..... | 125.00 | |
| | " " 1901, $1 gas testimony..... | 75.00 | |
| | " " 1901, $1 gas appeal bond..... | 75.00 | |
| | " " 1904, $1 election..... | 100.00 | |
| | " " 1904, $1 appraisement..... | 100.00 | |
| | C. A. F., October salary..... | 40.00 | |
| | E. C. S., 15285, October salary, fee & court costs ..... | 203.10 | |
| | | | 741.90 |
| Nov. 29. | Tr. Vo. 1915, Bond premium $1 gas case | 125.00 | |
| | " " 1927, Expense taking testimony $- gas case..... | 75.00 | |
| | Tr. Vo. 1927, Appeal Bond, $1 gas case.. | 75.00 | |
| | Tr. Vo. 1930, $1 gas agreement election (1559.24) ..... | 100.00 | |
| | Tr. Vo. 1930, $1 gas special appraisement | 100.00 | |
| | C. A. Frueauff, Nov. salary..... | 40.00 | |
| | E. C. Strode, Nov. salary..... | 200.00 | |
| | | | 715.00 |
| Dec. 31. | Tr. Vo. 1943, Bond premium, $1 gas case | 125.00 | |
| | Tr. Vo. 1955, Testimony " " " | 75.00 | |
| | " " 1955, Appeal bond " " " | 75.00 | |
| | " " 1958, $1 gas election expense... | 100.00 | |
| | " " 1958, " " special appraisement ..... | 100.00 | |
| | C. A. Frueauff, Dec. salary..... | 40.00 | |
| | E. C. Strode, Dec. salary..... | 200.00 | |
| | | | 715.00 |

727 A/c No. 1874. 1913—#1.

*Special Legal Expense—Gas & Electricity.*

| | | |
|---|---|---|
| 1913. | | |
| Jan. 13. | Tr. Vo. 1669, refund Nat'l Surety Co. on bond.. | $59.90 |
| Feb. 28. | " " 1693 " " " " " " " .. | 91.54 |
| Mar. 31. | " " 1713 " " " " " " " .. | 91.54 |
| Apr. 30. | " " 1739 " " " " " " " .. | 91.55 |
| 30. | Nat'l Surety Co., surety bond..... | 1,500.00 |
| July 12. | Bacon & Wheeler, 14717, transcribing testimony $1 gas ..... | 450.00 |
| Aug. 12. | John W. Thomas, Inc., appeal bond..... | 375.00 |

728 A/c #1507. 1912—#1.

*Promoting New Business—Gas.*

| | | | |
|---|---|---|---|
| 1912. | | | |
| Jan'y 31. | Tr. Vo. 1400, Domestic fuel & appliances a/c. | | 1,449.49 |
| | Tr. Vo. 1401, Gen'l Gas Lt. Co. a/c..... | | 328.47 |
| | | | 1,777.96 |
| Feb'y 29. | Tr. Vo. 1422, D. F. & A. a/c..... | | 1,726.78 |
| M'ch 30. | Tr. Vo. 1441, D. F. & A. a/c..... | | 1,895.77 |
| April 30. | Tr. Vo. 1465, D. F. & A. a/c..... | | 1,374.61 |
| May 31. | Tr. Vo. 1483 " " " ..... | | 1,716.56 |
| June 29. | Tr. Vo. 1509 " " " ..... | | 1,382.98 |
| July 31. | Tr. Vo. 1534 " " " ..... | | 1,765.48 |
| Aug. 31. | Tr. Vo. 1565 " " " ..... | | 1,706.40 |
| Sept. 30. | Tr. Vo. 1590 " " " ..... | | 1,398.76 |
| Oct. 31. | Tr. Vo. 1615 " " " ..... | | 1,456.24 |
| Nov. 30. | Tr. Vo. 1642 " " " ..... | | 1,467.99 |
| Dec. 31. | Tr. Vo. 1667 " " " ..... | | 2,027.11 |
| | Total for year..... | | $19,696.64 |

729 1912.

*Domestic Fuel Appliances and Connections.*

Advertising—1819*a*.

| | | | |
|---|---|---|---|
| 1912. | | | |
| Jan. | A. G. Osmer, rent of roof..... | 4.00 | |
| | Tr. Vo. 1390, Monthly proportion gas & elec. used in windows & signs..... | 45.36 | |
| | Enterprise Pub. Co., adv..... | 5.03 | |
| | Nebr. Echo ..... | 5.12 | |
| | Hy L. Doherty Co., drawing & art..... | 5.07 | |
| | Nebr. Advertising Co., adv..... | 6.40 | |
| | Lincoln Daily Star, " ..... | 23.46 | |
| | | | 94.48 |
| Feb. | H. L. Doherty, cut for ad..... | 4.95 | |
| | Lincoln Herald, adv..... | 6.40 | |
| | Nebr. Adv. Co., adv..... | 6.40 | |
| | Nebr. Echo ..... | 15.36 | |
| | Trade Review ..... | 26.88 | |
| | C., B. & Q. Ry. Co., frt. #12678..... | 2.47 | |
| | Tr. Vo. 1413, G. & E. used in windows & signs ..... | 16.96 | |
| | L. G. & E. L. Co., contg..... | 1.19 | |
| | Enterprise Pub. Co., adv..... | 2.77 | |
| | Keasberry & Mattison, stove mats..... | 15.00 | |
| | Pittsburg Htr. Co., water heater..... | 15.00 | |

| | | | |
|---|---|---|---|
| | Standard Oil Co., oil | 6.04 | |
| | Pay Roll | 20.80 | |
| | | | 140.22 |
| Mar. | Lincoln Daily Star, adv | 18.05 | |
| | Tr. Vo. 1451, Mantles, G. & E. used in windows & signs | 17.31 | |
| | Maupin-Shoop Pub. Co., adv | 10.88 | |
| | H. L. Doherty Co., adv. cuts | 3.31 | |
| | Enterprise Pub. Co., adv | 2.77 | |
| | Lincoln Herald, adv | 12.80 | |
| | Nebr. Adv. Co., adv | 6.40 | |
| | State Journal Co., adv | 27.65 | |
| | Trade Review, adv | 7.68 | |
| | Pay Roll | 41.60 | |
| | | | 148.45 |
| Apr. | Lincoln Daily Star, adv | 27.09 | |
| | Roscow & Overstreet, sign | .25 | |
| | Enterprise Pub. Co., adv | 2.77 | |
| | Lincoln Herald, adv | 6.40 | |
| | Lincoln Tel. Co., adv | .64 | |
| | Lincoln Daily Star, adv | 22.97 | |
| | Nebr. Echo, adv | 6.91 | |

730 A/c No. 1819*a*. 1912—#2.

| | | | |
|---|---|---|---|
| 1912. | | | |
| Apr. | (cont.) Nebr. Adv. Co., adv | 6.40 | |
| | State Journal Co. " | 46.08 | |
| | Western Adv. Co., ironholders | 18.00 | |
| | Tr. Vo. 1456 G. & E. used in Co.'s windows & signs | 44.23 | |
| | Pay roll | 41.60 | |
| | | | 223.34 |
| May | Lincoln Tel. Co., adv | 1.44 | |
| | H. A. East Co | 3.20 | |
| | W. M. Maupin | 1.82 | |
| | Nebr. Echo | 6.92 | |
| | State Journal | 34.82 | |
| | Trade Review | 7.28 | |
| | Tr. Vo. 1477 month's G. & E. used in Co.'s signs and windows | 31.31 | |
| | H. L. Doherty, adv | 6.80 | |
| | Pay roll. | 42.40 | |
| | | | 135.99 |
| June. | Chas. A. Landers, adv | 6.40 | |
| | A. H. Koop " | 6.40 | |
| | Lincoln Daily Star, adv | 23.94 | |

| | | | |
|---|---|---|---|
| | The Lincoln Herald, adv | 6.40 | |
| | N. Amos " | 5.00 | |
| | Nebr. Adv. Co. " | 6.40 | |
| | State Journal Co. " | 41.99 | |
| | The Trade Review, adv | 9.60 | |
| | H. A. East, cards | 1.60 | |
| | Will Maupin, adv | 4.80 | |
| | Nebr. Echo " | 10.37 | |
| | Nebr. Adv. Co | 9.60 | |
| | Tr. Vo. 1501, month's G. & E. used in Co.'s windows and signs | 41.23 | |
| | Raymond Bros. Co., matches | 1.40 | |
| | Pay roll | 40.00 | |
| | | | 215.13 |
| July | E. C. Chevront, adv | 4.00 | |
| | Lincoln Daily Star, adv | 34.62 | |
| | The Nebr. News | 6.00 | |
| | Acme Roll Ptg. Co., cards | 1.28 | |
| | G. R. De Ford, photos | 1.28 | |
| | F. M. Downs Co., decorating cloth | 2.56 | |
| | L. G. & E. L. Co., contg | 14.40 | |
| | Lincoln Herald, adv | 12.80 | |
| | Will M. Maupin | 5.60 | |
| | Nebraska News | 2.40 | |

731 A/c No. 1819*a*. 1912—#3.

1912.

| | | | |
|---|---|---|---|
| July (cont.)— | | | |
| | State Journal Co | 47.62 | |
| | Shoop & Brundage Co | 1.60 | |
| | The Trade Review | 7.68 | |
| | Tr. Vo. 1526, month's G. & E. used in Co.'s windows and signs | 34.61 | |
| | Pay roll | 43.20 | |
| | | | 219.65 |
| Aug. | Lincoln Daily Star, adv | 26.96 | |
| | Enterprise Pub. Co. " | 5.75 | |
| | Lilly Theatre " | 8.00 | |
| | N. Amos " | 8.00 | |
| | The Trade Review | 15.36 | |
| | H. L. Doherty Co., eng. for adv | 4.02 | |
| | Tr. Vo. 1557, month's G. & E. used in Co.'s windows and signs | 35.11 | |
| | Pay roll | 43.20 | |
| | The H. A. East Co., cards | 1.60 | |
| | Lincoln Herald, adv | 6.40 | |
| | Lincoln Daily Star adv | 71.27 | |
| | Will M. Maupin " | 2.88 | |

| | | | |
|---|---|---|---|
| | Rudge & Guenzel, cloth | 1.66 | |
| | State Journal Co., adv | 36.87 | |
| | | | 267.08 |
| Sept. | F. B. Weeks Co., adv | 5.34 | |
| | Tr. Vo. 1582, month's G. & E. used in Co.'s windows and signs | 43.33 | |
| | Enterprise Pub. Co., adv | 6.69 | |
| | Elite Amusement Co., adv | 6.40 | |
| | The Lincoln Herald, " | 6.40 | |
| | Will Maupin " | 1.92 | |
| | The Nebr. News " | 1.60 | |
| | Roscow & Overstreet, sign | .96 | |
| | The Trade Review, adv | 7.68 | |
| | Lincoln Daily Star, adv | 30.00 | |
| | Pay Roll | 40.00 | |
| | | | 150.32 |
| Oct. | Havelock Times, adv | 9.37 | |
| | The Draeger Oxy. App. Co., cylinder for submotor | 10.98 | |
| | H. L. Doherty, adv | 22.05 | |
| | Tr. Vo., Month's G. & E. used in Co.'s windows and signs | 37.21 | |
| | Acme Roll Printing Co., cards | 1.60 | |
| | H. M. Bushnell, adv | 7.68 | |
| | Huckins & Huckins, adv | 6.40 | |



| | | | |
|---|---|---|---|
| 1912. | | | |
| Oct. (cont.)— | | | |
| | L. G. & E. L. Co., contg | 5.54 | |
| | Lincoln Daily Star, adv | 24.66 | |
| | Lily Theatre, adv | 5.00 | |
| | Roscow & Overstreet, sign | .96 | |
| | Rudge & Guenzel, bunting | 1.87 | |
| | Enterprise Pub. Co., adv | 4.15 | |
| | | | 137.47 |
| Nov. | Nebr. Echo, adv | 50.82 | |
| | H. L. Doherty & Co., special adv. cuts | 8.00 | |
| | Gillespie & Phillips, printing | 16.80 | |
| | Lily Theatre, adv | 3.20 | |
| | The Lincoln Herald, adv | 6.40 | |
| | The Nebr. News | 1.60 | |
| | Lincoln Commercial Club, booth | 32.00 | |
| | Acme Roll Ptg. Co., cards | 3.84 | |
| | L. G. & E. L. Co., contg | 8.42 | |
| | Tr. Vo. 1634, month's G. & E. used in Co.'s signs and windows | 43.65 | |
| | Pay roll | 41.60 | |
| | | | 216.35 |

| | | | |
|---|---|---|---|
| Dec. | Lincoln Daily Star, adv | 55.08 | |
| | Enterprise Pub. Co., adv | 4.18 | |
| | The Havelock Times, adv | 1.46 | |
| | Nebr. Echo, adv | 10.37 | |
| | State Journal Co., adv | 74.25 | |
| | Acme Roll Prtg. Co | 4.80 | |
| | Chapin Bros., flowers | 60.00 | |
| | The Lincoln Herald, adv | 6.40 | |
| | L. G. & E. L. Co., contg | 42.76 | |
| | Will M. Maupin, adv | 2.90 | |
| | Roscow & Overstreet, adv | .25 | |
| | Shoop & Brundage Co., adv | 3.50 | |
| | Stryker-Brown System—distribution | 33.11 | |
| | Trade Review, adv | 7.68 | |
| | Western N. P. Union, ptg | 97.75 | |
| | Tr. Vo. 1659, month's G. & E. used in Co.'s windows and signs | 39.46 | |
| | Pay Roll | 41.60 | |
| | | | 485.55 |

A/c No. 1819*b*. 1912.

*Domestic Fuel Appliances & Connections Circulars.*

(No charges or credits for 1912.)

733 A/c No. 1819*c*. 1912—#1.

*Domestic Fuel Appliances & Connections.*

Salaries.

| | | | |
|---|---|---|---|
| Jan. | 10. L. Westerman, car fare and meals | 6.96 | |
| | 31. L. G. & E. L. Co., contg | 3.20 | |
| | 31. Pay Roll | 295.01 | |
| | | | 305.17 |
| Feb. | 13. L. Westerman, car fare and meals | 6.92 | |
| | 29. L. G. & E. L. Co., contg | 4.20 | |
| | 29. Pay Roll | 330.48 | |
| | | | 341.60 |
| Mar. | 11. L. Westerman, car fare and meals | 4.88 | |
| | 30. L. G. & E. L. Co., contg | 1.00 | |
| | 30. Pay Roll | 336.25 | |
| | | | 342.13 |
| Apr. | 11. L. Westerman, car fare and meals | 6.88 | |
| | 30. L. G. & E. L. Co., contg | 3.50 | |
| | 30. Pay Roll | 334.00 | |
| | | | 344.38 |

| | | | |
|---|---|---|---|
| May 14. | L. Westerman, car fare and meals..... | 7.00 | |
| 31. | L. G. & E. L. Co., contg..... | 3.20 | |
| 31. | Pay Roll ..... | 402.80 | |
| | | | 413.00 |
| June 11. | L. Westerman, car fare and meals..... | 7.00 | |
| 29. | L. G. & E. L. Co., contg..... | 3.15 | |
| 29. | Pay Roll ..... | 379.20 | |
| | | | 389.35 |
| July 10. | L. Westerman, car fare and meals..... | 7.00 | |
| 31. | L. G. & E. L. Co., contg..... | 2.56 | |
| | Pay Roll ..... | 379.03 | |
| | | | 388.59 |
| Aug. 12. | L. Westerman, car fare and meals..... | 5.82 | |
| 31. | Pay Roll ..... | 404.25 | |
| | L. G. & E. L. Co., contg..... | 3.85 | |
| | | | 413.92 |
| Sept. 11. | L. Westerman, car fare and meals..... | 7.40 | |
| 30. | L. G. & E. L. Co., contg..... | 2.30 | |
| 30. | L. Westerman, car fare and meals..... | 6.85 | |
| 30. | Pay Roll ..... | 398.55 | |
| | | | 415.10 |
| Oct. 31. | L. G. & E. L. Co., contg..... | 4.00 | |
| | L. Westerman, car fare and meals..... | 8.50 | |
| | Pay Roll ..... | 453.08 | |
| | | | 455.58 |
| Nov. 30. | L. G. & E. L. Co., contg..... | 2.60 | |
| | L. Westerman, car fare and meals..... | 7.30 | |
| | Pay Roll ..... | 437.68 | |
| | | | 447.58 |

734 A/c No. 1819*c*. 1912—#2.

| | | | |
|---|---|---|---|
| 1912. | | | |
| Dec. 31. | L. G. & E. L. Co., contg..... | 3.84 | |
| 31. | L. Westerman, car fare and meals..... | 8.10 | |
| | Pay Roll ..... | 508.56 | |
| | | | 520.50 |

735 A/c No. 1819*d*. 1912—#1.

*Domestic Fuel & Appliances & Connections.*

Exhibition Expense.

| | | | |
|---|---|---|---|
| 1912. | | | |
| Jan. 31. | Tr. Vo. 1395, month's proportion of rent & heat a/c..... | 40.00 | |

| | | | |
|---|---|---|---|
| Feb. 29. | Tr. Vo. 1419, month's proportion of rent & heat a/c | 145.03 | |
| Mar. 30. | Tr. Vo. 1438, month's proportion of rent & heat a/c | 117.10 | |
| Apr. 30. | Tr. Vo. 1462, month's proportion of rent & heat a/c | 114.26 | |
| May 31. | Tr. Vo. 1480, month's proportion of rent & heat a/c | 110.91 | |
| June 29. | Tr. Vo. 1506, month's proportion of rent & heat a/c | 111.12 | |
| July 31. | Tr. Vo. 1531, month's proportion of rent & heat a/c | 111.91 | |
| Aug. 31. | Rudge & Guenzel Co., cloth | 1.73 | |
| | Tr. Vo. 1562 | 116.61 | |
| | | | 118.34 |
| Sept. 30. | Tr. Vo. 1587—month's proportion of rent & heat a/c | 113.21 | |
| Oct. 31. | Tr. Vo. 1612—month's proportion of rent & heat a/c | 112.70 | |
| Nov. 30. | Tr. Vo. 1639—month's proportion of rent & heat a/c | 115.06 | |
| Dec. 31. | F. W. Brown Lbr. Co., lbr | .96 | |
| | L. G. & E. L. Co., contg | .25 | |
| | Tr. Vo. 1664, month's proportion of rent & heat a/c | 116.72 | |
| | Rudge & Guenzel Co., muslin | 5.32 | |
| | | | 123.25 |

736 A/c No. 1819*f*. 1912—#1.

*Domestic Fuel Appliances & Connections.*

Loss.

| | | Charges. | Credits. |
|---|---|---|---|
| 1912. | | | |
| Jan'y 15. | L. G. & E. L. Co., rebates | 14.45 | |
| 31. | " " " " " " contg | .25 | |
| 31. | " " " " " " rebates | 7.20 | |
| 31. | Peoples Plumbing Co., rebate on heater | 3.00 | |
| | Rudge & Guenzel Co., misc | .25 | |
| | Standard Oil Co. gasoline | .46 | |
| | Rudge & Guenzel Co. asbestos Paste | .50 | |
| | Tr. Vo. 1392, Proportion of Petty Ledger bad debts | 60.00 | |
| 31. | Petty Jr. 125, goods returned | 59.80 | |
| " | " " 124, goods sold | ..... | 401.50 |
| " | Ord. No. 288, goods sold from store-room | 339.97 | |
| " | Ord. No. 290, goods sold from store-room | 26.46 | |

| | | | |
|---|---|---|---|
| | " Ord. No. 291, goods put back into stock | ..... | 47.27 |
| | " Tr. Vo. 1396, proportion storeroom expense | 54.30 | |
| | | 566.64 | 448.77 |
| | | 448.77 | |
| | Loss | 117.87 | |
| Feb. | 15. L. G. & E. L. Co., rebates | 10.43 | |
| | 29. Tr. Vo. 1408, Proportion of bad debts, Petty Jr. | 60.00 | |
| | C. R. I. & P. Ry. Co., freight | 2.02 | |
| | L. G. & E. L. Co., contg | .95 | |
| | " " " " rebates | 22.70 | |
| | Petty Jr. 126, Goods sold | ..... | 405.95 |
| | " " 127 " returned | 25.50 | |
| | Hall Bros., hdw | .15 | |
| | Ord. No. 293, goods sold from storeroom | 324.34 | |
| | Ord. No. 295, goods sold from storeroom | 37.71 | |
| | Ord. No. 298, goods put back into stock | ..... | 2.37 |
| | Tr. Vo. 1420, proportion storeroom expense | 82.47 | |
| | | 566.27 | 408.32 |
| | | 408.32 | |
| | Loss | 157.95 | |

737 A/c No. 1819*f*. 1912—#2.

*Domestic Fuel Appliances & Connections.*

Loss.

| | | Charges. | Credits. |
|---|---|---|---|
| 1912. | | | |
| March | 18. L. G. & E. L. Co., rebates | 16.30 | |
| | 30. Tr. Vo. 1427, proportion of bad debts, Petty Jr. | 60.00 | |
| | 30. Ord. No. 299, goods sold from storeroom | 156.70 | |
| | Ord. No. 301, goods put back into stock | ..... | 96.94 |
| | Baker Hdw. Co., hdw | 1.44 | |
| | L. G. & E. L. Co., contg | 8.50 | |
| | Riggs Pharmacy, bronze & liquid | .75 | |
| | Western Supply Co., fittings | 2.85 | |

| | | | |
|---|---|---|---|
| | Petty Jr. 128, goods sold | ..... | 1,029.15 |
| | Petty Jr. 129, goods returned | 90.38 | |
| | Ord. No. 304, goods sold from storeroom | 720.97 | |
| | Ord. No. 306, goods sold from storeroom | 103.35 | |
| | Ord. No. 307, goods put back into stock | ..... | 170.42 |
| | Tr. Vo. 1439, proportion storeroom expense | 103.80 | |
| | | 1,265.04 | 1,296.51 |
| | | | 1,265.04 |
| | Gain | | 31.47 |
| April | 23. L. G. & E. L. Co., rebates | 23.15 | |
| | 30. Standard Oil Co.—gaso | .28 | |
| | 30. Hall Bros., misc. hdw | .46 | |
| | L. G. & E. L. Co., rebates | 13.00 | |
| | Lin. Plb. & Mfg. Co., trimming stove | 3.00 | |
| | Rudge & Guenzel, misc. hdw | 2.20 | |
| | Petty Jr. 130, goods sold | ..... | 1,753.85 |
| | " " 131 " returned | 74.80 | |
| | Ord. No. 310, goods sold from storeroom | 1,190.88 | |
| | Ord. No. 312, Goods sold from storeroom | 125.71 | |
| | Ord. No. 313, goods put back into stock | ..... | 73.42 |
| | Tr. Vo. 1449, Proportion Petty Ledger bad debts | 60.00 | |
| | Tr. Vo. 1463, Proportion storeroom exp. | 97.46 | |
| | | 1,590.94 | 1,827.27 |
| | | | 1,590.94 |
| | Gain | | 236.33 |

738 A/c No. 1819*f*. 1912—#3.

*Domestic Fuel Appliances & Connections.*

| | | Loss. Charges. | Credits. |
|---|---|---|---|
| 1912. | | | |
| May | 22. C. B. & Q. Ry. Co., freight | 3.03 | |
| | " L. G. & E. L. Co., rebates | 44.80 | |
| | 31. Pounds Plbg Co., rebate on heater | 5.00 | |

| | | | |
|---|---|---|---|
| | Tr. Vo. 1471, proportion Petty Ledger bad debts | 60.00 | |
| | Hall Bros., misc. hdw | .40 | |
| | L. G. & E. L. Co., rebates | 19.80 | |
| | L. G. & E. L. Co., contg | 7.60 | |
| | Rudge & Guenzel Co., mis. hdw | 1.81 | |
| | Ord. #317, goods sold from storeroom | 1,213.11 | |
| | Ord. #319, goods sold from storeroom | 77.67 | |
| | Ord. No. 320, goods put back into stock | ..... | 52.17 |
| | Ord. No. 322, goods put back into stock | ..... | 64.71 |
| | Petty Sales, 132, goods sold | ..... | 1,794.65 |
| | " " 132, goods sold | ..... | 3.03 |
| | " " 133, goods returned | 63.23 | |
| | Tr. Vo. 1481, Proportion storeroom expense | 96.00 | |
| | | 1,590.45 | 1,914.56 |
| | | | 1,590.45 |
| | Gain | | 324.11 |
| June | 6. D. H. Maxson, setting gas heaters | 14.50 | |
| | 10. Lin. Plbg. Co., " " " | 3.00 | |
| | 19. L. G. & E. L. Co., rebates | 26.00 | |
| | 29. Tr. Vo. 1492, proportion Petty Ledger bad debts | 60.00 | |
| | " Cox Bros., rebate on heater | 3.00 | |
| | Globe Delivery Co., del'y 1530 So. 22nd | .35 | |
| | Hall & Payne, rebate on heater | 3.00 | |
| | Chas. Kunkler " " " | 3.00 | |
| | Strause Gas Iron Co., Air mixers | 7.20 | |
| | Rathbone Sard & Co., repairs | .50 | |
| | F. C. Phillips Co., rebate on heaters | 6.00 | |
| | Western Supply Co., fittings | 10.68 | |
| | L. G. & E. L. Co., contg | 9.23 | |
| | L. G. & E. L. Co., rebates | 24.31 | |
| | Ord. #324, goods sold from storeroom | 1,093.38 | |
| | Ord. #326, goods sold from storeroom | 52.13 | |
| | Ord. No. 327, goods put back into stock | ..... | 24.47 |
| | Petty Jr. 134, goods sold | ..... | 1,571.86 |
| | " " 134, " returned | 89.75 | |
| | Tr. Vo. 1507, proportion storeroom exp. | 110.22 | |

739 A/c 1819*f*. 1912—#4.

*Domestic Fuel Appliances & Connections.*

Loss.

| 1912. | | Charges. | Credits. |
|---|---|---|---|
| June (cont.) | | | |
| | | 1,516.25 | 1,596.33 |
| | | | 1,516.25 |
| | Gain | | 80.08 |
| July | 20. Pittsburg W. H. Co., Exp. Jungh Show | ..... | 7.88 |
| | 22. L. G. & E. L. Co., rebates | 33.00 | |
| | 31. Tr. Vo. 1516, Proportion Petty Ledger bad debts | 60.00 | |
| | C. & N. W. Ry. Co., freight | .76 | |
| | W. M. Crane Co., repairs | 2.87 | |
| | W. A. Given, rebate on heater | 6.00 | |
| | Hall Bros. Co., misc. hdw. | .20 | |
| | Chas. Kunkler, rebate on heater | 3.00 | |
| | L. G. & E. L. Co., rebates | 12.50 | |
| | Nebr. Paper & Bag Co., wrapping paper | 1.07 | |
| | F. C. Phillips Co., rebate on heater | 3.00 | |
| | Rudge & Guenzel Co., hdw. | 1.50 | |
| | Western Supply Co., fittings | 6.00 | |
| | Ord. #330, goods sold from storeroom | 944.69 | |
| | Ord. #332, goods sold from storeroom | 48.27 | |
| | Ord. #333, goods put back into stock | ..... | 84.38 |
| | Petty, Jr., 136, goods sold | ..... | 1,257.71 |
| | Petty, Jr., 137, goods returned | 65.54 | |
| | Tr. Vo. 1532, storeroom exp. | 92.30 | |
| | | 1,280.70 | 1,349.97 |
| | | | 1,280.70 |
| | Gain | | 69.27 |
| Aug. | 20. L. G. & E. L. Co., rebates | 18.00 | |
| | 31. Tr. Vo. 1536, correction entry | 6.50 | |
| | Tr. Vo. 1547, proportion Petty Ledger bad debts | 60.00 | |
| | Ord. 337, goods sold from storeroom. | 1,134.95 | |
| | Ord. 339, goods sold from storeroom. | 94.38 | |

| | | | |
|---|---|---|---|
| | Ord. 340, goods put back into stock | ..... | 67.49 |
| | Ord. 342, goods sold from storeroom | 26.11 | |
| | L. G. & E. L. Co., rebates | 26.00 | |
| | Pounds Plbg. Co., labor on gas heater | 2.00 | |

740 A/c. 1819f. 1912—#5.

*Domestic Fuel Appliances & Connections.*

Loss.

| | | Charges. | Credits. |
|---|---|---|---|
| 1912. | | | |
| Aug. (cont.). | | | |
| 31. | Petty, Jr., 138, goods sold | ..... | 1,695.80 |
| | Petty, Jr., 139, goods returned | 82.10 | |
| | Tr. Vo. 1563, storeroom exp. | 91.67 | |
| | | 1,541.71 | 1,763.29 |
| | | | 1,541.71 |
| | Gain | | 221.58 |
| Sept. 30. | Tr. Vo. 1572, Petty Ledger bad debts | 60.00 | |
| | L. G. & E. L. Co., rebates | 43.75 | |
| | D. H. Maxson, rebate on heaters | 11.50 | |
| | Newberg & Bookstrom, rebate on heaters | 12.00 | |
| | F. C. Phillips Co., rebate on heaters | 3.00 | |
| | Rudge & Guenzel Co., mile board | 2.25 | |
| | Weyant Plbg. & Heat. Co., rebate on heater | 3.00 | |
| | Ord. #345, goods sold from storeroom | 1,000.18 | |
| | Ord. %347, goods sold from storeroom | 86.36 | |
| | Ord. #348, goods put back into stock | ..... | 78.55 |
| | Petty, Jr., 140, goods sold | ..... | 1,402.95 |
| | Petty, Jr., 141, goods returned | 114.00 | |
| | Tr. Vo. 1588, storeroom exp. | 93.09 | |
| | | 1,429.13 | 1,481.50 |
| | | | 1,429.13 |
| | Gain | | 52.37 |
| Oct. 22. | L. G. & E. L. Co., rebates | 21.05 | |
| 31. | Tr. Vo. 1599, Petty Ledger bad debts | 60.00 | |
| 31. | L. G. & E. L. Co., rebates | 27.75 | |
| | L. G. & E. L. Co., contg. | 1.10 | |
| | John W. Selby, rebates on heater | 12.00 | |

| | | | |
|---|---|---|---|
| | G. H. Wentz, rebates on heater..... | 3.00 | |
| | Ord. #350 goods put back in stock.. | ..... | 1.13 |
| | Ord. #352, goods sold from storeroom ..... | 749.64 | |
| | Ord. #354, goods sold from storeroom ..... | 87.01 | |
| | Ord. #355, goods put back in stock. | ..... | 49.89 |
| | Petty, Jr., 143, goods returned..... | 50.80 | |
| | Petty, Jr., 142, goods sold..... | ..... | 1,103.65 |
| | Tr. Vo. 1613, storeroom exp..... | 91.51 | |

741 A/c. 1819*f*. 1912—#6.

*Domestic Fuel Appliances & Connections.*

| | | Loss. | Charges. | Credits. |
|---|---|---|---|---|
| 1912. | | | | |
| Oct. | (cont.)—Hall Bros. Co., stove bolts..... | | .95 | |
| | | | 1,104.81 | 1,154.67 |
| | | | | 1,104.81 |
| | | Gain..... | | 49.86 |
| Nov. | 19. L. G. & E. L. Co., rebates..... | | 10.00 | |
| | 30. Tr. Vo. 1623, Petty Ledger bad debts | | 60.00 | |
| | Hall Bros. Co., screws & bolts..... | | 1.20 | |
| | L. G. & E. L. Co., rebates..... | | 20.00 | |
| | Ord. #357, goods sold from storeroom ..... | | 590.84 | |
| | Ord. #359, goods sold from storeroom ..... | | 24.67 | |
| | Ord. #360, goods put back into stock ..... | | ..... | 59.75 |
| | Ord. #362, goods put back into stock ..... | | ..... | 139.98 |
| | Petty, Jr., 144, goods returned..... | | 59.80 | |
| | Petty, Jr., 144, goods sold..... | | ..... | 865.05 |
| | Tr. Vo. 1640, storeroom exp..... | | 94.14 | |
| | | | 860.65 | 1,064.78 |
| | | | | 860.65 |
| | | Gain..... | | 204.13 |
| Dec. | 18. L. G. & E. L. Co., rebates..... | | 14.05 | |
| | 31. Tr. Vo. 1650, Petty Ledger bad debts | | 60.00 | |
| | Lincoln Paper Co., twine..... | | .96 | |
| | L. G. & E. L. Co., rebates..... | | 12.25 | |
| | F. C. Phillips Co., rebate on heater.. | | 3.00 | |

| | | | |
|---|---|---|---|
| | Ord. 363, goods sold from storeroom | 482.77 | |
| | Ord. 365, goods sold from storeroom | 85.68 | |
| | Ord. 366, goods put back in stock | ..... | 16.71 |
| | Petty, Jr., 147, goods returned | 11.85 | |
| | Petty, Jr., 146, goods sold | ..... | 773.30 |
| | Tr. Vo. 1665, storeroom exp. | 93.30 | |
| | | 713.86 | 790.01 |
| | | | 713.86 |
| | Gain | | 76.15 |

742 A/c No. 1819*g*. 1912—#1.

*Domestic Fuel Appliances & Connections.*

Labor & Material.

1912.

| | | | Charges. | Credits. |
|---|---|---|---|---|
| Jan'y | 31. | L. G. & E. L. Co., contg. | .90 | |
| | | " " rebates | 2.00 | |
| | | Rudge & Guenzel, misc. | 1.10 | |
| | | Raymond Bros. & Clarke, matches | 2.80 | |
| | | Pay roll | 157.22 | |
| | | Petty Jr. 124, Labor & Material | ..... | 148.65 |
| | | Ord. #288, Appl. & Connections used. | 51.38 | |
| | | Ord. #291, " " " returned | ..... | 4.52 |
| | | Tr. Vo. 1394, barn expense | 126.93 | |
| | | | 342.33 | 153.17 |
| | | | 153.17 | |
| | | Balance | 189.16 | |
| Feb'y | 29. | L. G. & E. L. Co., contg. | 1.13 | |
| | | " " rebates | 10.00 | |
| | | Petty Jr. 126, Labor & Material | ..... | 98.55 |
| | | Hall Bros., hdw. | .30 | |
| | | Rudge & Guenzel, nails | 2.40 | |
| | | Raymond Bros. & Clarke Co., matches. | 1.40 | |
| | | Western Supply Co., fittings | 17.50 | |
| | | Ord. #293, appl. & connections used. | 62.89 | |
| | | Ord. #298, " " " returned | ..... | 5.19 |
| | | Pay roll | 134.05 | |
| | | Tr. Vo. 1418, barn exp. | 79.59 | |
| | | | 309.26 | 103.74 |
| | | | 103.74 | |
| | | Balance | 205.52 | |

| | | | |
|---|---|---|---|
| March 18, | L. G. & E. L. Co., rebates | 8.55 | |
| 30, | Ord. #299, appl. & connections used | 497.50 | |
| | Ord. #301, " " " returned | ..... | 416.63 |
| | L. G. & E. L. Co., rebates | 3.46 | |
| | " " " contg. | 1.00 | |
| | Raymond Bros. Clarke Co., matches | 2.80 | |
| | Standard Oil Co., oil | 2.98 | |
| | Western Supply Co., fittings | 3.00 | |
| | Petty Jr. 128, labor & material | ..... | 174.05 |
| | Ord. #304, appl. & connections used | 109.44 | |
| | " #307, " " " returned | ..... | 6.48 |
| | Pay Roll | 129.11 | |
| | Tr. Vo. 1437, barn exp. | 98.96 | |
| | | 856.80 | 599.16 |
| | | 597.16 | |
| | Balance | 259.64 | |

743 A/c #1819*g*. 1912—#2.

*Domestic Fuel Appliances & Connections.*

Labor & Material.

| 1912. | | Charges. | Credits. |
|---|---|---|---|
| Apr- | 23. L. G. & E. L. Co., rebates | 14.85 | |
| | 30. Hall Bros. Co., misc. hdw. | .31 | |
| | Raymond Bros., Clark Co., matches | 1.40 | |
| | Western Supply Co., fittings | 2.93 | |
| | Petty Jr., 130, labor & material | ..... | 283.40 |
| | Ord. #310, appl. & connection used | 106.75 | |
| | " #313 " " " returned | ..... | 20.15 |
| | Pay roll | 167.80 | |
| | Tr. Vo. 1461, barn exp. | 102.36 | |
| | | 396.40 | 303.55 |
| | | 303.55 | |
| | Balance | 92.85 | |
| May | 22. C. B. & Q. Ry. Co., freight | 1.08 | |
| | " L. G. & E. L. Co., rebates | 3.70 | |
| | 31. J. H. Hetzel, cement | 12.60 | |
| | Raymond Bros., matches | 2.80 | |
| | Ord. #317, appl. & connect. used | 134.33 | |
| | Ord. #320, " " " returned | ..... | 6.96 |
| | Petty Jr. 132, labor & material | ..... | 263.20 |
| | " " 133, goods returned | 2.40 | |

| | | | |
|---|---|---|---|
| | Pay roll | 184.24 | |
| | Tr. Vo. 1479, barn exp. | 122.06 | |
| | | 463.21 | 270.16 |
| | | 270.16 | |
| | Balance | 193.05 | |
| June | 19. L. G. & E. L. Co., rebates | 3.50 | |
| | 29. Standard Oil Co., candles | 3.09 | |
| | L. G. & E. L. Co., rebates | 9.75 | |
| | Ord. #324, material used | 173.41 | |
| | Ord. #327 " returned | ..... | 7.02 |
| | Pay Roll | 188.59 | |
| | Petty Jr. 134, labor & material | ..... | 307.65 |
| | " " " material returned | 40.90 | |
| | Tr. Vo. 1505, barn exp. | 103.83 | |
| | | 523.07 | 314.67 |
| | | 314.67 | |
| | Balance | 208.40 | |
| July | 22. L. G. & E. L. Co., rebates | 3.45 | |
| | 31. Hall Bros. Co., misc. hdw. | 2.44 | |
| | L. G. & E. L. Co., rebates | 4.80 | |
| | Raymond Bros., matches | 2.80 | |
| | Standard Oil Co., oil | 2.98 | |
| | R. O. Simpon, connections | 1.50 | |
| | Western Supply Co., fittings | .38 | |

744 A/c #1819*g*. 1912—#3.

*Domestic Fuel Appliances & Connections.*

Labor & Material.

| 1912. | | Charges. | Credits. |
|---|---|---|---|
| July (cont.) | | | |
| | Ord. #330, material used | 118.71 | |
| | Ord. #333, " returned | ..... | 8.55 |
| | Ord. #335, " used | 27.53 | |
| | Pay roll | 157.08 | |
| | Petty Jr., 136, labor & material | ..... | 231.20 |
| | Tr. Vo. 1430, barn exp. | 130.08 | |
| | | 451.75 | 239.75 |
| | | 239.75 | |
| | Balance | 212.00 | |

| | | | | |
|---|---|---|---|---|
| Aug. | 20. | L. G. & E. L. Co., rebates | 2.00 | |
| | 30. | Ord. #337, material used | 139.31 | |
| | | " #340 " returned | ..... | 5.76 |
| | | Pay Roll | 194.75 | |
| | | L. G. & E. L. Co., rebates | 23.25 | |
| | | Raymond Bros. Clarke Co., matches | 1.40 | |
| | | Rudge & Guenzel Co., smoke pipe | 4.05 | |
| | | Petty Jr. 138, labor & material | ..... | 259.40 |
| | | Tr. Vo. 1561, barn exp | 97.49 | |
| | | | 462.25 | 265.16 |
| | | | 265.16 | |
| | | Balance | 197.09 | |
| Sept. | 30. | Hall Bros. Co., screws | .15 | |
| | " | L. G. & E. L. Co., contg | .60 | |
| | | " " rebates | 4.45 | |
| | | Raymond Bros. Clarke Co., matches | 1.40 | |
| | | Standard Oil Co., candles | 2.98 | |
| | | Ord. #345, material used | 149.57 | |
| | | " #348, " returned | ..... | 7.87 |
| | | Petty Jr., 140, labor & material | ..... | 328.00 |
| | | Pay roll | 182.22 | |
| | | Tr. Vo. 1586, barn exp | 98.53 | |
| | | | 439.90 | 335.87 |
| | | | 335.87 | |
| | | Balance | 104.00 | |
| Oct. | 19. | Western Supply Co., tinned straps | 2.94 | |
| | 22. | L. G. & E. L. Co., rebates | 18.30 | |
| | 31. | " " " | 1.00 | |
| | " | Raymond Bros., soap & matches | 2.80 | |
| | | Standard Oil Co., candles | 2.98 | |
| | | Ord. #352, material used | 111.94 | |
| | | Ord. #355, " returned | ..... | 6.82 |
| | | Pay Roll | 217.36 | |
| | | Petty Jr. 142, labor & material | ..... | 249.84 |
| | | Tr. Vo. 1611, barn exp | 95.06 | |
| | | | 452.38 | 256.66 |
| | | | 256.66 | |
| | | Balance | 195.72 | |

745 A/c #1819*g*. 1912—#4.

*Domestic Fuel Appliances & Connections.*

Labor & Material.

| 1912. | | Charges. | Credits. |
|---|---|---|---|
| Nov. | 19. L. G. & E. L. Co., rebates | 4.50 | |
| | 25. J. G. Hetzel, cement | 13.18 | |
| | 30. C. B. & Q. Ry. Co., freight | 1.32 | |
| | Hall Bros. Co., nails | 1.16 | |
| | L. G. & E. L. Co., rebates | 3.95 | |
| | Raymond Bros. Clarke Co., matches | 2.80 | |
| | Standard Oil Co., candles | 2.98 | |
| | Ord. #357, material used | 109.28 | |
| | " 360, " returned | ..... | 4.25 |
| | Petty Jr., 144, labor & material | ..... | 155.85 |
| | Pay Roll | 161.84 | |
| | Tr. Vo. 1638, barn exp | 75.81 | |
| | | 376.82 | 160.10 |
| | | 160.10 | |
| | Balance | 216.72 | |
| Dec. | 18. L. G. & E. L. Co., rebates | 4.00 | |
| | 20. Western Supply Co., pipe straps | 2.94 | |
| | 31. L. G. & E. L. Co., rebates | .50 | |
| | Raymond Bros. Co., matches | 1.40 | |
| | Ord. #363, material used | 165.41 | |
| | " 366 " returned | ..... | 6.93 |
| | Pay roll | 138.41 | |
| | Petty Jr. 146, labor & material | ..... | 124.15 |
| | Tr. Vo. 1663, barn exp | 82.81 | |
| | | 395.47 | 131.08 |
| | | 131.08 | |
| | Balance | 264.39 | |

746 A/c No. 1819*h*. 1912—#1.

*Domestic Fuel Appliances & Connections.*

New Business Expense.

| 1912. | | |
|---|---|---|
| Jan. | Tr. Vo. 1382, month's proportion stationery | 35.85 |
| | L. G. & E. L. Co., cont'g | 1.22 |
| | Nebr. Tel. Co., phones | 3.70 |
| | H. L. Doherty & Co., Geo. Williams exp | 101.12 |
| | L. G. & E. L. Co., phones | 3.70 |

| | | | |
|---|---|---|---|
| | Pay Roll | 313.68 | |
| | Tr. Vo. 1395, month's proportion of rent | 35.00 | |
| | " " 1396, " " storeroom exp. | 27.15 | |
| | " " 1397, " " special office expense | 4.73 | 526.15 |
| Feb. | Nebr. Tel. Co., service | 3.70 | |
| | Tr. Vo. 1404, month's proportion of stationery exp. | 35.85 | |
| | L. G. & E. L. Co., cont'g | 1.59 | |
| | Lincoln Tel. & Tel. Co., phones | 4.34 | |
| | Pay Roll | 314.25 | |
| | Tr. Vo. 1419, month's proportion of rent | 72.51 | |
| | " " 1420, " " storeroom exp. | 41.23 | |
| | " " 1421, " " special office expense | .68 | 474.15 |
| Mar. | Tr. Vo. 1423, month's proportion stationery exp. | 35.85 | |
| | Lincoln Tel. Co., service | 4.34 | |
| | " " " " | 5.62 | |
| | Lincoln Printing Co., cards | 1.12 | |
| | L. G. & E. L. Co., cont'g | 2.70 | |
| | Rudge & Guenzel Co., misc. hdw | .80 | |
| | State Printing Co., cards | 1.28 | |
| | Pay Roll | 343.75 | |
| | Tr. Vo. 1438, month's proportion rent a/c | 58.55 | |
| | " " 1439, " " storeroom exp. | 51.91 | |
| | " " 1440, " " special off. exp. | 15.14 | 521.06 |
| Apr. | Tr. Vo. 1445, apportioned stationery exp. for month | 26.60 | |
| | L. G. & E. L. Co., cont'g | 1.23 | |
| | Lincoln Tel. Co., service | 7.40 | |
| | Lincoln Printing Co., cards | .96 | |
| | Pay Roll | 328.00 | |
| | Tr. Vo. 1462, apportionment rent a/c per month | 57.13 | |
| | Tr. Vo. 1463, " storeroom exp. per mo. | 48.73 | |
| | " " 1464, " special off. exp. per mo. | 35.07 | 505.12 |

747 A/c No. 1819*h*. 1912—#2.

| | | | |
|---|---|---|---|
| 1912. | | | |
| May. | Lincoln Tel. Co., service | 9.96 | |
| | Tr. Vo. 1467, apportionment stationery exp. per month | 26.60 | |
| | L. G. & E. L. Co., cont'g | 3.42 | |
| | Pay Roll | 328.00 | |

| | | | |
|---|---|---|---|
| | Tr. Vo. 1480, apportionment rent exp. a/c per month | 55.46 | |
| | " " 1481, " storeroom exp. per mo. | 48.00 | |
| | " " 1482, " special exp. office " | 42.56 | |
| | | | 514.00 |
| June. | Tr. Vo. 1488, stationery | 26.60 | |
| | Lincoln Tel. Co., service | 9.96 | |
| | L. G. & E. L. Co., cont'g | 1.18 | |
| | Pay Roll | 328.00 | |
| | Tr. Vo., 1506, rent a/c | 55.53 | |
| | " " 1507, storeroom a/c | 55.11 | |
| | " " 1508, special office exp. | 40.53 | |
| | | | 516.91 |
| July. | Tr. Vo. 1513, stationery | 26.60 | |
| | Lincoln Tel. Co., service | 12.52 | |
| | L. G. & E. L. Co., cont'g | 1.30 | |
| | Pay Roll | 328.00 | |
| | Tr. Vo. 1531, rent a/c | 55.95 | |
| | " " 1532, storeroom a/c | 46.15 | |
| | " " 1533, special office exp. | 47.67 | |
| | | | 518.19 |
| Aug. | Lincoln Tel. Co., service | 9.96 | |
| | Tr. Vo. 1536, Oil Cloth in windows | 13.90 | |
| | " " 1544, stationery | 26.60 | |
| | Pay Roll | 334.00 | |
| | L. G. & E. L. Co., cont'g | 2.13 | |
| | Tr. Vo. 1562, rent a/c | 58.30 | |
| | " " 1563, storeroom exp. | 45.83 | |
| | " " 1564, special office exp. | 42.84 | |
| | | | 533.56 |
| Sept. | Tr. Vo. 1569, stationery | 26.60 | |
| | L. G. & E. L. Co., cont'g | .48 | |
| | Lincoln Tel. & Tel. Co., services | 9.96 | |
| | Pay Roll | 328.00 | |
| | Tr. Vo. 1587, rent | 56.60 | |
| | " " 1588, storeroom exp. | 46.54 | |
| | " " 1589, special office exp. | 43.50 | |
| | | | 511.68 |
| Oct. | Tr. Vo. 1595, stationery | 26.60 | |
| | Lincoln Tel. & Tel. Co., service | 9.96 | |
| | H. L. Doherty & Co., W. E. Quillen, new business expert | 19.01 | |
| | L. G. & E. L. Co., cont'g | 2.70 | |
| | Pay Roll | 328.00 | |
| | Tr. Vo. 1612, rent | 56.35 | |
| | " " 1613, storeroom exp. | 45.75 | |
| | " " 1614, special office exp. | 10.89 | |
| | | | 499.26 |

748 A/c No. 1819*h*. 1912—#3.

| | | | |
|---|---|---|---|
| 1912. | | | |
| Nov. | H. L. Doherty & Co.,—W. E. Quillen, services & expense | 67.00 | |
| | Tr. Vo. 1620, stationery | 19.00 | |
| | Lincoln Tel. & Tel. Co., services | 9.96 | |
| | L. G. & E. L. Co., cont'g | .43 | |
| | Pay Roll | 328.00 | |
| | Tr. Vo. 1639, rent | 57.53 | |
| | " " 1640, storeroom exp. | 47.07 | |
| | " " 1641, special office exp. | 16.25 | |
| | | | 545.24 |
| Dec. | Tr. Vo. 1647, stationery | 19.00 | |
| | L. G. & E. L. Co., cont'g | 1.04 | |
| | Pay Roll | 310.25 | |
| | Tr. Vo. 1664, rent | 58.36 | |
| | " " 1665, storeroom exp. | 46.65 | |
| | " " 1666, special office exp. | 22.09 | |
| | | | 457.39 |

749 A/c #1820*h*. 1912—#1.

New Business Expense.

| | | Reg. or Vo. No. | |
|---|---|---|---|
| 1912. | | | |
| Jan'y 30. | Tr. Vo. 1385, Closing out Gen'l Gas Lt. Co. a/c | .... | 100.00 |
| 31. | Neb. Tel. Co., phones | 12505 | 1.04 |
| | H. L. Doherty & Co., Exp. Geo. Williams | 75 | 25.28 |
| | Lin. Tel. & Tel. Co., phones | 88 | 1.02 |
| | Pay Roll | .... | 42.92 |
| | Tr. Vo. 1401, closing out Gen'l Gas Lt. Co. a/c | .... | 328.47 |
| | | | 498.73 |
| Feb'y 29. | Neb. Tel. Co., service | 12663 | 1.04 |
| | Tr. Vo. 1406, Gen'l Gas Lt. Co. a/c | .... | 100.00 |
| | Lin. Tel. & Tel. Co., phones | 12728 | 1.18 |
| | Pay Roll | .... | 43.06 |
| | Tr. Vo. 1419, proportion of rent a/c | .... | 29.00 |
| | | | 174.28 |
| M'c'h 30. | Tr. Vo. 1426, Gen'l Gas Lt. Co. a/c | .... | 100.00 |
| | Lin. Tel. & Tel. Co., service | 12852 | 1.18 |
| | " " " " " " | 3 | 1.52 |
| | Lin. P'r't'g Co., cards | 6 | .28 |
| | State " " " | 89 | .32 |

| | | | | |
|---|---|---|---|---|
| | Pay Roll | .... | | 44.50 |
| | Tr. Vo. 1438, rent | .... | | 23.41 |
| | | | | 171.21 |
| April 30. | Lin. Tel Co., service | 13036 | | 2.06 |
| | " P'r't'g Co., cards | 40 | | .24 |
| | Tr. Vo. 1448, Gen'l Gas Lt. Co. a/c | .... | | 52.88 |
| | Pay Roll | .... | | 44.00 |
| | Tr. Vo. 1462, rent | .... | | 22.85 |
| | | | | 122.03 |
| May 22. | Lin. Tel. Co., service | 13162 | | 2.70 |
| 31. | Pay Roll | .... | | 44.60 |
| | Tr. Vo. 1480*b*, rent | .... | | 22.18 |
| | | | | 69.48 |

750 A/c #1820*h*. 1912—#2.

New Business Expense.

| 1912. | | Reg. or Vo. No. | |
|---|---|---|---|
| June 29. | Lin. Tel. Co., service | 13342 | 2.70 |
| | Pay Roll | .... | 44.00 |
| | Tr. Vo. 1506, rent | .... | 22.00 |
| | | | 68.70 |
| July 31. | Lin. Tel. Co., service | 13497 | 3.34 |
| | Pay Roll | .... | 44.00 |
| | Tr. Vo. 1531, rent | .... | 22.38 |
| | | | 69.72 |
| Aug. 26. | Lin. Tel. Co., service | 13677 | 2.70 |
| 31. | Pay Roll | .... | 45.50 |
| | Tr. Vo. 1562, rent | .... | 23.31 |
| | | | 71.51 |
| Sept. 30. | Lin. Tel. Co., service | 13918 | 2.70 |
| | Pay Roll | .... | 44.00 |
| | Tr. Vo. 1587, rent | .... | 22.64 |
| | | | 69.34 |
| Oct. 31. | Lin. Tel & Tel. Co., service | 14028 | 2.70 |
| | H. L. Doherty & Co., exp. W. E. Quillen | 14030 | 4.75 |

| | | | | |
|---|---|---|---|---|
| | Pay Roll | .... | | 44.00 |
| | Tr. Vo. 1612, rent | .... | | 22.54 |
| | | | | 73.99 |
| Nov. 19. | H. L. Doherty & Co., exp. & services of Quillen | 14165 | | 17.00 |
| 30. | Lin. Tel & Tel. Co., service | 14210 | | 2.70 |
| | Pay Roll | .... | | 44.00 |
| | Tr. Vo. 1639, rent | .... | | 23.02 |
| | | | | 86.72 |
| Dec. 31. | Pay Roll | .... | | 42.00 |
| | Tr. Vo. 1664, rent | .... | | 23.34 |
| | | | | 65.34 |

751 A/c No. 1891*a*. 1913—#1.

*Special Appraisement a/c and Expense of Dollar Gas Case.*

| | | | |
|---|---|---|---|
| 1913. | | | |
| Jan. | Sloan Huddle & Co., Vo. 13720 on a/c $2,650.00 Services | 500.00 | 500.00 |
| Feb. | Grant & Fulton, negatives & blue prints. | 6.33 | |
| | The Hall Bros. Co., tape line | 6.50 | |
| | Sloan, Huddle & Co., 14018, services | 1,650.00 | |
| | Western G. & P. Co., shellac & color | .55 | |
| | L. G. & E. L. Co., 13964, cont'g | 2.50 | |
| | Henry I. Lea, 13909, services | 500.00 | 2,165.88 |
| M'c'h. | H. L. Doherty, 14045, Nash, Cropper & Brodnax salaries | 303.34 | |
| | F. W. Brown, lbr. | .10 | |
| | Forbes Stables, livery, 14088 | 16.50 | |
| | George Bros., letterheads, stationery | 11.70 | |
| | Hall Bros., empty box | .75 | |
| | Lindell Hotel, 14102, room rent H. I. Lea. | 15.00 | |
| | Harry Porter, supplies | 8.80 | |
| | Rudge & Guenzel Co., hinges, lock & hook. | .45 | |
| | Palace Livery, 14155, livery | 10.00 | |
| | Lincoln G. & E. L. Co., 14105, cont'g express, etc. | 6.88 | |
| | Pay Roll | 133.33 | 506.85 |
| Apr. | H. L. Doherty & Co., 14222, exp. Brodnax, Nash & Cropper | 640.62 | |
| | Blazek Studio, prints | .90 | |

| | | | |
|---|---|---|---|
| | Denver G. & E. L. Co., 14326, Malone exp. (No explanation) | 85.10 | |
| | Grant & Fulton, negatives & prints | 10.30 | |
| | Hall Bros. Co., glass & cover | .95 | |
| | Henry I. Lea, 14237, appraisement | 1,000.00 | |
| | L. G. & E. L. Co., cont'g | .50 | |
| | Tr. Vo. 1754*a*, material purchased by Brodnax for appr. | 17.15 | |
| | Pay Roll | 95.00 | |
| | | | 1,850.52 |
| May. | Culbertson & Waite, appraising property | 10.00 | |
| | Green & Purbaugh " " | 25.00 | |
| | Henry I. Lea, 14387, appraisement service. | 1,000.00 | |
| 752 | A/c No. 1891*a*. 1913—#2. | | |
| 1913. | | | |
| May (cont.). | | | |
| | H. L. Doherty, 14390, appr. exp., Brodnax, Nash, Cropper & Friede | 644.65 | |
| | Roy Hindmarsh, photos | 10.00 | |
| | Geo. Campen, 14248, appraisement on gas mains and service | 307.22 | |
| | City Clerk, copy of agreement | 1.25 | |
| | Harry Porter, ferrules-screws | 6.47 | |
| | Rees Printing Co., 14533, 12 pair backs | 16.00 | |
| | State Journal Co., photos negatives | 24.50 | |
| | L. G. & E. L. Co., cont'g | 1.30 | |
| | Pay Roll | 75.00 | |
| | | | 2,121.29 |
| June. | H. L. Doherty, 14567, exp. appr. May salary Brodnax, Friede, Nash, Cropper | 398.85 | |
| | R. H. Gillespie, binders & court transcript. | 2.75 | |
| | Grant & Fulton, blue prints, city property. | 7.80 | |
| | L. G. & E. L. Co., cont'g | .80 | |
| | Pay Roll | 34.17 | |
| | | | 444.37 |
| Aug. | H. L. Doherty & Co., 14895, exp. May Cropper, Nash, Friede & Brodnax | 245.23 | |
| | Grant & Fulton, blue prints | 13.32 | |
| | Henry I. Lea, 14910, payment on a/c | 500.00 | |
| | | | 758.55 |
| Sept. | F. M. Cropper, 15048, R. R. fare Toledo-Lincoln & return & hotel | 68.70 | |
| | B. C. Adams, 15050, exp. return to Spokane & to Omaha & Dubuque | 80.00 | |
| | Henry I. Lea, 15051, payment on a/c | 500.00 | |

| | | | |
|---|---|---|---|
| | E. C. Strode, 14969, R. R. fare Omaha-Lincoln | 3.40 | |
| | Pay Roll | 93.00 | |
| | | | 745.10 |
| Oct. | E. C. Strode, 15285, exp. Omaha, Adams in $1 gas case | 35.80 | |
| Nov.17. | Fred D. Cornell, appraising property 33rd & X and 1st & M | 5.00 | |
| " 29. | Henry I. Lea, payment on acc't | 1,000.00 | |
| | Nebr. School of Business, typewriting | 5.10 | |
| | E. C. Strode, Phone to Rose & Sullivan (Omaha) | 3.20 | |
| | | | 1,065.30 |
| Dec. 31. | Minor S. Bacon, Reporting & transcb. testimony | 223.25 | |
| | Lindell Hotel, B. C. Adams, Hotel exp. | 64.70 | |
| | | | 287.95 |

753 & 754 1913—#1.

*Rebates & Allowances—Gas and Electric Light Furnished Free.*

1913.

Jan. 31. Vo. 13783:

| | A/c. #104 | A/c. #499 | |
|---|---|---|---|
| J. K. H., G. & E. | .84 | 3.38 | |
| E. B., Gas | 1.34 | 5.38 | |
| S. H. B., G. & E. | 5.72 | 23.09 | |
| H. H. H., G. & E. | 1.96 | 7.85 | |
| | 9.86 | 39.70 | 49.56 |
| | A/c. #101 | A/c. #496 | |
| C. O. W., G. & E. | 3.40 | 13.61 | 17.01 |
| | | | 76.57 |

Mar. 18. Vo. 14044:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| H. H. H., G. & E. | 2.05 | 8.19 | |
| E. B., Gas | 1.20 | 4.80 | |
| S. H. B., Elec. | .74 | 2.95 | |
| J. K. H., G. & E. | .87 | 3.48 | |
| | 4.86 | 19.42 | 24.28 |

Mar. 31. Vo. 14104:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| H. H. H., G. & E. | 1.65 | 6.61 | |
| S. H. B., G. & E. | .14 | .57 | |
| J. K. H., G. & E. | .71 | 2.85 | |
| | 2.50 | 10.03 | 12.53 |
| | | | 36.81 |

May 31. Vo. 14456:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| S. H. B., G. & E. | 5.95 | 23.81 | |
| H. H., G. & E. | 3.20 | 12.81 | |
| J. K. H., G. & E. | .59 | 2.38 | |
| E. B., Gas | 3.38 | 13.54 | |
| | 13.12 | 52.54 | 65.66 |

June 30. Vo. 14629:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| H. H. H., Gas & E. | 1.55 | 6.19 | |
| S. H. B., G. & E. | 1.64 | 6.58 | |
| | 3.19 | 12.77 | 15.96 |
| E. B., Gas | 1.08 | 4.32 | 5.40 |
| | | | 21.36 |

755 1913—#2.

1913.

July 31. Vo. 14796:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| H. H. H., G. & E. | 1.41 | 4.44 | |
| S. H. B., G. & E. | 4.87 | 7.80 | |
| E. B., Gas | .... | 3.72 | |
| | 6.28 | 15.96 | 22.24 |

Aug. 30. Vo. 14939:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| S. H. B., G. & E. | 1.86 | 7.43 | |
| J. K. H., G. & E. | 1.79 | 7.19 | |
| E. B. Gas | .86 | 3.46 | |
| H. H., G. & E. | 1.26 | 5.07 | |
| | 5.77 | 23.15 | 28.92 |

Sept. 18. Vo. 15031:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| (El Comfo loaned to Senator McKincek, C. K..... | .60 | 2.40) | |

Sept. 30. Vo. 15108:

| | A/c. #103 | A/c. #498 | |
|---|---|---|---|
| E. B., Gas ..... | 1.12 | 2.60 | |
| H. H., G. & E..... | 1.12 | 4.49 | |
| S. H. B., G. & E..... | 3.06 | 12.12 | |
| J. K. H., G. & E..... | .81 | 3.25 | |
| | 6.11 | 22.46 | 28.57 |

756 1913. 1913.

*Rebates & Allowances. Gas & Electric Light Furnished Free.*

Oct. 31. Vo. 15255:

| | 103 | 498 |
|---|---|---|
| J. K. H., Gas & Elec..... | 1.77 | 7.10 |
| H. H. H., Gas & Elec..... | 1.75 | 7.24 |
| E. B., Gas ..... | .69 | 2.79 |
| S. H. B., Gas & Elec..... | 4.97 | 19.87 |
| J. K. H., Elec..... | .18 | .76 |
| | 9.36 | 37.76 |

Nov. 29. Vo. 15406:

| | 103 | 498 |
|---|---|---|
| J. K. H., Gas & Elec..... | 1.77 | 7.10 |
| H. H., Gas & Elec..... | 1.79 | 7.15 |
| E. B., gas ..... | .65 | 2.59 |
| S. H. B., Gas & Elec..... | 5.62 | 22.49 |
| | 9.83 | 39.33 |

Dec. 31. Vo. 15554:

| | 103 | 498 |
|---|---|---|
| S. H. B., Gas & Elec..... | 6.12 | 24.47 |
| E. B., Gas ..... | .88 | 3.56 |
| J. K. H., Gas & Elec..... | 1.93 | 7.72 |
| H. H., Gas & Elec..... | 1.66 | 6.65 |
| | 10.59 | 42.40 |

757 *Rebates to T. H. Pratt.*
(Prior to Jan. 1, 1907.)

Taken from the Original Vouchers of the Lincoln Gas & Elec. Lt. Co.

| | | | | |
|---|---|---|---|---|
| | | | Vo. 362—Old Series—T. H. Pratt, Inc. | |
| Apr. | 1, | 1902. | exp. & gas bill—M'ch 1, 1902..... | $8.85 |
| April | 30, | " | Vo. 474—Old Series—T. H. P., gas..... | 1.05 |
| June | 10, | " | Vo. 660—Old Series—T. H. P., gas..... | 1.00 |
| July | 31, | " | Vo. 791—Old Series—T. H. P., gas..... | 1.60 |
| Aug. | 31, | " | Vo. 959—Old Series—T. H. P., gas..... | 1.95 |
| Oct. | 4, | " | Vo. 971—Old Series—T. H. Pratt, gas.. | 2.83 |
| Dec. | 6, | " | Vo. 1241—Old Series—Thos. H. Pratt, gas | 2.48 |
| Jan. | 6, | 1903. | Vo. 1304—Old Series—Thos. H. Pratt, gas | 1.45 |
| Jan. | 31, | " | Vo. 1401—Old Series—T. H. Pratt, gas for T. H. Pratt at 221 So. 17..... | 1.65 |
| Feb. | 28, | " | Vo. 1506—Old Series—T. H. Pratt, gas.. | 1.50 |
| M'ch | 31, | " | Vo. 1617—Old Series—T. H. Pratt, gas.. | 1.35 |
| Apr. | 30, | " | Vo. 1687—Old Series—T. H. Pratt, gas.. | 1.43 |
| May | 31, | " | Vo. 1775—Old Series—T. H. Pratt, gas.. | 1.65 |
| June | 30, | " | Vo. 1876—Old Series—T. H. Pratt, light. | 2.03 |
| Sept. | 30, | " | Vo. 2142—Old Series—T. H. Pratt, for fan | 2.50 |
| Oct. | 31, | " | Vo. 2223—Old Series—T. H. Pratt, gas & electricity ..... | 6.45 |
| Nov. | 30, | " | Vo. 2309—Old Series—T. H. Pratt, gas.. | 2.95 |
| Dec. | 31, | " | Vo. 2398—Old Series—T. H. Pratt, gas.. | 2.03 |
| Jan. | 31, | 1904. | Vo. 2479—Old Series—T. H. Pratt, gas.. | 2.45 |
| M'ch | 31, | " | Vo. 99—Orig. Series—T. H. Pratt, gas.. | 1.61 |
| Apr. | 30, | " | Vo. 184—T. H. Pratt, gas..... | 1.26 |
| June | 28, | " | Vo. 376—T. H. Pratt, gas..... | 3.10 |
| July | 31, | " | Vo. 502—T. H. Pratt, gas..... | 2.73 |
| Aug. | 31, | " | Vo. 607—T. H. Pratt, gas..... | 3.17 |
| Sept. | 30, | " | Vo. 706—T. H. Pratt, gas..... | 3.57 |
| Oct. | 31, | " | Vo. 799—T. H. Pratt, gas..... | 3.15 |
| Dec. | 29, | " | Vo. 1022—T. H. Pratt, gas..... | 2.76 |

758 *Rebates of T. H. Pratt.*

| | | | | |
|---|---|---|---|---|
| Jan'y | 28, | 1905. | Vo. 1128—T. H. Pratt, gas..... | 2.88 |
| Feb'y | 25, | " | Vo. 1215—T. H. Pratt, gas..... | 2.04 |
| May | 27, | " | Vo. 59—T. H. Pratt, gas..... | 7.56 |
| July | 31, | " | Vo. 314—T. H. Pratt, gas..... | 6.84 |
| Aug. | 28, | " | Vo. 324—T. H. Pratt, gas..... | 3.84 |
| Oct. | 28, | " | Vo. 600—T. H. Pratt, gas..... | 10.68 |

Vo. 2787—M'ch. 2807 contains the following rebate slips of T. H. Pratt.

| | | | | |
|---|---|---|---|---|
| Feb'y | 28, | 1906. | T. H. Pratt, gas..... | 14.55 |
| M'ch | 23, | " | T. H. Pratt, gas..... | 2.16 |

| | | | | |
|---|---|---|---|---|
| Apr. | 30, | " | T. H. Pratt, gas | 2.88 |
| June | 18, | " | T. H. Pratt, gas | 3.48 |
| Oct. | 10, | " | T. H. Pratt, gas | 20.40 |
| Nov. | 15, | " | T. H. Pratt, gas | 3.96 |
| Dec. | 20, | " | " " " " | 4.44 |

759 A/c No. —. 1913—#1.

*Sundry Expense.*

| | | | |
|---|---|---|---|
| 1913. | | | |
| Jan. | B. C. Adamas, 13697, H. L. D. & Co. Exp. Adams & Strode, N. Y., water power proj. | 200.00 | |
| | L. G. & E. L. Co., 137152, Bartless Inter. Ry. | 25.00 | |
| | L. G. & E. L. Co., 137152, City Lt. Tract. Co. Sedalia, Mo | 50.00 | 275.00 |
| Feb. | The Banks Law Pub. Co., E. C. S., 1 vol. 14485 | 18.00 | |
| | Chas. Olson, Real estate owner | 15.04 | |
| | L. G. & E. L. Co., Cusack Sign Co | .64 | |
| | L. G. & E. L. Co., 13961, J. C. Mitchell, collection charge | 5.00 | |
| | L. G. & E. L. Co., 13961, Bills Rea, J. A. Bogg's note | 169.23 | 207.91 |
| Mch. | H. L. Doherty & Co., 14024, H. L. D. & Co. Wired to H. L. D. & Co. at request of F. W. F | 6,000.00 | |
| | H. L. Doherty & Co., 10025 at request of F. W. F | 8,000.00 | |
| | H. L. Doherty & Co., 10026, at request of F. W. F | 6,000.00 | |
| | H. L. Doherty & Co., 10027, at request of F. W F | 5,000.00 | |
| | Lincoln Tel. & Tel. Co., 14033, Thos. Cusack Co | .85 | |
| | C., B. & Q., 14057, Lin. Tract. Co., coal | 15.00 | |
| | George Bros., 14092 | 29.80 | |
| | Hall Bros. Co., 14096, H. L. D. & Co | 3.50 | |
| | Nebr. Power Co., " " | 6.95 | |
| | Rudge & Guenzel Co., 14420 " | 1.00 | |
| | Western Glass & Paint Co., 14208, Nebr. Power Co | .60 | |
| | L. G. & E. L. Co., 14105, Notes rec. Lanc. Milk P. Asso | 144.17 | |
| | L. G. & E. L. Co., Henry Lea | 100.00 | |
| | L. G. & E. L. Co., H. L. D. & Co | 81.54 | |

| | | | |
|---|---|---|---|
| | Pay Roll, Nebr. Power Co. | 11.00 | |
| | F. S. Martin & Co., Lin. Tract. Co. case. | 13.50 | |
| | Tr. Vo. 1728, Havelock Stock & Bonds, int. rec. | 50.00 | |
| | Western Supply Co., 14039, Nebr. Power Co. | 2.94 | |
| | | | 25,460.85 |
| Apr. | Lincoln Tel. Co., 14200, Cusack Sign Co. | .35 | |
| | Tr. Vo. 1750, Have lock Elect. Co., int. rec. | 50.00 | |
| | L. G. & E. L. Co., 14276, H. L. D. & Co. | 3.75 | |
| | L. G. & E. L. Co, Nebr. Power Co. | .39 | |
| | J. North & Co., 14284, H. L. D. & Co. | 7.25 | |
| | Office Equip. & Supply Co. 14288, H. L. D. & Co. | 3.00 | |
| | L. G. & E. L. Co., Freemont G. & El. & P. Co. | 1,500.00 | |
| | Pay Roll, real estate owner | 9.25 | |
| | | | 1,573.99 |

760 A/c No. —. 1913—#2.

1913.

| | | | |
|---|---|---|---|
| May | John Bushnell, 14270, Toledo Tract. Lt. & Power Co. | 30.00 | |
| | J. E. Trexler, 14365, United Water & Power Co. | 25.00 | |
| | C. G. Crittenden, 14246, H. L. D. & Co. taking up certificate of sub. Mont. L. & Pw. Co. pool | 1,026.79 | |
| | L. G. & E. L. Co., 14385, L. G. & E. L. Co., taking up $50 in certif. of indebtedness, Doherty Invest. Co. | 50.00 | |
| | Remington Typewriter Co., 14480, H. L. D. & Co. | 105.30 | |
| | L. G. & E. L. Co., Havelock Elec. Co. | 200.00 | |
| | | | 1,437.09 |
| June | Lincoln Tel. Co., 14553, Nebr. Power Co. | 3.10 | |
| | L. G. & E. L. Co., 14556, E. Erickson, certif. of indebtedness | 25.00 | |
| | L. G. & E. L. Co., 14571, Thos. Cusack Co. | 1.29 | |
| | | | 29.39 |
| July | L. G. & E. L. Co., 14591, P. C. Parks | 159.30 | |
| | B. C. Adams, 14732, Country Club Bonds $50 | 100.00 | |
| | B. C. Adams, 14750, Exp. to N. Y., spec. trav. exp. (no explanation) | 195.00 | |
| | | | 454.30 |

| | | | |
|---|---|---|---|
| Aug. | B. C. Adams, 14761, Spokane Gas & F. Co. | 100.00 | |
| | Tr. Vo. 1846*a*, H. L. D. & Co., int. onr. running a/c—7 | 1,219.89 | |
| | L. G. & E. L. Co., 14940, Thos. Cusack Co. | 64 | |
| | Nebr. Power Co | .25 | |
| | | | 1,320.78 |
| Sept. | B. C. Adams, 15050, Spokane G & F. Co. | 250.00 | |
| | | | 250.00 |
| Oct. | G. L. Babst, Sec'y 15178, Co. Club, bonds. | 100.00 | |
| | H. L. D. & Co., 15210, H. L. D. & Co | 5,000.00 | |
| | " " " " " " 15211 " | 10,000.00 | |
| | " " " " " " 15212 " | 5,000.00 | |
| | E. C. S., 15254, H. L. D. Co. (copy re Beatrice E. L. Co.) | 13.50 | |
| | | | 20,113.50 |
| Nov. 11. | B. C. Adams, Spokane Gas & Fuel Co. | 50.00 | |
| 29. | Tr. Vo. 1941, Ill. Elec. Co., Chicago, credit memo | 125.36 | |
| | Tr. Vo. 1942, Humphrey Co., Kalamazoo, Mich., credit memo | 489.94 | |
| | Tr. Vo. 1942, Nernst Lamp Co., Pittsburgh, Pa., credit memo | 266.57 | |
| | | | 931.87 |

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|---|---|---|---|
| 1913. | | | |
| Dec. 31. | L. G. & E. L. Co., Thos. Cusack Co | .57 | |
| | Tr. Vo. 1963*a*—H. L. Doherty & Co., rebate on appliances | 97.67 | |
| | Tr. Vo. 1963*a*—Lincoln Traction Co., pole expense to be born- by Lincoln Tr. Co | 190.05 | |
| | | | 288.29 |

*Executive Salaries from* 1904 *to* 1912, *Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department* (*Excluding Items Not Common to Both Departments*).

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| 1904. | March. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. Eglington, salary | 12.50 | 12.50 | 25.00 |
| | | Emerson McMillin & Co., payment coupons | 12.50 | 12.50 | 25.00 |
| 1904. | April. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| | | R. P. Jones, director's fees | 15.00 | 15.00 | 30.00 |
| | | Emerson McMillin & Co., Ex. Salary | 18.39 | 18.39 | 36.78 |
| 1904. | May. | A. Eglington, salary | 12.50 | 12.50 | 25.00 |
| | | H. L. Doherty, " | 125.00 | 125.00 | 250.00 |
| 1904. | June. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| 1904. | July. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| | | Emerson McMillin & Co., Transfer fees | 60.00 | 60.00 | 120.00 |
| 1904. | Aug. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| | | Chemical Nat'l Bk., int | 12.48 | 12.48 | 24.96 |
| 1904. | Sept. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| 1904. | Oct. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| 1904. | Nov. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |

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|---|---|---|---|---|---|
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| 1904. | Dec. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| | | Emerson McMillin & Co., coupons | 12.45 | 12.44 | 24.89 |
| 763 | | | | | |
| 1905. | Jan. | Trust Co. of Am., Reg. Service for 1 yr | 18.75 | 18.75 | 37.50 |
| | | A. L. Eglington, salary | 12.50 | 12.50 | 25.00 |
| | | H. L. Doherty, " | 125.00 | 125.00 | 250.00 |
| 1905. | Feb. | Chemical Nat'l Bank, Bond Int | 12.49 | 12.49 | 24.98 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| 1905. | March. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| | | Pay Roll | 30.00 | 30.00 | 60.00 |
| 1905. | April. | Paul R. Jones, Sec'y, Director's fees | 25.00 | 25.00 | 50.00 |
| | | A. L. Eglington, salary | 12.50 | 12.50 | 25.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | Pay Roll | 30.00 | 30.00 | 60.00 |
| 1905. | May. | A. L. Eglington, salary | 12.50 | 12.50 | 25.00 |
| | | H. L. Doherty, " | 125.00 | 125.00 | 250.00 |
| | | Pay Roll | 30.00 | 30.00 | 60.00 |
| 1905. | June. | Emerson McMillin & Co., Audit Books | 13.95 | 13.00 | 26.95 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Eglington, " | 12.50 | 12.50 | 25.00 |
| | | Pay Roll | 30.00 | 30.00 | 60.00 |
| 1905. | July. | Pay roll | 30.00 | 30.00 | 60.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | E. A. Astron, " | 12.50 | 12.50 | 25.00 |
| 1905. | Aug. | Emerson McMillin & Co., Transfer Fee | 5.00 | 5.00 | 10.00 |

*Executive Salaries from* 1904 *to* 1912, *Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department* (*Excluding Items Not Common to Both Departments*).

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| | | Chemical Nat'l Bank, fees | 12.49 | 12.49 | 24.98 |
| | | Paul Jones, Sec'y, Director's fees | 25.00 | 25.00 | 50.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. N. Ostran, " | 12.50 | 12.50 | 25.00 |
| | | Pay Roll | 75.00 | 75.00 | 150.00 |
| 1905. | Sept. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. N. Ostran, " | 12.50 | 12.50 | 25.00 |
| | | Pay Roll | 75.00 | 75.00 | 150.00 |
| 1905. | Oct. | Pay roll | 75.00 | 75.00 | 150.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. N. Ostran, " | 12.50 | 12.50 | 25.00 |
| 764 | | | | | |
| 1905. | Nov. | R. W. Horton, Director's fees | 20.00 | 20.00 | 40.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. L. Ostran, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1905. | Dec. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. N. Ostran, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1906. | Jan. | R. W. Horton, Sec., Director's fees | 20.00 | 20.00 | 40.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. N. Ostran, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |

| | | | | | |
|---|---|---|---|---|---|
| 1906. | Feb. | Chemical Nat'l Bank, Fees Corall Bond | 12.49 | 12.49 | 24.98 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1906. | March. | Pay roll | 75.00 | 75.00 | 150.00 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| 1906. | April. | Pay roll | 75.00 | 75.00 | 150.00 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| 1906. | May. | Pay Roll | 75.00 | 75.00 | 150.00 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| 1906. | June. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1906. | July. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1906. | Aug. | Trust Co. of Am., Reg. Stock | 18.75 | 18.75 | 37.50 |
| | | Chemical Nat'l Bank, fees | 12.49 | 12.49 | 24.98 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 765 | | | | | |
| 1906. | Sept. | Emerson McMillin Co., Reg. stock | 18.75 | 18.75 | 37.50 |
| | | Emerson McMillin Co., Transfer fees | 7.50 | 7.50 | 15.00 |
| | | A. L. T. Co., auditing | 5.93 | 5.93 | 11.86 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |

*Executive Salaries from 1904 to 1912, Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department (Excluding Items Not Common to Both Departments).*

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1906. | Oct. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1906. | Nov. | R. W. Horton, Sec., Director's fees | 40.00 | 40.00 | 80.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, salary | 12.50 | 12.50 | 25.00 |
| 1906. | Dec. | Trust Co. of Am., Proving Bonds & Cremating proof | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| | | A. H. Ostron, salary | 12.50 | 12.50 | 25.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| 1907. | Jan. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | F. J. Rehlander, cash contg | 25.00 | 25.00 | 50.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1907. | Feb. | Chemical Nat'l Bank | 12.48 | 12.48 | 24.96 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 75.00 | 75.00 | 150.00 |
| 1907. | Mar. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | H. Honewell, " | 36.46 | 36.46 | 72.92 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |

| | | | | | |
|---|---|---|---|---|---|
| | | Pay roll | 89.58 | 89.58 | 179.16 |
| 1907. | Apr. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1907. | May. | Harry Womer, Director's fees | 20.00 | 20.00 | 40.00 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| 766 | | | | | |
| 1907. | May. | A. H. Ostron, salary | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1907. | June. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1907. | July. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1907. | Aug. | Chemical Nat'l Bank, int. | 12.49 | 12.49 | 24.98 |
| | | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | Emerson McMillin Co., fees, coupons | 112.99 | 56.79 | 169.78 |
| | | A. H. Ostron, salary | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1907. | Sept. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1907. | Oct. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1907. | Nov. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |

*Executive Salaries from* 1904 *to* 1912, *Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department (Excluding Items Not Common to Both Departments).*

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| 1907. | Dec. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1908. | Jan. | Henry L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1908. | Feb. | Chemical Nat'l Bank, int. | 12.49 | 12.49 | 24.98 |
| | | Lincoln Gas & Elec. Lt. Co., contg. (5695) | 25.00 | 25.00 | 50.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 766½ | | | | | |
| 1908. | Mch. | A. H. Ostron, salary | 12.50 | 12.50 | 25.00 |
| | | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | Pay roll | 104.18 | 104.18 | 208.36 |
| 1908. | Apr. | H. L. Doherty, salary | 125.00 | 125.00 | 250.00 |
| | | A. H. Ostron, " | 12.50 | 12.50 | 25.00 |
| | | Pay roll | 135.43 | 72.91 | 208.34 |
| 1908. | May. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 166.68 | 41.67 | 208.35 |
| 1908. | June. | Henry L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |

| | | | | | |
|---|---|---|---|---|---|
| | | Emerson McMillin Co. Trust Co. of Am. (6294) | 30.00 | 7.50 | 37.50 |
| | | Pay roll | 166.68 | 41.67 | 208.35 |
| 1908. | July. | L. G. & E. L. Co., director's fees | 25.00 | 25.00 | 50.00 |
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 166.68 | 41.67 | 208.35 |
| 1908. | Aug. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Emerson McMillin Co., Trans. fee & pay. of coupons | 135.82 | 33.96 | 169.78 |
| | | Pay roll | 166.68 | 41.67 | 208.35 |
| | | Chemical Nat'l Bk | 12.49 | 12.48 | 24.97 |
| 1908. | Sept. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 166.68 | 41.67 | 208.35 |
| 1908. | Oct. | H. L. Doherty, " | 200.00 | 50.00 | 250.00 |
| | | Doherty Oprtg. Co., Exp. Jones | 16.00 | 4.00 | 20.00 |
| | | A. H. Ostron, salary | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 166.68 | 41.66 | 208.34 |
| 1908. | Nov. | Doherty Oprtg. Co. | 131.60 | 56.40 | 188.00 |
| | | A. H. Ostron, salary | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 166.68 | 41.67 | 208.35 |
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| 1908. | Dec. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | Doherty Op. Co., H. H. Scott, 6 da | 120.00 | 30.00 | 150.00 |
| | | A. H. Ostron, salary | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 166.68 | 41.67 | 208.35 |
| 767 | | | | | |
| 1909. | Jan. | Lin. G. & E. Lt. Co., contg. (7187- | 56.00 | 14.00 | 70.00 |
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |

*Executive Salaries from 1904 to 1912, Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department (Excluding Items Not Common to Both Departments).*

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| | | Emerson McMillin Co., Trust Co. of Am | 30.00 | 7.50 | 37.50 |
| | | A. H. Ostron, salary | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 160.00 | 40.00 | 200.00 |
| 1909. | Feb. | Chemical Nat'l Bank Commissions (7353) | 16.64 | 8.33 | 24.97 |
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | Mar. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | April. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | May. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Lin. G. & E. Lt. Co., contg. (7877) | 80.00 | 20.00 | 100.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | June. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | July. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | Aug. | Chemical Nat'l Bank Commissions | 16.64 | 8.33 | 24.97 |

| | | | | | |
|---|---|---|---|---|---|
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | Emerson McMillin Co., pmt. of coupons & trans., agent fees | 183.78 | 46.00 | 229.78 |
| | | Linc. G. & E. Lt. Co., contg. (8266) | 40.00 | 10.00 | 50.00 |
| | | A. H. Ostron, salary | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | Sept. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 768 | | | | | |
| 1909. | Oct. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | Nov. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1909. | Dec. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Ostron, " | 20.00 | 5.00 | 25.00 |
| | | Trust Co. of Am., Fees, registration of stock | 30.00 | 7.50 | 37.50 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1910. | Jan. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | L. G. & E. L. Co., contg. (8989) | 40.00 | 10.00 | 50.00 |
| | | A. H. Ostron, salary | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1910. | Feb. | Chemical Nat'l Bank, Commissions (9087) | 16.64 | 8.33 | 24.97 |
| | | A. H. Armstrong, salary | 133.33 | 33.34 | 166.67 |
| | | H. L. Doherty, " | 200.00 | 50.00 | 250.00 |
| | | Doherty Op. Co., H. H. Scott | 48.00 | 12.00 | 60.00 |
| | | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |

*Executive Salaries from 1904 to 1912, Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department (Excluding Items Not Common to Both Departments).*

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| | | E. H. Smith, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1910. | March. | A. H. Armstrong, salary | 133.33 | 33.34 | 166.67 |
| | | Henry L. Doherty, " | 200.00 | 50.00 | 250.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " 8 da. in Jan | 34.40 | 8.60 | 43.00 |
| | | Doherty Op. Co., Stock Reg. fee | 30.00 | 7.50 | 37.50 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| 1910. | April. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 260.00 | 65.00 | 325.00 |
| | | L. G. & E. Lt. Co., Contg. (9462) | 40.00 | 10.00 | 50.00 |
| 769 | | | | | |
| 1910. | May. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | F. W. Freuauff, " | 166.00 | 40.00 | 106.00 |
| | | Pay roll | 290.00 | 72.50 | 362.50 |
| 1910. | June. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |

| | | | | | |
|---|---|---|---|---|---|
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 1910. | July. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.00 | 33.25 | 166.25 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 1910. | Aug. | Chemical Nat'l Bank, Commissions (9931) | 16.64 | 8.33 | 24.97 |
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Emerson McMillin Co., Transfee Fee (10002) | 144.00 | 36.00 | 180.00 |
| | | Trust Co. of Am., Fee as Reg. (10027) | 30.00 | 7.50 | 37.50 |
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 1910. | Sept. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 1910. | Oct. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.00 | 33.25 | 166.25 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 1910. | Nov. | E. A. Smith, salary | 20.00 | 5.00 | 25.00 |
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |

*Executive Salaries from* 1904 *to* 1912, *Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department (Excluding Items Not Common to Both Departments).*

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 770 | | | | | |
| 1910. | Dec. | A. H. Armstrong, salary | 133.33 | 33.34 | 166.67 |
| | | H. L. Doherty, " | 200.00 | 50.00 | 250.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 1911. | Jan. | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | H. L. Doherty, " | 200.00 | 50.00 | 250.00 |
| | | Pay roll | 320.00 | 80.00 | 400.00 |
| 1911. | Feb. | Emerson McMillin Co., Service (10788) | 72.00 | 18.00 | 90.00 |
| | | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Chemical Nat'l Bank, Exec. Sal. (10823) | 16.64 | 8.33 | 24.97 |
| | | L. G. & E. Lt. Co., contg. (10823) | 32.00 | 8.00 | 40.00 |
| | | Pay roll | 314.38 | 78.60 | 392.98 |
| 1911. | March. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | A. H. Armstrong, " | 133.33 | 33.34 | 166.67 |

| | | | | | |
|---|---|---|---|---|---|
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 280.00 | 70.00 | 350.00 |
| 1911. | April. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | H. L. Doherty & Co., Coms. (11163) | 74.00 | 18.50 | 92.50 |
| | | L. G. & E. Lt. Co., contg. | 40.00 | 10.00 | 50.00 |
| | | Pay roll | 280.00 | 70.00 | 350.00 |
| 1911. | May. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | H. L. Doherty & Co., Misc. Exp. (11315) | 240.00 | 60.00 | 300.00 |
| | | Pay roll | 280.00 | 70.00 | 350.00 |
| 1911. | June. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 280.00 | 70.00 | 350.00 |
| 770½ | | | | | |
| 1911. | July. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | E. A. Smith, " | 20.00 | 5.00 | 25.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 280.00 | 70.00 | 350.00 |
| 1911. | Aug. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | C. B. Gilbert, " | 20.00 | 5.00 | 25.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | Emerson McMillin Co., Transfer fees (11739) | 48.00 | 12.00 | 60.00 |
| | | Pay roll | 300.00 | 75.00 | 375.00 |
| 1911. | Sept. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | C. B. Gilbert, " | 20.00 | 5.00 | 25.00 |

*Executive Salaries from* 1904 *to* 1912, *Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department (Excluding Items Not Common to Both Departments).*

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | H. L. Doherty & Co., Transfer Fees (11932) | 30.00 | 7.50 | 37.50 |
| | | Pay roll | 300.00 | 75.00 | 375.00 |
| 1911. | Oct. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | C. B. Gilbert, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 300.00 | 75.00 | 375.00 |
| 1911. | Nov. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | C. B. Gilbert, " | 20.00 | 5.00 | 25.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | H. L. Doherty & Co., Service (12202) | 107.52 | 26.88 | 134.40 |
| | | Pay roll | 300.00 | 75.00 | 375.00 |
| 1911. | Dec. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | C. B. Gilbert, " | 20.00 | 5.00 | 25.00 |
| | | Pay roll | 300.00 | 75.00 | 375.00 |
| 1912. | Jan. | Henry L. Doherty, salary | 200.00 | 50.00 | 250.00 |
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | C. B. Gilbert " | 20.00 | 5.00 | 25.00 |
| | | Hy. L. Doherty & Co., Commissions (12575) | 38.35 | 9.59 | 47.94 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 771 | | | | | |
| 1912. | Feb. | H. L. Doherty, salary | 200.00 | 50.00 | 250.00 |

| | | | | | |
|---|---|---|---|---|---|
| | | F. W. Freuauff, " | 160.00 | 40.00 | 200.00 |
| | | C. B. Gilbert, " | 20.00 | 5.00 | 25.00 |
| | | Emerson McMillin Co., Transfer fees (12654) | 48.00 | 12.00 | 60.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 1912. | March. | H. L. Doherty & Co., Commissions (12816) | 78.00 | 19.50 | 97.50 |
| | | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 1912. | April. | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | H. L. Doherty & Co., salary | 220.00 | 55.00 | 275.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 1912. | May. | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | H. L. Doherty & Co., salary | 220.00 | 55.00 | 275.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 1912. | June. | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | Henry L. Doherty, salary | 220.00 | 55.00 | 275.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 1912. | July. | Hy. L. Doherty & Co., Sal. & Com. (13526) | 258.35 | 64.59 | 322.94 |
| | | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 1912. | Aug. | Hy. L. Doherty & Co., salary | 220.00 | 55.00 | 275.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| | | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | Windsor Trust Co., services (13798) | 40.00 | 10.00 | 50.00 |
| 1912. | Sept. | H. L. Doherty & Co., salaries & Commissions | 280.00 | 70.00 | 350.00 |
| | | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |
| 1912. | Oct. | H. L. Doherty & Co., salary Sept. | 220.00 | 55.00 | 275.00 |
| | | F. W. Freuauff, salary | 160.00 | 40.00 | 200.00 |
| | | Pay roll | 340.00 | 85.00 | 425.00 |

*Executive Salaries from* 1904 *to* 1912, *Both Inclusive, Showing Growth, and Division Between Gas Department and Electric Department* (*Excluding Items Not Common to Both Departments*).

Executive Salaries.

| Year. | Month. | Item. | Gas. | Elec. | Total. |
|---|---|---|---|---|---|
| 772 | | | | | |
| 1912. | Nov. | H. L. Doherty & Co., sal. Oct..... | 220.00 | 55.00 | 275.00 |
| | | F. W. Freuauff, salary..... | 160.00 | 40.00 | 200.00 |
| | | Pay roll ..... | 340.00 | 85.00 | 425.00 |
| 1912. | Dec. | H. L. Doherty & Co., sal. for Nov. (14292)..... | 253.60 | 63.40 | 317.00 |
| | | F. W. Freuauff, salary..... | 160.00 | 40.00 | 200.00 |
| | | Pay roll ..... | 340.00 | 85.00 | 425.00 |

773 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Repoprts.)

| 1913. | Banks. | Office. | Bal. on hand. |
|---|---|---|---|
| Jan'y ..... | 32,064.73 | 2,993.13 | 35,057.86 |
| Feb'y ..... | 41,361.96 | 1,992.93 | 43,354.89 |
| M'ch ..... | 25,299.17 | 2,769.06 | 28,068.23 |
| April ..... | 30,042.43 | 2,811.86 | 32,854.29 |
| May ..... | 20,293.55 | 2,304.20 | 22,597.75 |
| June ..... | 24,290.70 | 2,222.72 | 26,513.42 |
| July ..... | 13,087.28 | 1,865.85 | 14,953.13 |
| Aug. ..... | 17,419.74 | 2,870.89 | 20,290.63 |
| Sept. ..... | 28,509.28 | 2,075.78 | 30,585.06 |
| Oct. ..... | 14,811.20 | 2,189.08 | 17,000.28 |
| Nov. ..... | 10,987.79 | 3,743.96 | 14,731.75 |
| Dec. ..... | 26,912.70 | 1,460.91 | 28,373.61 |

| | |
|---|---|
| Average monthly balance in bank..... | $23,756.70 |
| Average monthly balance in office..... | 2,441.70 |
| Average monthly balance on hand..... | 26,198.40 |

774 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1912. | Banks. | Office. | Bal. on hand. |
|---|---|---|---|
| Jan'y ..... | 40,792.01 | 2,016.96 | 42,808.97 |
| Feb'y ..... | 49,897.08 | 2,279.05 | 52,176.13 |
| M'ch ..... | 44,849.81 | 2,122.00 | 46,971.81 |
| April ..... | 49,772.62 | 2,372.42 | 52,145.04 |
| May ..... | 37,208.50 | 2,351.23 | 39,559.73 |
| June ..... | 50,549.74 | 1,919.99 | 52,469.73 |
| July ..... | 36,520.45 | 2,304.51 | 38,824.96 |
| Aug. ..... | 39,520.79 | 2,211.05 | 41,731.84 |
| Sept. ..... | 47,387.13 | 3,254.75 | 50,641.88 |
| Oct. ..... | 55,247.15 | 2,391.69 | 57,638.84 |
| Nov. ..... | 33,695.02 | 2,805.73 | 36,500.75 |
| Dec. ..... | 43,342.23 | 3,158.76 | 46,500.99 |

| | |
|---|---|
| Average monthly balance in banks..... | $44,065.21 |
| Average monthly balance in office..... | 2,431.60 |
| Average monthly balance on hand..... | 46,497.55 |

775 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1911. | Banks. | Office. | Bal. on hand. |
|---|---|---|---|
| Jan'y ..... | 14,926.84 | 2,256.80 | 17,183.64 |
| Feb'y ..... | 12,276.06 | 1,611.56 | 13,887.62 |
| M'ch ..... | 10,648.63 | 1,513.75 | 12,162.41 |
| April ..... | 13,702.55 | 1,522.95 | 15,225.50 |
| May ..... | 7,737.33 | 2,319.66 | 10,056.99 |
| June ..... | 27,845.07 | 1,673.25 | 29,519.32 |
| July ..... | 27,034.80 | 2,753.54 | 29,788.34 |
| Aug. ..... | 27,578.29 | 1,880.58 | 29,458.87 |
| Sept. ..... | 40,162.25 | 1,560.74 | 41,722.99 |
| Oct. ..... | 36,168.07 | 2,255.10 | 38,423.17 |
| Nov. ..... | 38,404.17 | 2,152.96 | 40,557.13 |
| Dec. ..... | 36,780.06 | 2,471.24 | 39,251.30 |

| | |
|---|---|
| Average monthly balance in bank..... | $24,438.76 |
| Average monthly balance in office..... | 1,997.67 |
| Average monthly balance on hand..... | $26,436.44 |

776 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1910. | Banks. | Office. | Bal. on hand. |
|---|---|---|---|
| Jan'y ..... | 574.49 | 1,624.73 | 2,199.22 |
| Feb'y ..... | 2,530.39 | 1,100.16 | 3,630.55 |
| M'ch ..... | 4,834.28 | 2,514.96 | 7,349.24 |
| April ..... | 9,732.58 | 1,794.54 | 11,527.12 |
| May ..... | 9,903.77 | 1,311.38 | 11,215.15 |
| June ..... | 6,726.42 | 2,114.22 | 8,840.64 |
| July ..... | 5,861.51 | 1,831.53 | 7,693.04 |
| Aug. ..... | 5,915.53 | 1,556.09 | 7,471.62 |
| Sept. ..... | 4,403.19 | 1,464.52 | 5,867.71 |
| Oct. ..... | 7,572.36 | 1,394.06 | 8,963.42 |
| Nov. ..... | 6,311.92 | 2,309.84 | 8,621.76 |
| Dec. ..... | 13,517.68 | 1,684.27 | 15,201.95 |

| | |
|---|---|
| Average monthly balance in banks..... | $6,490.34 |
| Average monthly balance in office..... | 1,725.02 |
| Average monthly balance on hand..... | 8,215.37 |

777 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1909. | Banks. | Bank overdrafts. | Office. | Balance. | Overdrafts. |
|---|---|---|---|---|---|
| Jan'y. | ..... | 5,705.52 | 2,559.91 | ..... | 3,145.61 |
| Feb'y. | ..... | 5,010.96 | 4,048.20 | ..... | 962.76 |
| M'ch. | 2,705.40 | ..... | 1,638.15 | 4,343.55 | ..... |
| Apr. | ..... | 800.80 | 2,011.61 | 1,210.81 | ..... |
| May. | 1.53 | ..... | 2,375.82 | 2,377.35 | ..... |
| June. | ..... | 284.33 | 1,853.78 | 1,569.45 | ..... |
| July. | ..... | 2,103.52 | 1,896.31 | ..... | 207.21 |
| Aug. | ..... | 2,705.09 | 1,536.93 | ..... | 168.16 |
| Sept. | 187.22 | ..... | 1,319.35 | 1,506.57 | ..... |
| Oct. | ..... | 463.29 | 1,875.78 | 1,412.49 | ..... |
| Nov. | 1,275.65 | ..... | 1,033.75 | 2,309.40 | ..... |
| Dec. | ..... | 4,185.85 | 1,377.19 | ..... | 2,808.66 |

778 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1908. | Banks. | Bank overdrafts. | Office. | Balance. | Overdrafts. |
|---|---|---|---|---|---|
| Jan'y. | ..... | 11,889.45 | 4,641.78 | ..... | 7,247.67 |
| Feb'y. | ..... | 12,390.55 | 3,703.30 | ..... | 8,687.25 |
| M'ch. | ..... | 5,751.51 | 3,790.32 | ..... | 1,961.19 |
| April. | ..... | 4,992.40 | 4,805.36 | ..... | 187.04 |
| May. | ..... | 2,079.24 | 4,078.08 | 1,998.84 | ..... |
| June. | 3,355.57 | ..... | 5,473.09 | 8,828.66 | ..... |
| July. | 1,158.63 | ..... | 6,980.62 | 8,139.25 | ..... |
| Aug. | ..... | 2,712.41 | 5,060.75 | 2,348.34 | ..... |
| Sept. | ..... | 2,882.34 | 5,396.74 | 2,514.40 | ..... |
| Oct. | ..... | 1,711.07 | 5,505.73 | 3,794.66 | ..... |
| Nov. | ..... | 3,746.67 | 3,437.81 | ..... | 308.86 |
| Dec. | ..... | 1,269.84 | 4,193.93 | 2,924.09 | ..... |

779 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1907. | Banks. | Bank overdrafts. | Office. | Balance. | Overdrafts. |
|---|---|---|---|---|---|
| Jan'y. | ..... | 9,579.55 | 3,162.74 | ..... | 6,416.81 |
| Feb'y. | ..... | 1,893.67 | 3,044.35 | 1,150.68 | ..... |
| M'ch. | ..... | 5,490.69 | 3,226.32 | ..... | 2,264.37 |
| April. | 3,088.88 | ..... | 1,879.19 | 4,888.07 | ..... |
| May. | ..... | 3,059.83 | 1,899.36 | ..... | 1,160.47 |
| June. | ..... | 7,275.89 | 2,276.16 | ..... | 4,999.73 |
| July. | ..... | 3,639.23 | 1,742.79 | ..... | 1,896.44 |
| Aug. | ..... | 870.78 | 2,379.59 | 1,508.81 | ..... |
| Sept. | ..... | 6,763.53 | 2,039.33 | ..... | 4,724.20 |
| Oct. | ..... | 7,275.03 | 5,312.19 | ..... | 1,962.84 |
| Nov. | ..... | 27,895.57 | 2,303.91 | ..... | 25,591.66 |
| Dec. | ..... | 21,065.33 | 7,777.27 | ..... | 13,288.06 |

780 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1906. | Banks. | Bank overdrafts. | Office. | Balance. | Overdrafts. |
|---|---|---|---|---|---|
| Jan'y. | ..... | 5,375.91 | 1,398.00 | ..... | 3,977.91 |
| Feb'y. | ..... | 7,927.67 | 1,500.38 | ..... | 6,427.29 |
| M'ch. | ..... | 10,442.70 | 1,444.58 | ..... | 8,998.12 |
| April. | ..... | 337.80 | 1,295.24 | 957.44 | ..... |
| May. | ..... | 1,949.80 | 1,038.02 | ..... | 311.78 |
| June. | ..... | 7,439.43 | 1,264.87 | ..... | 6,174.56 |
| July. | ..... | 3,162.78 | 1,839.36 | ..... | 1,323.43 |
| Aug. | ..... | 6,787.12 | 1,788.48 | ..... | 4,998.64 |
| Sept. | ..... | 9,298.11 | 1,476.52 | ..... | 7,821.59 |
| Oct. | ..... | 7,998.52 | 2,579.95 | ..... | 5,418.58 |
| Nov. | ..... | 10,041.48 | 2,572.64 | ..... | 7,468.84 |
| Dec. | ..... | 8,491.53 | 2,856.00 | ..... | 5,635.53 |

781 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1905. | Banks. | Bank overdrafts. | Office. | Balance. | Overdrafts. |
|---|---|---|---|---|---|
| Jan'y. | ..... | 163.97 | 3,558.16 | 3,394.19 | ..... |
| Feb'y. | ..... | 532.80 | 3,627.18 | 3,094.38 | ..... |
| M'ch. | ..... | 2,384.18 | 3,654.93 | 1,270.75 | ..... |
| April. | ..... | 436.39 | 3,487.11 | 3,050.72 | ..... |
| May. | 19,456.14 | ..... | 4,018.12 | 23,474.26 | ..... |
| June. | 17,773.20 | ..... | 5,117.18 | 22,890.38 | ..... |
| July. | 19,839.42 | ..... | 4,341.32 | 24,180.74 | ..... |
| Aug. | 18,650.91 | ..... | 3,825.23 | 22,476.14 | ..... |
| Sept. | 12,267.30 | ..... | 4,871.86 | 17,139 16 | ..... |
| Oct. | 12,380.04 | ..... | 5,043.17 | 17,423.21 | ..... |
| Nov. | ..... | 3,224.04 | 4,588.44 | 1,364.40 | ..... |
| Dec. | ..... | 4,531.12 | 719.54 | ..... | 3,811.58 |

782 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1904. | Banks. | Bank overdrafts. | Office. | Balance. | Overdrafts. |
|---|---|---|---|---|---|
| Jan'y. | ..... | 20,926.29 | 1,989.32 | ..... | 18,936.97 |
| Feb'y. | ..... | 1,457.45 | 2,618.88 | 1,161.43 | ..... |
| M'ch. | 11,129.64 | ..... | 4,270.30 | 15,309.94 | ..... |
| April. | 1,844.52 | ..... | 8,874.36 | 10,718.88 | ..... |
| May. | ..... | 376.77 | 2,476.89 | 2,100.12 | ..... |
| June. | 4,856.33 | ..... | 2,288.03 | 7,444.36 | ..... |
| July. | 2,468.17 | ..... | 4,143.99 | 6,612.16 | ..... |
| Aug. | 79.49 | ..... | 2,817.46 | 2,896.95 | ..... |
| Sept. | 263.15 | ..... | 2,689.14 | 2,952.29 | ..... |
| Oct. | 2,800.30 | ..... | 1,896.40 | 4,696.70 | ..... |
| Nov. | 1,533.99 | ..... | 3,188.66 | 4,722.65 | ..... |
| Dec. | ..... | 522.67 | 3,069.76 | 2,547.09 | ..... |

783 *Cash on Hand and in Banks at the End of Each Month.*

(Taken from the Company's Financial Reports.)

| 1903. | Banks. | Bank overdrafts. | Office. | Balance. | Overdrafts. |
|---|---|---|---|---|---|
| Jan'y. | 2,124.76 | ..... | 1,676.43 | 3,801.19 | ..... |
| Feb'y. | ..... | 8,723.75 | 1,637.39 | ..... | 7,086.36 |
| M'ch. | ..... | 7,748.73 | 1,712.48 | ..... | 6,036.25 |
| April. | ..... | ..... | ..... | ..... | 1,552.96 |
| May. | ..... | 15,950.28 | 1,908.70 | ..... | 14,041.58 |
| June. | ..... | 21,157.62 | 2,133.06 | ..... | 19,024.56 |
| July. | ..... | 16,654.13 | 2,218.49 | ..... | 14,435.64 |
| Aug. | ..... | 30,566.37 | 2,165.85 | ..... | 28,400.52 |
| Sept. | ..... | 23,496.33 | 1,455.41 | ..... | 22,040.92 |
| Oct. | ..... | 29,104.60 | 1,732.07 | ..... | 27,372.53 |
| Nov. | ..... | 37,467.18 | 1,710.58 | ..... | 35,756.60 |
| Dec. | ..... | 32,405.01 | 2,557.24 | ..... | 29,847.77 |

(Here follow diagrams marked pages 784, 784*a* & 784*b*.)

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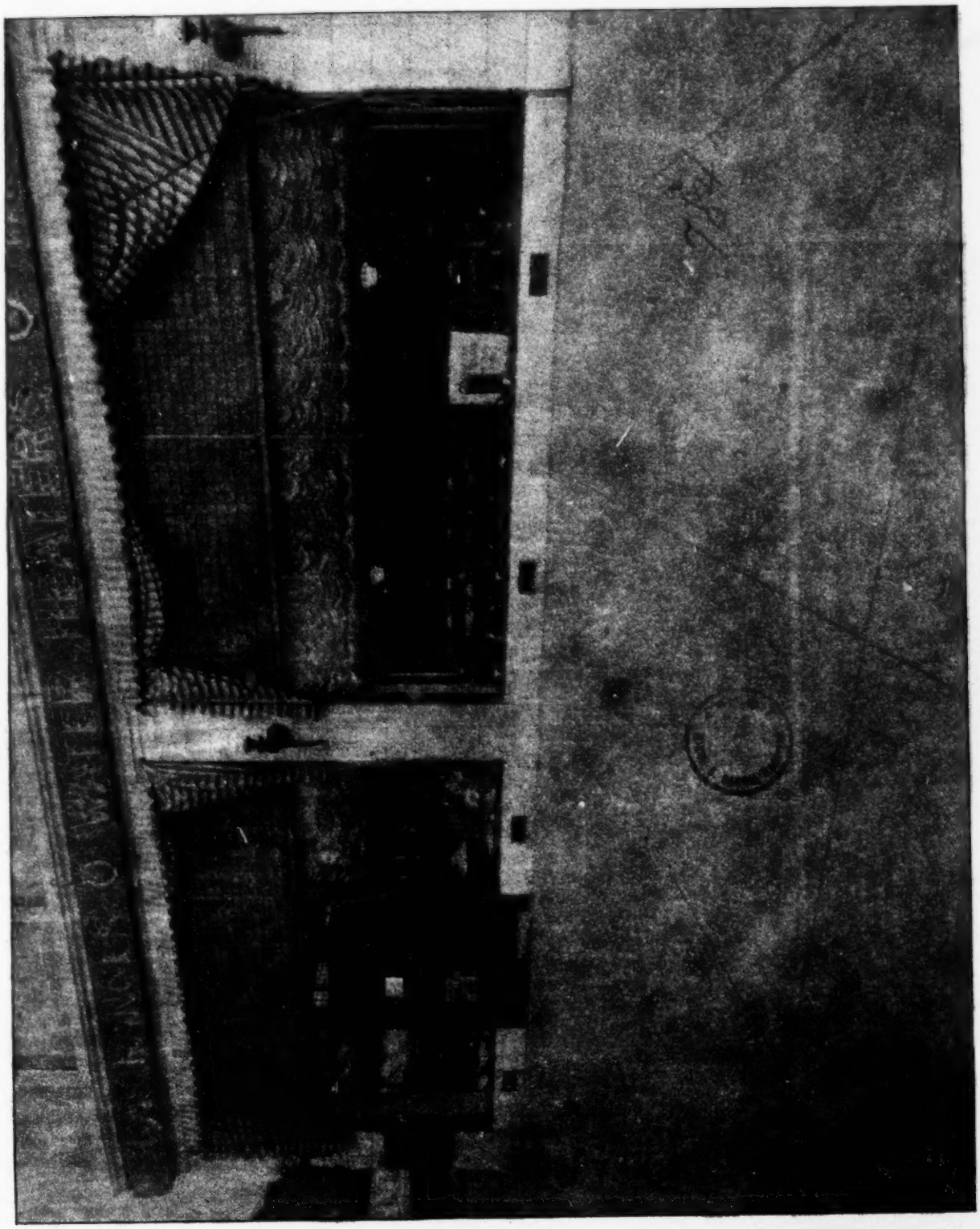
No. 335



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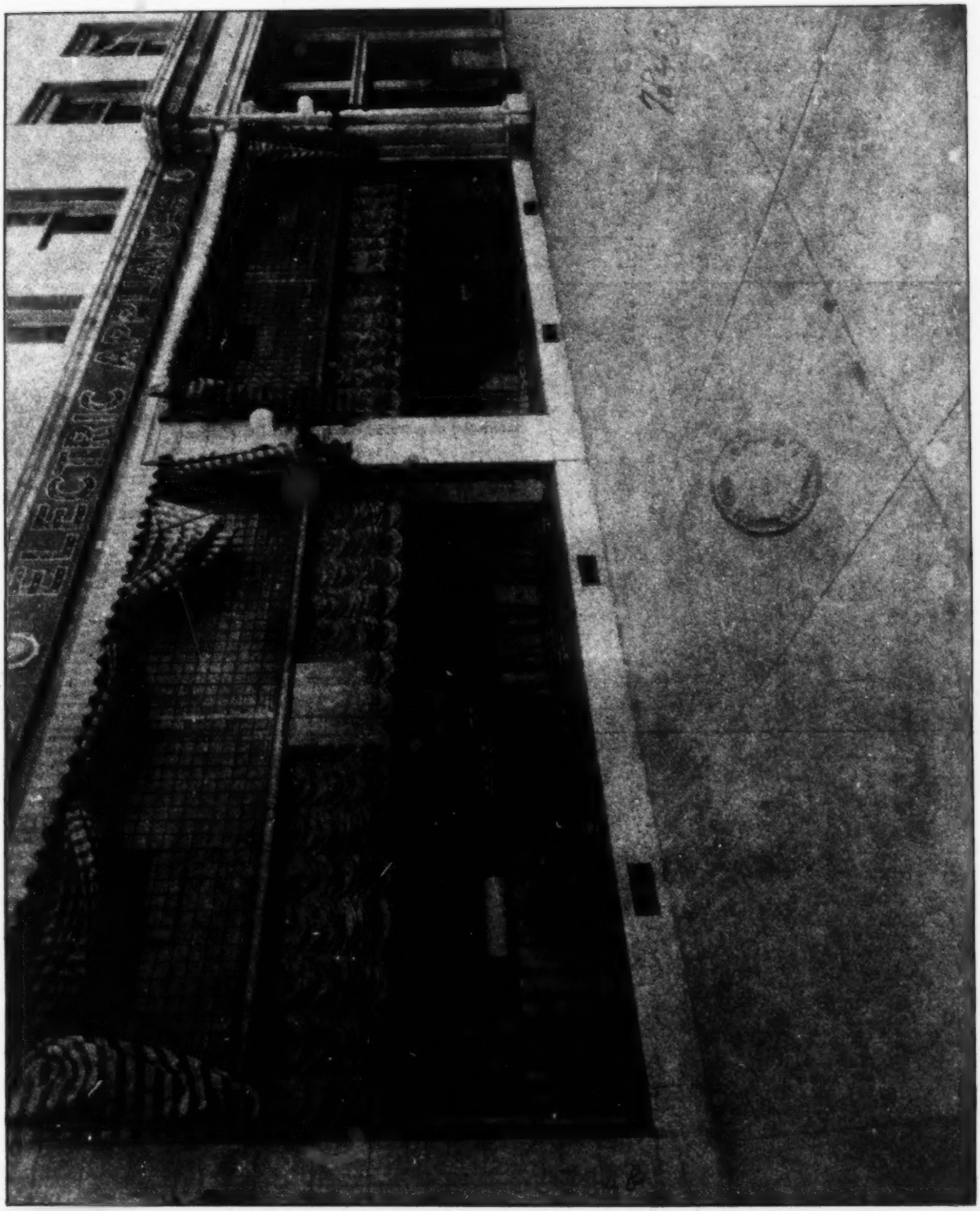

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EXHIBIT 337

785 Lincoln Gas & Electric Lt. Co.

*Income in Lincoln per Gas Reports & Expenses & Net Income for Lincoln per Adams.*

| Year. | $ Income in Lincoln. | $ Expense for Lincoln. | $ Net income in Lincoln. |
|---|---|---|---|
| 1905..... | 173,560.23 | 95,940.50 | 77,619.73 |
| 1903..... | 185,299.70 | 116,860.81 | 68,438.89 |
| 1907..... | 214,888.20 | 127,135.18 | 87,753.02 |
| 1908..... | 232,792.93 | 128,824.77 | 103,968.16 |
| 1909..... | 243,875.56 | 120,681.40 | 123,194.16 |
| 1910..... | 248,957.71 | 117,843.52 | 131,114.19 |
| 1911..... | 268,021.97 | 118,569.27 | 149,452.70 |
| 1912..... | 273,175.93 | 136,145.01 | 137,030.92 |

*Total Estimated Expense & Expense for Lincoln per Adams.*

| Year. | $ Total expense. | Per cent Expense for Lincoln. | $ Expense for Lincoln. |
|---|---|---|---|
| 1905..... | 95,978.90 | 99.93 | 95,940.50 |
| 1906..... | 117,165.45 | 99.74 | 116,860.81 |
| 1907..... | 127,671.40 | 99.58 | 127,135.18 |
| 1908..... | 129,693.72 | 99.33 | 128,824.77 |
| 1909..... | 121,300.04 | 98.49 | 120,681.40 |
| 1910..... | 119,069.95 | 98.97 | 117,843.52 |
| 1911..... | 121,261.28 | 97.78 | 118,569.27 |
| 1912..... | 140,399.11 | 96.97 | 136,145.01 |

786 Lincoln Gas & Electric Lt. Co.

*Estimated Salaries, Office, Distribution & General Expense & Repairs, Renewals & Depreciation, per Adams, & Materials & Labor Making Gas, Plus Taxes, per Gas Reports.*

| Year. | $ Salaries, etc., per Adams. | $ Repairs, etc., per Adams. | $ Materials & labor & taxes. | $ Total expense. |
|---|---|---|---|---|
| 1905..... | 21,553.50 | 12,932.10 | 61,493.30 | 95,978.90 |
| 1906..... | 22,281.14 | 13,829.67 | 81,054.64 | 117,165.45 |
| 1907..... | 24,214.41 | 16,142.94 | 87,314.05 | 127,671.40 |
| 1908..... | 25,400.83 | 17,585.19 | 86,707.70 | 129,693.42 |
| 1909..... | 25,535.50 | 18,385.56 | 77,378.98 | 121,300.04 |
| 1910..... | 26,271.13 | 18,915.21 | 73,883.61 | 119,069.95 |
| 1911..... | 27,272.16 | 20,454.12 | 73,535.00 | 121,261.28 |
| 1912..... | 28,126.32 | 21,094.74 | 91,178.05 | 140,399.11 |

787 Lincoln Gas & Electric Lt. Co.

*Estimated Salaries, Office, Distribution & General Expense.*

By Alton D. Adams.

| Year. | M feet gas sold. | Cents above expense per M feet. | $ Total above expense. |
|---|---|---|---|
| 1905..... | 143,690 | 15.0 | 21,553.50 |
| 1906..... | 153,663 | 14.5 | 22,281.14 |
| 1907..... | 179,366 | 13.5 | 24,214.41 |
| 1908..... | 195,391 | 13.0 | 25,400.83 |
| 1909..... | 204,284 | 12.5 | 25,535.50 |
| 1910..... | 210,169 | 12.5 | 26,271.13 |
| 1911..... | 227,268 | 12.0 | 27,272.16 |
| 1912..... | 234,386 | 12.0 | 28,126.32 |

*Estimated Repairs, Renewals & Depreciation Expense.*

By Alton D. Adams.

| Year. | M feet gas sold. | Cents above expense per M. feet. | $ Total above expense. |
|---|---|---|---|
| 1905..... | 143,690 | 9.00 | 12,932.10 |
| 1906..... | 153,663 | 9.00 | 13,829.67 |
| 1907..... | 179,366 | 9.00 | 16,142.94 |
| 1908..... | 195,391 | 9.00 | 17,585.19 |
| 1909..... | 204,284 | 9.00 | 18,385.56 |
| 1910..... | 210,169 | 9.00 | 18,915.21 |
| 1911..... | 227,268 | 9.00 | 20,454.12 |
| 1912..... | 234,386 | 9.00 | 21,094.74 |

788 Lincoln Gas & Electric Light Co.

*Estimated Salaries, Office, Distribution & General Expense, & Repairs, Renewals & Depreciation, per Adams, & Material & Labor Making Gas, Plus Taxes, per Gas Reports, in Cents per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries, etc., per Adams. | Repairs, etc., per Adams. | Material & labor & taxes. | Total expense. |
|---|---|---|---|---|---|
| 1905.... | 143,690 | 15.0 | 9.0 | 42.80 | 66.80 |
| 1906.... | 153,663 | 14.5 | 9.0 | 52.74 | 76.25 |
| 1907.... | 179,366 | 13.5 | 9.0 | 48.68 | 71.19 |
| 1908.... | 195,391 | 13.0 | 9.0 | 44.38 | 66.38 |
| 1909.... | 204,284 | 12.5 | 9.0 | 37.88 | 59.38 |
| 1910.... | 210,169 | 12.5 | 9.0 | 35.15 | 56.65 |
| 1911.... | 227,268 | 12.0 | 9.0 | 32.36 | 53.36 |
| 1912.... | 234,386 | 12.0 | 9.0 | 38.90 | 59.90 |

789 Lincoln Gas & Electric Light Co.

*Reported Expense for Gas Sold in Lincoln Only.*

| | Year 1905. | Year 1906. | Year 1907. |
|---|---|---|---|
| Total M Feet Gas Sold..... | 143,690. | 153,633. | 179,366. |
| M Feet Sold Outside Lincoln. | 49. | 398. | 740. |
| M Feet Sold in Lincoln.... | 143,641. | 153,265. | 178,626. |
| Per Cent Sold in Lincoln... | 99.96 | 99.74 | 99.58 |
| Total Gas Expense ..... | 104,643.53 | 125,515.30 | 137,147.61 |
| Gas Expense for Lincoln.. | 104,601.67 | 125,188.96 | 136,571.59 |

*Reported Income & Expense for Gas Sold in Lincoln Only.*

| | Year 1908. | Year 1909. | Year 1910. |
|---|---|---|---|
| Total M Feet Gas Sold..... | 195,391. | 204,284. | 210,169. |
| M Feet Sold Outside Lincoln. | 1,295. | 1,040. | 2,145. |
| M Feet Sold in Lincoln.... | 194,096. | 203,244. | 208,024. |
| Per Cent Sold in Lincoln.. | 99.33 | 99.49 | 98.97 |
| Total Gas Expense ..... | 135,690.42 | 133,320.05 | 143,539.84 |
| Gas Expense for Lincoln... | 134,781.29 | 132,640.11 | 142,061.37 |

790 *Lincoln Gas & Electric Light Co.*

*Reported Income and Expense for Gas Sold in Lincoln Only.*

| | Year 1911. | Year 1912. |
|---|---|---|
| Total M Feet Gas Sold..... | 227,268. | 234,386. |
| M Feet Sold Outside Lincoln..... | 5,039. | 7,089. |
| M Feet Sold in Lincoln..... | 222,229. | 227,297. |
| Per Cent Sold in Lincoln..... | 97.78 | 96.97 |
| Total Gas Expense ..... | 158,123.76 | 175,835.64 |
| Gas Expense for Lincoln..... | 154,613.41 | 170,507.82 |

*Total Gas Income, per Reports and Income Outside Lincoln, per Lea.*

| Year. | $ Total income. | $ Income outside Lincoln. | $ Income in Lincoln. |
|---|---|---|---|
| 1905..... | 173,619.03 | 58.80 | 173,560.23 |
| 1906..... | 185,778.26 | 478.56 | 185,299.70 |
| 1907..... | 215,776.20 | 888.00 | 214,888.20 |
| 1908..... | 234,347.51 | 1,554.58 | 232,792.93 |
| 1909..... | 245,124.74 | 1,249.18 | 243,875.56 |
| 1910..... | 251,942.37 | 2,984.66 | 284,957.71 |
| 1911..... | 274,292.95 | 6,270.98 | 268,021.97 |
| 1912..... | 282,162.11 | 8,986.18 | 273,175.93 |

791 *Lincoln Gas & Electric Light Co.*

*Income in Lincoln with Net Gas Rate $1 per M.*

| Year. | $ Income in Lincoln. | M feet gas sold, Lincoln. | $ Reduction at 20 cts. per M feet. | $ Income with $1 gas. |
|---|---|---|---|---|
| 1905..... | 173,560.23 | 143,641 | 28,728.20 | 144,832.03 |
| 1906..... | 185,299.70 | 153,265 | 30,653.00 | 154,646.70 |
| 1907..... | 214,888.20 | 178,626 | 35,725.20 | 179,163.00 |
| 1908..... | 232,792.93 | 194,096 | 38,819.20 | 193,973.75 |
| 1909..... | 243,875.56 | 203,244 | 40,648.80 | 203,226.76 |
| 1910..... | 248,959.71 | 208,084 | 41,604.80 | 207,354.91 |
| 1911..... | 268,021.97 | 222,229 | 44,445.80 | 223,576.17 |
| 1912..... | 273,175.93 | 227,297 | 45,459.40 | 227,716.53 |

*Net Income in Lincoln with Net Gas Rate $1 per M.*

| Year. | $ Income with $1 gas. | $ Estimated expense. | $ Net income. |
|---|---|---|---|
| 1905..... | 144,832.03 | 95,940.50 | 48,891.53 |
| 1906..... | 154,646.70 | 116,860.81 | 37,785.89 |
| 1907..... | 179,163.00 | 127,135.18 | 52,027.82 |
| 1908..... | 193,973.73 | 128,824.77 | 65,148.96 |
| 1909..... | 203,226.76 | 120,681.40 | 82,545.36 |
| 1910..... | 207,354.91 | 117,843.52 | 89,511.39 |
| 1911..... | 223,576.17 | 118,569.27 | 105,006.90 |
| 1912..... | 227,716.53 | 136,145.01 | 91,571.52 |

792 *All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes for Plants Selling 100 to 300 Million Feet of Gas Annually, per Sworn Returns to the Massachusetts Gas Commissioners. Cents per M Feet Gas Sold.*

| City. | Year. | M feet gas sold. | Total above expense. |
|---|---|---|---|
| Haverhill | 1902 | 123,887 | 10.64 |
| Taunton | 1912 | 126,482 | 14.11 |
| Taunton | 1913 | 136,492 | 13.17 |
| Haverhill | 1903 | 153,068 | 10.36 |
| Haverhill | 1904 | 160,863 | 9.08 |
| Haverhill | 1905 | 165,483 | 10.08 |
| Haverhill | 1906 | 170,759 | 10.44 |
| Charlestown | 1904 | 179,798 | 12.16 |
| Charlestown | 1903 | 181,733 | 12.28 |
| Haverhill | 1907 | 182,359 | 12.27 |
| Charlestown | 1905 | 182,705 | 12.10 |
| Lynn | 1900 | 183,843 | 7.38 |
| Charlestown | 1906 | 190,244 | 12.32 |
| Lynn | 1901 | 197,189 | 9.13 |
| Charlestown | 1907 | 210,863 | 11.90 |
| Lynn | 1902 | 224,514 | 8.76 |
| Charlestown | 1908 | 228,126 | 11.92 |
| Charlestown | 1909 | 230,580 | 12.77 |
| Lawrence | 1903 | 236,808 | 12.02 |
| Charlestown | 1910 | 238,229 | 11.40 |
| Charlestown | 1911 | 255,288 | 11.28 |
| Charlestown | 1912 | 266,869 | 10.25 |
| Cambridge | 1900 | 276,284 | 11.83 |
| Lynn | 1903 | 282,578 | 8.37 |

793 Cambridge Gas Light Company.

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1900 | 29,595 | 3,094 | 32,689 |
| 1901 | 30,686 | 5,189 | 35,875 |
| 1902 | 31,798 | 4,515 | 36,313 |
| 1903 | 35,321 | 7,276 | 42,597 |
| 1904 | 36,795 | 8,131 | 44,926 |
| 1905 | 40,481 | 11,444 | 51,925 |
| 1906 | 43,338 | 13,968 | 57,306 |
| 1907 | 46,657 | 21,697 | 68,354 |
| 1908 | 50,083 | 19,001 | 69,084 |
| 1909 | 53,432 | 23,481 | 76,913 |
| 1910 | 57,485 | 27,425 | 84,910 |
| 1911 | 64,736 | 30,918 | 95,654 |
| 1912 | 66,514 | 31,268 | 97,782 |

794 *Cambridge Gas Light Company.*

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners. Cents per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1900 | 276,284 | 10.71 | 1.11 | 11.83 |
| 1901 | 308,680 | 9.94 | 1.68 | 11.62 |
| 1902 | 325,935 | 9.75 | 1.38 | 11.14 |
| 1903 | 415,705 | 8.49 | 1.75 | 10.24 |
| 1904 | 420,723 | 8.74 | 1.93 | 10.67 |
| 1905 | 439,162 | 9.21 | 2.60 | 11.82 |
| 1906 | 468,555 | 9.24 | 2.98 | 12.23 |
| 1907 | 533,033 | 8.75 | 4.07 | 12.82 |
| 1908 | 585,144 | 8.55 | 3.24 | 11.80 |
| 1909 | 620,594 | 8.60 | 3.78 | 12.39 |
| 1910 | 669,982 | 8.58 | 4.09 | 12.67 |
| 1911 | 717,054 | 9.02 | 4.31 | 13.33 |
| 1912 | 762,630 | 8.70 | 4.10 | 12.82 |

795 *Charlestown Gas & Electric Light Company.*

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1900 | 24,256 | 5,339 | 29,595 |
| 1901 | 22,862 | 4,787 | 27,649 |
| 1902 | 19,104 | 7,896 | 27,000 |
| 1903 | 20,126 | 2,205 | 22,331 |
| 1904 | 19,660 | 2,213 | 21,873 |
| 1905 | 19,622 | 2,518 | 22,140 |
| 1906 | 20,754 | 2,709 | 23,463 |
| 1907 | 22,388 | 2,735 | 25,123 |
| 1908 | 23,787 | 3,410 | 27,197 |
| 1909 | 23,924 | 5,542 | 29,466 |
| 1910 | 24,720 | 2,448 | 27,168 |
| 1911 | 25,942 | 2,876 | 28,818 |
| 1912 | 24,244 | 3,114 | 27,358 |

796 Charlestown Gas & Electric Light Company.

*All Expenses Except Materials and Labor Making Gas, Repairs, and Taxes, per Sworn Returns to Massachusetts Commissioners. Cents per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1900 | 135,014 | 17.96 | 3.95 | 21.91 |
| 1901 | 135,669 | 16.85 | 3.52 | 20.37 |
| 1902 | 145,719 | 13.11 | 5.41 | 18.52 |
| 1903 | 181,733 | 11.07 | 1.21 | 12.28 |
| 1904 | 179,798 | 10.93 | 1.23 | 12.16 |
| 1905 | 182,705 | 10.73 | 1.37 | 12.10 |
| 1906 | 190,244 | 10.90 | 1.42 | 12.32 |
| 1907 | 210,863 | 10.61 | 1.29 | 11.90 |
| 1908 | 228,126 | 10.42 | 1.42 | 11.91 |
| 1909 | 230,580 | 10.37 | 2.40 | 12.77 |
| 1910 | 238,229 | 10.37 | 1.02 | 11.40 |
| 1911 | 255,288 | 10.16 | 1.12 | 11.28 |
| 1912 | 266,869 | 9.08 | 1.16 | 10.25 |

797 Lawrence Gas Company.

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1900..... | 19,235 | 9,770 | 29,005 |
| 1901..... | 19,794 | 6,975 | 26,769 |
| 1902..... | 20,890 | 11,175 | 32,065 |
| 1903..... | 24,368 | 4,119 | 28,487 |
| 1904..... | 27,535 | 7,203 | 34,738 |
| 1905..... | 27,182 | 7,866 | 35,048 |
| 1906..... | 28,701 | 8,552 | 37,253 |
| 1907..... | 33,227 | 8,541 | 41,768 |
| 1908..... | 34,166 | 8,037 | 42,203 |
| 1909..... | 35,862 | 8,023 | 43,885 |
| 1910..... | 36,847 | 8,678 | 45,525 |
| 1911..... | 38,861 | 9,522 | 48,383 |
| 1912..... | 41,528 | 11,911 | 53,439 |

798 Lawrence Gas Company.

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners. Cents per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1900..... | 138,314 | 13.97 | 7.06 | 22.56 |
| 1901..... | 146,549 | 13.50 | 4.75 | 18.26 |
| 1902..... | 184,256 | 11.33 | 6.06 | 17.40 |
| 1903..... | 236,808 | 10.29 | 1.73 | 12.02 |
| 1904..... | 242,658 | 11.34 | 2.96 | 14.31 |
| 1905..... | 261,888 | 13.38 | 3.00 | 13.38 |
| 1906..... | 290,425 | 9.88 | 2.94 | 12.99 |
| 1907..... | 325,679 | 10.20 | 2.62 | 12.82 |
| 1908..... | 356,594 | 9.58 | 2.25 | 11.83 |
| 1909..... | 377,393 | 9.50 | 2.12 | 11.62 |
| 1910..... | 417,864 | 8.81 | 2.07 | 10.88 |
| 1911..... | 441,397 | 8.80 | 2.15 | 10.96 |
| 1912..... | 441,324 | 9.49 | 2.69 | 12.10 |

799 Lynn Gas & Electric Light.

*All Expenses Except Materials and Labor Making —, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1900 | 8,904 | 4,668 | 13,572 |
| 1901 | 9,756 | 8,267 | 18,023 |
| 1902 | 10,342 | 9,338 | 19,680 |
| 1903 | 11,422 | 12,235 | 23,657 |
| 1904 | 15,221 | 13,609 | 28,830 |
| 1905 | 18,460 | 12,107 | 30,567 |
| 1906 | 21,683 | 14,124 | 35,807 |
| 1907 | 26,481 | 20,332 | 46,813 |
| 1908 | 31,421 | 16,942 | 48,363 |
| 1909 | 34,608 | 18,109 | 52,717 |
| 1910 | 38,102 | 19,015 | 57,117 |
| 1911 | 40,845 | 33,614 | 74,459 |
| 1912 | 44,328 | 29,306 | 73,634 |

800 *Lynn Gas & Electric Light Company.*

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners. Cents per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1900 | 183,843 | 4.84 | 2.53 | 7.38 |
| 1901 | 197,189 | 4.94 | 4.19 | 9.13 |
| 1902 | 224,514 | 4.60 | 5.49 | 8.76 |
| 1903 | 282,578 | 4.04 | 4.32 | 8.37 |
| 1904 | 320,642 | 4.74 | 4.24 | 8.99 |
| 1905 | 358,776 | 5.14 | 3.37 | 8.52 |
| 1906 | 410,221 | 5.28 | 4.43 | 8.72 |
| 1907 | 477,938 | 5.54 | 4.25 | 9.79 |
| 1908 | 506,125 | 6.20 | 3.34 | 9.55 |
| 1909 | 538,426 | 6.42 | 3.36 | 9.79 |
| 1910 | 605,581 | 6.29 | 3.13 | 9.43 |
| 1911 | 667,170 | 6.12 | 5.03 | 11.16 |
| 1912 | 743,042 | 5.96 | 3.94 | 9.90 |

801 Taunton Gas Light Company.

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns to Massachusetts Commissioners.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1900..... | 8,837 | 236 | 9,073 |
| 1901..... | 11,010 | 250 | 11,260 |
| 1902..... | 10,654 | 1,595 | 12,249 |
| 1903..... | 12,191 | 219 | 12,410 |
| 1904..... | 11,508 | 2,130 | 13,638 |
| 1905..... | 11,428 | 766 | 12,194 |
| 1906..... | 11,942 | 5,270 | 17,212 |
| 1907..... | 12,006 | 1,314 | 13,320 |
| 1908..... | 12,991 | 1,956 | 14,947 |
| 1909..... | 12,428 | 1,809 | 14,237 |
| 1910..... | 16,471 | 1,729 | 18,200 |
| 1911..... | 15,163 | 2,097 | 17,260 |
| 1912..... | 16,037 | 1,818 | 17,855 |
| 1913..... | 16,122 | 1,862 | 17,984 |

802 Taunton Gas Light Company.

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals, and Taxes, per Sworn Returns Massachusetts Commissioners. Cents per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1900..... | 53,334 | 16.56 | .44 | 17.01 |
| 1901..... | 51,139 | 21.52 | .48 | 22.01 |
| 1902..... | 58,493 | 18.21 | 2.72 | 20.66 |
| 1903..... | 66,074 | 18.45 | .33 | 18.78 |
| 1904..... | 70,532 | 16.31 | 3.01 | 19.33 |
| 1905..... | 73,231 | 15.60 | 1.04 | 16.65 |
| 1906..... | 76,559 | 15.59 | 6.87 | 22.48 |
| 1907..... | 81,397 | 14.74 | 1.61 | 16.36 |
| 1908..... | 84,670 | 15.34 | 2.31 | 17.65 |
| 1909..... | 91,753 | 13.54 | 1.97 | 15.51 |
| 1910..... | 107,365 | 15.34 | 1.61 | 16.94 |
| 1911..... | 119,920 | 12.64 | 1.74 | 14.39 |
| 1912..... | 126,482 | 12.67 | 1.43 | 14.11 |
| 1913..... | 136,492 | 11.81 | 1.36 | 13.17 |

803 Haverhill Gas Light Co.

*All Expenses Except Materials & Labor Making Gas, Repairs, Renewals & Taxes, per Sworn Returns to Massachusetts Commissioners.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1896..... | 8,217 | 792 | 9,009 |
| 1897..... | 11,668 | 505 | 12,173 |
| 1898..... | 10,233 | 561 | 10,794 |
| 1899..... | 10,780 | 1,257 | 12,037 |
| 1900..... | 11,155 | 10,859 | 22,014 |
| 1901..... | 13,740 | 4,124 | 17,864 |
| 1902..... | 11,102 | 2,090 | 13,192 |
| 1903..... | 12,637 | 3,228 | 15,865 |
| 1904..... | 10,953 | 3,657 | 14,610 |
| 1905..... | 12,334 | 4,356 | 16,690 |
| 1906..... | 13,246 | 4,590 | 17,836 |
| 1907..... | 12,872 | 9,504 | 22,376 |

804 Haverhill Gas Light Co.

*All Expenses Except Material & Labor Making Gas, Renewals, Repairs, & Taxes, per Sworn Returns Massachusetts Commissioners. Cents per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1896..... | 72,782 | 11.28 | 1.08 | 12.37 |
| 1897..... | 78,745 | 14.81 | 0.64 | 15.45 |
| 1898..... | 85,895 | 11.91 | 0.65 | 12.56 |
| 1899..... | 91,737 | 11.75 | 1.37 | 13.12 |
| 1900..... | 115,022 | 9.69 | 9.44 | 19.13 |
| 1901..... | 115,457 | 11.90 | 3.57 | 15.47 |
| 1902..... | 123,887 | 8.96 | 1.68 | 10.64 |
| 1903..... | 153,068 | 8.25 | 2.10 | 10.36 |
| 1904..... | 160,863 | 6.80 | 2.27 | 9.08 |
| 1905..... | 165,483 | 7.45 | 2.63 | 10.08 |
| 1906..... | 170,759 | 7.75 | 2.68 | 10.44 |
| 1907..... | 182,359 | 7.05 | 5.21 | 12.27 |

805 *Thousand Feet of Gas Sold in the Year* 1907 *and the Net Rate per Thousand from Brown's Directory of* 1908.

| Location of plant. | M feet gas sold. | $ Highest net rate. | Miles of mains. | M feet gas per mile main. |
|---|---|---|---|---|
| Keokuk, Iowa ..... | 30,000 | 1.00 | 14 | 2,142 |
| Colorado Springs .... | 65,250 | 1.00<br>1.50 | 36 | 1,812 |
| La Crosse, Wis. ..... | 71,000 | 1.00 | 43 | 1,651 |
| Clinton, Iowa ..... | 86,000 | 1.00 | 38 | 2,263 |
| Springfield, Mo. ..... | 90,000 | 1.00 | 30 | 3,000 |
| Quincy, Ill. ..... | 94,000 | 1.00 | 52.7 | 1,785 |
| Pueblo, Col. ..... | 125,000 | 1.00<br>1.50 | 60 | 2,083 |
| Dubuque, Ia. ..... | 127,000 | 1.00 | 50 | 2,540 |
| Davenport, Iowa ..... | 160,000 | 1.00 | 140 | 1,143 |
| Lincoln, Neb. ..... | 179,366 | 1.20 | 64.1 | 2,798 |
| Peoria, Ill. ..... | 255,000 | .90 | 130 | 1,961 |
| Sioux City ..... | 257,666 | 1.00 | 78.4 | 3,286 |
| * Cedar Rapids, Ia. .. | 91,330 | 0.90 | | |

* Per Record U. S. Supreme Court.

806 *Some Gas Plants Where the Highest Net Rate per Thousand Feet for Any Purpose Was Not Over One Dollar, in* 1907, *per Brown's Gas Directory of* 1908.

| Plant location. | M feet annually sold. | $ Highest net rate. | Candle power. |
|---|---|---|---|
| Canton, Ohio ..... | 11,000 | 1.00 | 16 |
| Erie, Pa. ..... | 50,000 | 1.00 | 28 |
| La Crosse, Wis. ..... | 75,000 | 1.00 | 18 |
| Clinton, Iowa ..... | 86,000 | 1.00 | 17 |
| Springfield, Mo. ..... | 90,000 | 1.00 | 18 |
| Cedar Rapids, Iowa *.. | 91,330 | .90 | |
| Springfield, Ohio ..... | 100,000 | 1.00 | 20 |
| Bloomington, Ill. .... | 110,000 | 1.00 | 18 |
| Wheeling, W. Va. .... | 116,000 | .75 | 16 |
| Ft. Wayne, Ind. ..... | 120,000 | 1.00 | 20 |
| Dubuque, Iowa ..... | 127,000 | 1.00 | 17 |
| Chattanooga, Tenn. ... | 131,000 | 1.00 | 18 |
| Knoxville, Tenn. ..... | 132,000 | 1.00 | 17 |
| Springfield, Ill. ..... | 140,000 | 1.00 | 18 |
| Lancaster, Pa. ..... | 150,000 | 1.00 | 24.5 |
| Covington, Ky. ..... | 150,000 | 1.00 | 18 |
| Holyoke, Mass. ..... | 163,000 | 1.00 | 18 |
| Saginaw, Mich. ..... | 173,000 | 1.00 | 16 |
| Jackson, Mich. ..... | 180,000 | 1.00 | 18 |
| Haverhill, Mass. ..... | 182,000 | 1.00 | 20.4 |
| Terre Haute, Ind. .... | 215,689 | 1.00 | 20 |
| Charlestown, Mass. ... | 220,000 | .90 | 18 |
| Toledo, Ohio ..... | 240,000 | .85 | 16 |
| Norfolk, Va. ..... | 240,000 | 1.00 | 22 |
| Peoria, Ill. ..... | 255,000 | .90 | 17 |

* U. S. Supreme Court Record.

807 *Some Gas Plants Where the Highest Net Rate per Thousand Feet for Any Purpose Was Not Over One Dollar, in* 1907, *per Brown's Gas Directory of* 1908.

| Plant location. | M feet annually sold. | $ Highest net rate. | Candle power. |
|---|---|---|---|
| Elizabeth, N. J. | 260,000 | 1.00 | 20 |
| New Bedford, Mass. | 260,000 | .90 | 20 |
| Atlantic City, N. J. | 275,000 | .90 | 22 |
| Malden, Mass. | 300,000 | 1.00 | 22 & 18 |
| Wilmington, Del. | 323,000 | 1.00 | 21.5 |
| Chester, Pa. | 330,000 | 1.00 | 22 |
| Dayton, Ohio | 335,000 | .85 | 18 |
| Memphis, Tenn. | 350,000 | 1.00 | 20 |
| Springfield, Mass. | 372,000 | .95 | 18 |
| Des Moines, Iowa | 461,808 | 1.00 | 24 |
| Hartford, Conn. | 464,021 | .85 | 20 |
| Fall River, Mass. | 470,000 | .90 | 18 |
| Worcester, Mass. | 525,000 | .85 | 18.5 |
| Lynn, Mass. | 525,000 | .85 | 18.5 |
| Syracuse, N. Y. | 525,000 | .95 | 21.4 |
| Lowell, Mass. | 542,000 | .90 | 18 |
| Cambridge, Mass. | 570,000 | .90 | 18 |
| Grand Rapids, Mich. | 762,699 | .90 | 18 |
| Aurora, Ill. | 780,000 | 1.00 | 20 |
| Denver, Colo. | 865,000 | 1.00 | 22 |
| New Haven, Conn. | 887,000 | .95 | 20 |
| Indianapolis, Ind. | 966,230 | .90 | 18 |
| Chicago, Ill. | 1,100,000 | .85 | 26 |
| Cleveland, Ohio | 1,450,000 | .75 | 18 |

808 *Some Gas Plants Where the Highest Net Rate per Thousand Feet for Any Purpose Was Not Over One Dollar, in* 1907, *per Brown's Gas Directory of* 1908.

| Plant location. | M feet annually sold. | $ Highest net rate. | Candle power. |
|---|---|---|---|
| Washington, D. C. | 1,847,726 | 1.00 | 22 |
| Milwaukee, Wis. | 2,230,000 | .80 | 17 |
| Detroit, Mich. | 2,512,081 | .90 | 19 |
| San Francisco, Cal. | 2,528,767 | .85 | 21 |
| Los Angeles, Cal. | 2,750,000 | .80 | 20 |
| Brooklyn, N. Y. | 9,500,000 | .80 | 25 |

809 *Contents.*


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*Other Gas Plants Compared with Lincoln.*

Alton D. Adams, Natick, Massachusetts.

811 *Massachusetts Plants with Rates of $1 or Less for Gas & the Lincoln Plant in 1912.*

| | Massachusetts plants. | Lincoln plant. |
|---|---|---|
| Number of Plants Compared | 18 | 1 |
| Price of Gas Per M | $0.75–$1.00 | $1.20 |
| Million Feet Sold By Each Plant | 57–783 | 234 |
| M Feet Total Gas Sold | 7,488,972 | 234,386 |
| M Feet Total Holder Capacity | 36,329 | 850 |
| Feet Holder Capacity Per M Sold | 4.85 | 3.62 |
| Feet of Mains Larger Than 2 Inches | 10,523,556 | 141,285 |
| Feet Mains Larger than 2″ Per M Sold | 1.40 | 0.60 |
| Total Feet Of Mains | 11,414,602 | 459,251 |
| Total Feet Mains Per M. Feet Gas Sold | 1.52 | 1.95 |
| Per Cent Mains Larger than 2 Inches | 92.1 | 30.7 |
| Number of Plants Compared | 11 | 1 |
| M Feet Of Gas Sold | 5,108,479 | 234,386 |
| Per Cent Dividends to Stock | 10.05 | |
| Capital Stock & Bonds | 8,964,100 | 2,250,000 |
| Plant Assets Per Company's Books | 12,818,834 | 785,081 |
| Cents Dividends Per M Feet Gas Sold | 17.64 | |
| Cents Net Income Per M Feet Gas Sold | | 58.46 |
| Per Cent Dividends To Plant Assets | 6.52 | |
| Per Cent Net Income to Plant Assets | | 17.45 |
| Per Cent Plant Assets To Stock & Bonds | 154.15 | 34.89 |
| Stock & Bonds Per M. Feet Sold | 1.75 | 9.60 |
| Plant Assets Per M Feet Gas Sold | 2.70 | 3.34 |

812 Worcester Gas Light Company.

*All Expenses Except Materials and Labor, Making Gas, Repairs, Renewals and Taxes, Per Sworn Returns to Massachusetts Commissioners.*

| Year. | $ Salaries & office expense. | $ Distribution & general expense. | $ Total above expense. |
|---|---|---|---|
| 1895 | 20,747 | 5,012 | 25,760 |
| 1896 | 20,782 | 5,258 | 26,040 |
| 1897 | 21,367 | 4,638 | 26,005 |
| 1898 | 22,676 | 6,705 | 29,381 |
| 1899 | 23,514 | 4,138 | 27,652 |
| 1900 | 23,708 | 4,345 | 28,053 |
| 1901 | 24,852 | 3,770 | 28,622 |
| 1902 | 26,222 | 8,654 | 34,876 |
| 1903 | 27,508 | 3,728 | 32,236 |
| 1904 | 29,407 | 5,407 | 34,814 |
| 1905 | 30,959 | 10,892 | 41,851 |
| 1906 | 31,607 | 15,608 | 47,215 |
| 1907 | 32,489 | 18,663 | 51,152 |
| 1908 | 34,566 | 16,880 | 51,446 |
| 1909 | 37,540 | 10,729 | 48,269 |
| 1910 | 37,488 | 11,130 | 48,618 |
| 1911 | 45,726 | 9,576 | 55,302 |
| 1912 | 51,421 | 15,534 | 66,955 |
| 1913 | 51,926 | 19,068 | 70,994 |

813 Worcester Gas Light Company.

*All Expenses Except Materials and Labor Making Gas, Repairs, Renewals and Taxes, per Sworn Returns Massachusetts Commissioners—Cents Per M Feet Gas Sold.*

| Year. | M feet gas sold. | Salaries & office expense. | Distribution & general expense. | Total above expense. |
|---|---|---|---|---|
| 1895.... | 158,541 | 13.08 | 3.16 | 16.24 |
| 1896.... | 191,706 | 10.84 | 2.74 | 13.58 |
| 1897.... | 200,376 | 10.66 | 2.31 | 12.97 |
| 1898.... | 218,336 | 10.38 | 3.07 | 13.45 |
| 1899.... | 231,037 | 10.17 | 1.79 | 11.96 |
| 1900.... | 264,333 | 08.96 | 1.64 | 10.61 |
| 1901.... | 279,313 | 08.89 | 1.34 | 10.24 |
| 1902.... | 312,475 | 08.39 | 2.76 | 11.16 |
| 1903.... | 385,339 | 07.39 | 0.96 | 08.36 |
| 1904.... | 397,623 | 07.39 | 1.35 | 08.75 |
| 1905.... | 410,641 | 07.53 | 2.65 | 10.19 |
| 1906.... | 444,687 | 07.10 | 3.50 | 10.61 |
| 1907.... | 493,625 | 06.58 | 3.78 | 10.36 |
| 1908.... | 541,124 | 06.38 | 3.11 | 09.50 |
| 1909.... | 561,050 | 06.69 | 1.91 | 08.60 |
| 1910.... | 637,570 | 05.87 | 1.74 | 07.62 |
| 1911.... | 725,964 | 06.29 | 1.31 | 07.61 |
| 1912.... | 783,734 | 06.56 | 1.98 | 08.54 |
| 1913.... | 861,455 | 06.02 | 2.21 | 08.24 |

814 *Gas Rates & Dividends of Massachusetts Plants in the Year 1912.*

| Plant. | M feet gas sold. | $ Price per M feet. | % Dividends paid. | Cents, dividends per M sold. |
|---|---|---|---|---|
| Attleboro ..... | 57,326 | 1.00 | 12 | 12.14 |
| North Adams .... | 89,731 | 1.00 | 18 | 6.74+ |
| Suburban ..... | 131,822 | .90 | 9 | 13.25+ |
| Taunton ..... | 126,482 | 1.00 | 10 | 17.39 |
| Salem ..... | 168,313 | 1.00 | 9 | 26.71 |
| Haverhill ..... | 235,160 | .85 | .... | .... |
| Charlestown ..... | 266,869 | .85 | 12.5 | 20.34+ |
| East Boston ..... | 375,193 | .85 | 10 | 15.33 |
| Newton ..... | 416,253 | .90 | 11 | 14.80 |
| New Bedford ..... | 472,545 | .80 | 12 | 16.04 |
| Lawrence ..... | 441,324 | .90 | 8 | 16.25+ |
| Malden ..... | 580,820 | .90 | 7 | 19.09 |
| Fall River ..... | 550,734 | .80 | 12 | 15.02 |
| Lowell ..... | 593,971 | .85 | 12 | 20.20 |
| Springfield ..... | 693,023 | .85 | 12 | 19.70 |
| Lynn ..... | 743,042 | .75 | 16 | 12.29+ |
| Cambridge ..... | 762,630 | .85 | 10 | 15.74 |
| Worcester ..... | 783,734 | .75 | 12 | 17.61 |

+Estimated.

815 *Feet of Mains & Holder Capacity, Massachusetts Gas Plants June 30, 1912.*

| Plant. | Total feet mains. | Mains larger than 2 inches. | | M feet holder capacity. |
|---|---|---|---|---|
| | | Feet. | % | |
| Attleboro | 110,849 | 108,515 | 97.8 | 231 |
| North Adams | 170,620 | 150,190 | 88.0 | 413 |
| Suburban | 326,393 | 308,933 | 94.6 | 300 |
| Taunton | 404,246 | 335,501 | 82.9 | 635 |
| Salem | 393,583 | 355,688 | 90.3 | 769 |
| Haverhill | 388,280 | 343,265 | 88.4 | 1,540 |
| Charleston | 313,793 | 299,679 | 95.5 | 1,396 |
| East Boston | 387,234 | 373,886 | 96.5 | 582 |
| Newton | 1,072,514 | 1,064,201 | 99.2 | 1,332 |
| New Bedford | 631,079 | 569,952 | 90.3 | 1,188 |
| Lawrence | 882,589 | 845,942 | 95.8 | 2,395 |
| Malden | 978,089 | 947,580 | 96.8 | 1,700 |
| Fall River | 690,707 | 612,597 | 88.6 | 3,076 |
| Lowell | 930,444 | 640,686 | 68.8 | 4,250 |
| Springfield | 1,003,863 | 985,491 | 98.1 | 3,412 |
| Lynn | 932,225 | 875,453 | 93.9 | 3,320 |
| Cambridge | 857,318 | 839,548 | 97.9 | 6,100 |
| Worcester | 940,676 | 866,449 | 92.1 | 3,630 |
| | 11,414,602 | 10,523,556 | 92.1 | 36,329 |

816 *Feet of Mains & Holder Capacity Per M Feet Gas Sold, Massachusetts Plant, June 30, 1912.*

| Plant. | M feet gas sold. | Total feet mains. | Feet mains larger than 2 inches. | Feet holder capacity. |
|---|---|---|---|---|
| Attleboro | 57,326 | 1.93 | 1.89 | 4.02 |
| North Adams | 89,731 | 1.90 | 1.67 | 4.60 |
| Suburban | 131,822 | 2.47 | 2.34 | 2.27 |
| Taunton | 126,482 | 3.19 | 2.65 | 5.25 |
| Salem | 168,313 | 2.33 | 2.11 | 4.56 |
| Haverhill | 235,160 | 1.65 | 1.45 | 6.54 |
| Charlestown | 266,869 | 1.17 | 1.12 | 5.23 |
| East Boston | 375,193 | 1.03 | 0.99 | 1.55 |
| Newton | 416,253 | 2.57 | 2.55 | 3.19 |
| New Bedford | 472,545 | 1.33 | 1.20 | 2.51 |
| Lawrence | 441,324 | 1.99 | 1.91 | 5.42 |
| Malden | 580,820 | 1.68 | 1.63 | 2.92 |
| Fall River | 550,734 | 1.25 | 1.11 | 5.58 |
| Lowell | 593,971 | 1.56 | 1.07 | 7.15 |
| Springfield | 693,023 | 1.44 | 1.42 | 4.92 |
| Lynn | 743,042 | 1.25 | 1.17 | 4.46 |
| Cambridge | 762,630 | 1.12 | 1.10 | 7.99 |
| Worcester | 783,734 | 1.20 | 1.10 | 4.66 |
| | 7,488,972 | 1.52 | 1.40 | 4.85 |

817 *Capital Stock & Dividends of Massachusetts Plants with No Bonds & Rate $1 or Less, Year Ending June 30, 1912.*

| Plant. | $ Capital stock. | M feet gas sold. | Per cent dividends | Cents, dividends per M feet gas sold. |
|---|---|---|---|---|
| Attleboro ..... | 58,000 | 57,326 | 12.0 | 12.14 |
| Taunton ..... | 220.000 | 126,482 | 10.0 | 17.39 |
| Salem ..... | 499,600 | 168,313 | 9.0 | 26.71 |
| East Boston .... | 575,000 | 375,193 | 10.0 | 15.33 |
| Newton ..... | 560,000 | 416,253 | 11.0 | 14.80 |
| Malden ..... | 1,584,000 | 580,820 | 7.0 | 19.09 |
| Fall River ..... | 690,000 | 550,734 | 12.0 | 15.03 |
| Lowell ..... | 1,000,000 | 593,971 | 12.0 | 20.20 |
| Springfield ..... | 1,137,500 | 693,023 | 12.0 | 19.70 |
| Cambridge ..... | 1,440,000 | 726,630 | 8.3 | 15.74 |
| Worcester ..... | 1,200,000 | 783,734 | 11.5 | 17.61 |
| | 8,964,100 | 5,108,479 | 10.05 | 17.64 |

818 *Stock & Notes, Massachusetts Gas Plants with $1 or Less Rate & No Bonds in 1912.*

| Plant. | M feet gas sold. | $ Stocks & notes. | $ Per M feet sold. Stocks. | $ Per M feet sold. Stocks & notes. |
|---|---|---|---|---|
| Attleboro ..... | 57,326 | 58,000 | 1.01 | 1.01 |
| Taunton ..... | 126,482 | 240,000 | 1.74 | 1.90 |
| Salem ..... | 168,313 | 616,100 | 2.97 | 3.66 |
| East Boston ..... | 375,193 | 620,000 | 1.53 | 1.65 |
| Newton ..... | 416,253 | 762,500 | 1.34 | 1.83 |
| Malden ..... | 580,820 | 2,029,000 | 2.72 | 3.49 |
| Fall River ..... | 550,734 | 890,000 | 1.25 | 1.62 |
| Lowell ..... | 593,971 | 1,225,000 | 1.68 | 2.06 |
| Springfield ..... | 693,023 | 1,602,500 | 1.68 | 2.31 |
| Cambridge ..... | 762,630 | 1,441,400 | 1.89 | 1.89 |
| Worcester ..... | 783,734 | 1,396,000 | 1.53 | 1.78 |
| | 5,108,479 | 10,880,500 | 1.75 | 2.09 |

819 *Capital Stock & Stock Premiums, Massachusetts Gas Plants, June 30, 1912.*

| Plant. | M feet gas sold. | $ Stock. | $ Stock premiums. | $ Stock & premiums per M sold. |
|---|---|---|---|---|
| Attleboro ..... | 57,326 | 58,000 | 14,500 | 1.26 |
| Taunton ..... | 126,482 | 220,000 | 48,000 | 2.11 |
| Salem ..... | 168,313 | 499,600 | 60,000 | 3.32 |
| East Boston .... | 375,193 | 575,000 | 11,000 | 1.56 |
| Newton ..... | 416,253 | 560,000 | 130,000 | 1.65 |
| Malden ..... | 580,820 | 1,584,000 | 296,713 | 3.23 |
| Fall River ..... | 550,734 | 690,000 | 111,598 | 1.45 |
| Lowell ..... | 593,971 | 1,000,000 | 417,157 | 2.38 |
| Springfield ..... | 693,023 | 1,137,500 | 637,500 | 2.56 |
| Cambridge ..... | 762,630 | 1,440,000 | 715,965 | 2.82 |
| Worcester ..... | 783,734 | 1,200,000 | 650,000 | 2.36 |
| | 5,108,479 | 8,964,100 | 3,092,433 | 2.36 |

820 *Assets & Dividends of Massachusetts Gas Plants, Year Ending June 30, 1912.*

| Plant. | $ Reported plant assets. | $ Gas dividends. | $ Assets per M feet sold. | % Dividends to assets. |
|---|---|---|---|---|
| Attleboro ..... | 157,372 | 6,960 | 2.74 | 4.53 |
| Taunton ..... | 308,000 | 22,000 | 2.43 | 7.14 |
| Salem ..... | 797,902 | 44,964 | 4.74 | 5.63 |
| East Boston ..... | 857,994 | 57,500 | 2.28 | 6.70 |
| Newton ..... | 723,861 | 61,600 | 1.73 | 8.50 |
| Malden ..... | 2,112,723 | 110,880 | 3.65 | 5.24 |
| Fall River ..... | 1,325,558 | 82,800 | 2.40 | 6.24 |
| Lowell ..... | 1,688,220 | 120,000 | 2.84 | 7.10 |
| Springfield ..... | 2,248,677 | 136,500 | 3.24 | 6.07 |
| Cambridge ..... | 2,480,804 | 120,000 | 3.25 | 4.83 |
| Worcester ..... | 2,117,723 | 138,000 | 2.70 | 6.51 |
| | 13,818,834 | 901,204 | 2.70 | 6.52 |

824 *Feet Length of Mains Added by Certain Gas Plants in Various Years—Per Reports in Massachusetts.*

| Plant location. | Feet increase of mains. | Year of increase. |
|---|---|---|
| Brookline | 565,002 | 1894 |
| Brockton | 227,687 | 1912 |
| Brookline | 221,965 | 1895 |
| Worcester Co. | 120,437 | 1905 |
| Boston | 118,963 | 1910 |
| Boston | 115,964 | 1908 |
| Quincy | 113,233 | 1908 |
| Suburban | 112,942 | 1902 |
| Malden | 111,623 | 1907 |
| Boston | 111,615 | 1909 |

Total length of mains of Lincoln Gas & Electric Light Co., in use January 1, 1913,—459,251 feet, per testimony of Company.

825 *Time Provided in Contracts for the Construction of Gas Plants.*

| Location & construction | Date of contract. | Date of completion. |
|---|---|---|
| 1,000,000 Foot Gas Holder, Springfield, Ill. | Nov. 6, 1912. | July 1, 1913. |
| 1,000,000 Ft. Water Gas Set, Springfield, Ill. | April 19, 1905. | 90 days. |
| 25 Ft. Diam., 10 Ft. Deep Purifier, Springfield, Ill. | June 24, 1912. | Sept. 29, 1912. |
| 4 Purifiers 17½ ft. Diam., Holyoke, Mass. | May 19, 1909. | 4 months. |
| 7½ ft. Water Gas Sets, Lincoln, Nebr. | May 24, 1912. | Aug. 1, 1912. |
| 1,000,000 ft. Holder, Haverhill, Mass. | Sept. 30, 1910. | Mar. 1, 1911. |
| 200,000 gal. Oil Tank, Haverhill, Mass. | Dec. 23, 1910. | Jan. 22, 1911. |
| 10 ft. Station Meter, Haverhill, Mass. | Sept. 15, 1910. | Jan. 1, 1911. |
| No. 4½ B. Water Gas Sets, Haverhill, Mass. | Sept. 10, 1910. | Dec. 15, 1910. |
| Condenser 11 x 5 x 14½ ft., Haverhill, Mass. | Oct. 4, 1910. | Nov. 25, 1910. |
| 4 Purifiers 20 x 15 x 7½ ft., Haverhill, Mass. | Sept. 15, 1910. | Nov. 24, 1910. |
| Coal Shed, Haverhill, Mass. | Oct. 24, 1910. | 40 days. |

826 Lincoln Gas & Electric Light Co.

COST EXHIBITS No. 2.

Alton D. Adams, Natick, Massachusetts.

827 Lincoln Gas & Electric Light Co.

*Cost of Mains Laid* 1903 *to* 1912 *per Works Orders.*

| | 2 Inch. | 4 Inch. | 6 Inch. |
|---|---|---|---|
| Total Feet Laid | 184,263 | 27,453 | 2,552 |
| Cost Materials | $19,167.47 | $8,108.81 | 1,167.00 |
| Cost Labor | 18,551.05 | 4,429.59 | 495.26 |
| Total Cost | 37,718.52 | 12,538.40 | 1,662.26 |
| Cents Cost Material Per Foot | 10.40 | 29.53 | 45.73 |
| Cents Cost Labor Per Foot | 10.06 | 16.13 | 19.39 |
| Cents Total Cost Per Foot | 20.46 | 45.66 | 65.12 |

828 & 829 Lincoln Gas & Electric Light Co.

*Cost Service Pipes per Cards—A to R.*

| | |
|---|---|
| Number of Services Laid | 1,639 |
| Feet of Pipe | 103,394 |
| Cost of Pipe | $6,446.02 |
| Cost Other Material | 1,423.50 |
| Cost of Labor | 9,816.57 |
| Total Cost | 17,686.09 |
| Cost Pipe Per Service | $3.93 |
| Cost Other Material Per Service | .86 |
| Cost Labor Per Service | 5.98 |
| Total Cost Per Service | $10.79 |
| Feet Pipe Per Service | 63.083 |
| Cost Pipe Per Foot | $.0623 |
| Cost Other Materials Per Foot | .0138 |
| Cost Labor Per Foot | .0949 |
| Total Cost Per Foot | .1710 |

830 *Gas Sales & Rates, per Reports Massachusetts Commissioners.*

| Plant. | Years. | $ Net rate. | M feet sold. | Population. | Feet sold per inhabitant. |
|---|---|---|---|---|---|
| North Adams.... | 1900 | .... | 42,829 | 24,200 | 1,769 |
| North Adams.... | 1910 | *1.00 | 79,400 | 23,226 | |
| East Boston .... | 1900 | 1.40 | 50,665 | | |
| East Boston .... | 1910 | .90 | 241,697 | 90,940 | |
| Taunton ..... | 1900 | 1.20 | 53,334 | 31,036 | 1,718 |
| Taunton ..... | 1910 | 1.00 | 107,365 | 37,493 | 2,863 |
| Salem ..... | 1900 | 1.30 | 56,809 | 35,956 | 1,579 |
| Salem ..... | 1910 | 1.10 | 144,967 | 59,418 | 2,439 |
| Malden ..... | 1900 | 1.30 | 81,833 | 33,664 | 2,430 |
| New Bedford ... | 1900 | 1.35 | 83,084 | 62,442 | 1,330 |
| New Bedford ... | 1910 | .85 | 360,311 | 101,774 | 3,540 |
| Newton ..... | 1900 | 1.25 | 101,608 | 33,587 | 3,025 |
| Newton ..... | 1910 | .95 | 323,052 | 88,034 | 3,669 |
| Haverhill ..... | 1900 | 1.00 | 115,022 | 37,175 | 3,094 |
| Haverhill ..... | 1910 | 1.00 | 203,362 | 44,115 | 4,609 |

* Rate 1912.

831 *Gas Sales & Rates, per Reports Massachusetts Commissioners.*

| Plant. | Years. | $ Net rate. | M feet sold. | Population. | Feet sold per inhabitant. |
|---|---|---|---|---|---|
| Fall River .... . | 1900 | 1.25 | 119,251 | 104,863 | 1,137 |
| Fall River ..... | 1910 | .85 | 495,612 | 122,093 | 4,059 |
| Charlestown .... | 1900 | 1.10 | 135,014 | | |
| Charlestown .... | 1910 | .90 | 238,229 | 57,595 | 4,136 |
| Lawrence ..... | 1900 | 1.15 | 138,314 | 62,559 | 2,210 |
| Lawrence ..... | 1910 | .90 | 417,864 | 110,170 | 3,792 |
| Springfield ..... | 1900 | 1.25 | 152,272 | 62,059 | 2,453 |
| Springfield ..... | 1910 | .90 | 568,112 | 107,683 | 5,275 |
| Lynn ..... | 1900 | 1.00 | 183,843 | 68,513 | 2,683 |
| Lynn ..... | 1910 | .75 | 605,581 | 112,109 | 5,401 |
| Worcester ..... | 1900 | 1.00 | 264,333 | 118,421 | 2,232 |
| Worcester ..... | 1910 | .80 | 637,570 | 145,986 | 4,367 |
| Cambridge ..... | 1900 | 1.00 | 276,284 | 91,886 | 3,006 |
| Cambridge ..... | 1910 | .85 | 669,982 | 165,924 | 4,037 |
| Lowell ..... | 1900 | 1.00 | 345,359 | 94,969 | 3,636 |
| Lowell ..... | 1910 | .90 | 573,672 | 118,515 | 4,840 |

832 *Lincoln Gas & Electric Lt. Co. Gas Sold & Highest Net Rate Yearly.*

| Year. | $ per M feet. | M feet gas sold in Lincoln. | Population, Lincoln. | Feet gas per inhabitant. |
|---|---|---|---|---|
| 1898 | *1.73 | 40,738 | | |
| 1899 | *1.50 | 42,773 | | |
| 1900 | .... | *60,000 | 40,169 | 1,493 |
| 1901 | .... | *65,000 | | |
| 1902 | *1.50 | 75,690 | | |
| 1903 | *1.50 | 98,343 | | |
| 1904 | 1.20 | 117,429 | | |
| 1905 | 1.20 | 143,641 | | |
| 1906 | 1.20 | 153,265 | | |
| 1907 | 1.20 | 178,626 | | |
| 1908 | 1.20 | 194,096 | | |
| 1909 | 1.20 | 203,244 | | |
| 1910 | 1.20 | 208,024 | 43,973 | 4,730 |
| 1911 | 1.20 | 222,229 | | |
| 1912 | 1.20 | 227,297 | | |

* Per Brown's Directory.

833 & 834 *Gas Rates Price of Coal per Ton & Gas Made in Lincoln & per Returns to Massachusetts Commissioners* 1912.

| Plant. | $ Net rate. | $ Price gas coal. | Per cent cost coal from residuals. | M feet gas made. | % Water gas. |
|---|---|---|---|---|---|
| † Lincoln | 1.20 | 5.50 | | | |
| † Lincoln | 1.20 | 5.44 | | | |
| Taunton | 1.00 | 4.83 | 44.57 | 144,808 | 0.0 |
| Haverhill | .85 | *5.84 | ..... | 249,151 | 100.0 |
| Charlestown | .85 | .... | 63.06 | 299,718 | 0.0 |
| New Bedford | .80 | 3.62 | 29.98 | 496,190 | 61.7 |
| Lawrence | .90 | 4.84 | 32.52 | 468,401 | 41.8 |
| Fall River | .80 | *5.92 | ..... | 583,248 | 100.0 |
| Lowell | .85 | 4.54 | 46.15 | 612,100 | 38.0 |
| Springfield | .85 | 4.21 | 38.94 | 720,153 | 57.2 |
| Lynn | .75 | 3.76 | 35.33 | 793,950 | 58.8 |
| Cambridge | .85 | 3.86 | 41.98 | 798,929 | 26.5 |
| Worcester | .75 | 4.43 | 30.72 | 821,646 | 42.1 |

† Per Gas Reports of 1907 & 1912 Respectively.
* W. G. Generator Fuel.

835 *Working Capital.*

Lincoln Gas & Electric Light Co.

Alton D. Adams, Natick, Massachusetts.

836 *Lincoln Gas & Electric Light Co.*

*Operating Expense & Income of Years* 1907 *&* 1912.

| Month & year. | $ Expense. | $ Income. |
|---|---|---|
| 1907. | | |
| January | 12,139.35 | 20,092.81 |
| February | 11,182.85 | 16,310.66 |
| March | 10,894.76 | 16,701.93 |
| April | 11,434.12 | 16,685.44 |
| May | 11,290.73 | 16,797.79 |
| June | 10,103.23 | 15,915.62 |
| July | 10,627.16 | 15,581.25 |
| August | 11,182.60 | 15,065.72 |
| September | 11,475.18 | 17,779.56 |
| October | 13,212.62 | 21,035.66 |
| November | 13,651.79 | 21,342.85 |
| December | 14,258.20 | 22,466.91 |
| 1912. | | |
| January | 15,416.79 | 27,209.07 |
| February | 13,387.38 | 25,070.07 |
| March | 13,635.30 | 21,315.46 |
| April | 13,429.95 | 22,025.61 |
| May | 14,518.93 | 22,005.35 |
| June | 13,938.05 | 22,582.43 |
| July | 14,114.38 | 20,057.71 |
| August | 14,539.34 | 20,376.93 |
| September | 15,384.20 | 24,676.66 |
| October | 15,427.19 | 25,933.80 |
| November | 15,385.41 | 25,562.03 |
| December | 16,396.57 | 25,346.99 |

837 Lincoln Gas & Electric Light Co.

*Operating Expenses in Each Month, and Coke, Coal, & Oil on Hand at Close of Month, per Gas Reports of* 1912.

| Month. | $ Total expense. | $ Coke, coal, & oil on hand. | $ Working capital equals expense of one month plus coke, coal, & oil on hand end of month. |
|---|---|---|---|
| January ..... | 15,416.79 | 3,326.39 | |
| February ..... | 13,387.38 | 4,046.15 | |
| March ..... | 13,635.30 | 4,178.98 | |
| April ..... | 13,429.95 | 2,935.25 | |
| May ..... | 14,518.93 | 3,711.53 | |
| June ..... | 13,938.05 | 3,658.98 | |
| July ..... | 14,114.38 | 5,265.54 | |
| August ..... | 14,539.34 | 4,198.32 | |
| September ..... | 15,384.20 | 2,273.67 | |
| October ..... | 15,427.19 | 3,353.49 | |
| November ..... | 15,385.41 | 4,853.88 | 20,239.29 |
| December ..... | 16,396.57 | 2,823.76 | |

838 Lincoln Gas & Electric Light Co.

*Cost of Coal & Oil on Hand Close of Each Month.*

| Year. | Month. | $ Coal. | $ Oil. | $ Coal & oil. |
|---|---|---|---|---|
| 1907. | January ..... | 6,597.64 | | |
| | February ..... | 13,475.05 | | |
| | March ..... | 12,914.92 | | |
| | April ..... | 10,747.09 | | |
| | May ..... | 11,630.22 | | |
| | June ..... | 12,778.96 | | |
| | July ..... | 12,580.74 | | |
| | August ..... | 10,984.24 | | |
| | September ..... | 11,632.82 | | |
| | October ..... | 11,514.30 | | |
| | November ..... | 9,597.15 | | |
| | December ..... | 8,687.72 | | |
| 1912. | January * ..... | 2,299.64 | 1,026.75 | 3,326.39 |
| | February ..... | 2,729.11 | 1,317.04 | 4,046.15 |
| | March ..... | 3,218.72 | 960.26 | 4,178.98 |
| | April ..... | 2,369.25 | 566.00 | 2,935.25 |
| | May ..... | 2,073.91 | 1,637.62 | 3,711.53 |
| | June ..... | 2,075.12 | 1,583.86 | 3,658.98 |
| | July ..... | 3,440.73 | 1,824.81 | 5,265.54 |
| | August ..... | 2,599.24 | 1,599.08 | 4,198.32 |
| | September ..... | 1,752.62 | 521.05 | 2,273.67 |
| | October ..... | 1,824.41 | 1,529.08 | 3,353.49 |
| | November ..... | 2,418.84 | 2,435.04 | 4,853.88 |
| | December ..... | 2,376.37 | 447.39 | 2,823.76 |

* Coke included in 1912.

*Gratuitous Work, General Supervision, Cost of Reading Meters, No. of Meters, and No. of Consumers, as per Company's Annual Reports.*

| Line. | Item. | 1903. | 1904. | 1905. |
|---|---|---|---|---|
| 3204. | Grat. Work | 1,982.88 | 698.59 | 1,067.00 |
| 3205. | Gen. Sup. | 832.07 | 545.22 | 488.23 |
| 3520. | No. meters | 875. | 1,021. | 1,243. |
| | No. Customers | 869. | 1,007. | 1,218. |
| 3436. | Cost reading Meter | .1848 A. C. | .19 | .15 |
| 3440. | | .1824 D. C. | .19 | .081 |

| Line. | Item. | 1906. | 1907. | 1908. |
|---|---|---|---|---|
| 3204. | Grat. Work | 1,435.37 | 1,635.36 | 1,877.39 |
| 3205. | Gen. Sup. | 462.52 | 1,033.76 | 723.00 |
| 3520. | No. Meters | 1,472. | 1,577. | 1,500. |
| | No. Customers | 1,486. | 1,756. | 1,989. |
| 3436. | Cost reading Meter | .0150 | .268 A. C. | .175 A. C. |
| 3440. | | | .088 D. C. | .295 D. C. |

| Line. | Item. | 1909. | 1910. | 1911. |
|---|---|---|---|---|
| 3204. | Grat. Work | 1,876.12 | 2,062.42 | 2,284.14 |
| 3205. | Gen. Sup. | 724.80 | 697.37 | 801.94 |
| 3520. | No. Meters | 1,932. | 2,290. | 2,414. |
| | No. Customers | 2,586. | 3,050. | 2,389. |
| 3436. | Cost reading Meter | .0144 | .0132 | .0096 |
| 3440. | | .012 A. C. | .120 A. C. | .118 A. C. |
| | | .058 D. C. | .678 D. C. | .945 D. C. |

| Line. | Item. | 1912. |
|---|---|---|
| 3204. | Grat. Work | 3,011.26 |
| 3205. | Gen. Sup. | 919.29 |
| 3947. | No. Meters | 2,990. |
| 3946. | No. Customers | 2,934. |
| 3436. | Cost reading Meter | .0087 |
| 3440. | | .103 A. C.<br>1.0 D. C. |

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## Electrical Department.

### Steam Generator.

*Common Expenses.*

| Line. | Item. | 1903. | 1904. | 1905. |
|---|---|---|---|---|
| | Opp. Expense per K. W. Hr. Generator | .02047 | .0179 | .0168 |
| 3000. | Fuel | 19,679.89 | 21,376.63 | 22,707.38 |
| 3001. | Water | 1,119.62 | 652.89 | 1,276.64 |
| 3002. | B. R. Labor | 2,341.83 | 2,524.38 | 2,648.36 |
| 3003. | Gen. Labor | 362.08 | 453.45 | 414.98 |
| 3004. | Supplies | 796.62 | 1,099.50 | 1,207.22 |
| 3005. | Clerical Salaries | 209.64 | 209.25 | 228.04 |
| 3006. | Repairs, Boilers & Pipes | 1,284.68 | 1,802.38 | 1,829.49 |
| 3007. | Rep. General | 416.37 | 225.55 | 263.38 |
| 3008. | Sundries Sup., etc. | 2,208.78 | 2,344.11 | 2,098.85 |
| 3009. | Total K. W. Hrs. | 1,115,716. | 1,300,350.6 | 1,410,772. |
| 3010. | Less Steam Heat | 1,368.96 | 2,100. | 3,600. |
| 3011. | Net Expense | 27,050.55 | 28,588.14 | 29,074.34 |

| Line. | Item. | 1906. | 1907. | 1908. |
|---|---|---|---|---|
| | Opp. Expense per K. W. Hr. Generator | .0148 | .0124 | .0145 |
| 3000. | Fuel | 30,093.47 | 38,698.06 | 46,188.32 |
| 3001. | Water | 1,900.32 | 3,647.09 | 4,219.94 |
| 3002. | B. R. Labor | 3,237.92 | 4,933.32 | 4,325.84 |
| 3003. | Gen. Labor | 819.62 | 868.84 | 590.98 |
| 3004. | Supplies | 1,394.03 | 2,380.11 | 2,484.75 |
| 3005. | Clerical Salaries | 240.53 | 272.74 | 685.57 |
| 3006. | Repairs, Boilers & Pipes | 2,492.55 | 2,126.02 | 2,301.43 |
| 3007. | Rep. General | 621.19 | 838.09 | 830.68 |
| 3008. | Sundries Sup., etc. | 2,272.99 | 2,821.46 | 2,893.61 |
| 3009. | Total K. W. Hrs. | 2,177,022. | 3,469,802. | 3,551,725. |
| 3010. | Less Steam Heat | 3,600. | 4,200. | 4,291.70 |
| 3011. | Net Expense | 39,472.62 | 52,385.73 | 60,229.42 |

| Line. | Item. | 1909. | 1910. | 1911. |
|---|---|---|---|---|
| | Opp. Expense per K. W. Hr. Generator | .0155 | .0179 | .0154 |
| 3000. | Fuel | 42,134.93 | 56,152.37 | 59,742.29 |
| 3001. | Water | 4,712.87 | 5,596.72 | 4,777.96 |
| 3002. | B. R. Labor | 4,523.04 | 3,792.02 | 3,421.40 |
| 3003. | Gen. Labor | 332.79 | 233.74 | 149.33 |
| 3004. | Supplies | 1,895.20 | 1,770.08 | 1,752.50 |
| 3005. | Clerical Salaries | 517.22 | 574.86 | 609.82 |
| 3006. | Repairs, Boilers & Pipes | 2,816.60 | 3,520.42 | 5,017.90 |
| 3007. | Rep. General | 664.03 | 983.70 | 6,544.15 |
| 3008. | Sundries Sup.. etc. | 3,414.17 | 3,417.13 | 2,796.77 |
| 3009. | Total K. W. Hrs. | 3,145,172. | 3,427,311. | 4,128,984. |
| 3010. | Less Steam Heat | 4,750.00 | 6,475.00 | 7,225.00 |
| 3011. | Net Expense | 56,260.85 | 69,566.13 | 77,587.12 |

| Line. | Item. | 1912. |
|---|---|---|
| | Opp. Expense per K. W. Hr. Generator..... | .0179 |
| 3000. | Fuel ..... | 62,485.39 |
| 3001. | Water ..... | 6,624.41 |
| 3002. | B. R. Labor..... | 5,602.30 |
| 3003. | Gen. Labor ..... | 167.15 |
| 3004. | Supplies ..... | 1,799.50 |
| 3005. | Clerical Salaries ..... | 513.30 |
| 3006. | Repairs, Boilers & Pipes..... | 11,310.93 |
| 3007. | Rep. General ..... | 941.74 |
| 3008. | Sundries Sup., etc. ..... | 2,575.78 |
| 3009. | Total K. W. Hrs. ..... | 4,638,835. |
| 3010. | Less Steam Heat ..... | 8,895.00 |
| 3011. | Net Expense ..... | 83,125.50 |



## Electrical Department.

*General Expense.*

| Line. | Item. | 1903. | 1904. | 1905. | 1906. |
|---|---|---|---|---|---|
| 3224. | Ex. Salaries ..... | 2,623.42 | 2,005.07 | 2,447.21 | 2,808.88 |
| 3225. | Clerical " ..... | 792.95 | 562.91 | 474.72 | 400.00 |
| 3226. | Gen. Off. Exp..... | 400.24 | 376.43 | 241.29 | 238.74 |
| 3227. | Rent Ex. Off..... | 261.47 | 331.42 | 332.99 | 466.99 |
| 3228. | Legal Exp. ..... | 985.90 | 1,356.09 | 956.04 | 840.10 |
| 3229. | Incidental ..... | 2,324.25 | 1,831.00 | 1,502.86 | 2,181.29 |
| 3232. | Taxes ..... | 1,825.90 | 1,056.00 | 1,056.00 | 3,345.24 |
| 3231. | Prom. N. Bus. ..... | 1,107.94 | 3,201.83 | 5,191.04 | 9,016.23 |
| | | 10,322.07 | 10,720.75 | 12,202.15 | 19,330.47 |

| Line. | Item. | 1907. | 1908. | 1909. | 1910. |
|---|---|---|---|---|---|
| 3224. | Ex. Salaries | 3,168.64 | 2,015.94 | 1,536.66 | 2,459.89 |
| 3225. | Clerical " | 493.74 | 207.00 | 187.00 | 201.10 |
| 3226. | Gen. Off. Exp | 438.39 | 339.79 | 275.33 | 269.58 |
| 3227. | Rent Ex. Off. | 539.14 | 301.59 | 331.96 | 412.23 |
| 3228. | Legal Exp. | 1,141.92 | 795.70 | 766.45 | 999.88 |
| 3229. | Incidental | 1,743.92 | 1,203.45 | 1,005.63 | 742.93 |
| 3232. | Taxes | 3,542.52 | 3,714.36 | 3,993.00 | 4,167.50 |
| 3231. | Prom. N. Bus. | 11,157.50 | 7,930.04 | 12,165.09 | 7,350.88 |
| | | 22,225.77 | 16,507.87 | 20,261.12 | 16,603.99 |

| Line. | Item. | 1911. | 1912. |
|---|---|---|---|
| 3224. | Ex. Salaries | 2,367.73 | 2,229.33 |
| 3225. | Clerical " | 266.70 | 303.70 |
| 3226. | Gen. Off. Exp | 320.00 | 329.92 |
| 3227. | Rent Ex. Off. | 392.23 | 434.42 |
| 3228. | Legal Exp. | 1,080.76 | 1,223.13 |
| 3229. | Incidental | 1,389.48 | 1,134.02 |
| 3232. | Taxes | 5,280.00 | 7,200.00 |
| 3231. | Prom. N. Bus. | 6,637.30 | 3,877.33 |
| | | 17,734.20 | 16,731.85 |

844 Electric- Department.

*General Expense per K. W. Hour Capacity.*

| Line. | Item. | 1903. | 1904. | 1905. | 1906. |
|---|---|---|---|---|---|
| 3224. | Ex. Salaries | .8692 | .4849 | .4216 | .3476 |
| 3225. | Clerical " | ..... | .0511 | .0562 | .0463 |
| 3226. | Gen. Off. Ex. | ..... | .0255 | .0281 | .0232 |

| | | | | | |
|---|---|---|---|---|---|
| 3227. | Rent Ex. Off. | ..... | .0511 | .0562 | .0502 |
| 3228. | Legal Ex. | .1943 | .1222 | .1124 | .0908 |
| 3229. | Incidental | .7706 | .4660 | .3519 | .4213 |
| 3231. | Prom. New Bus. | .3671 | .8160 | 1.2150 | 1.7415 |
| 3232. | Taxes | .9080 | .4050 | .3710 | .9536 |
| 3233. | Total | 3.1094 | 2.4218 | 2.6124 | 3.6745 |

| Line. | Item. | 1907. | 1908. | 1909. | 1910. |
|---|---|---|---|---|---|
| 3224. | Ex. Salaries | .3161 | .1985 | .1811 | .1462 |
| 3225. | Clerical " | .0372 | .0355 | .0577 | .0316 |
| 3226. | Gen. Off. Ex. | .0186 | .0177 | .0212 | .0148 |
| 3227. | Rent Ex. Off. | .0372 | .0355 | .0424 | .0214 |
| 3231. | Prom. New Bus. | .0558 | .0556 | .0904 | .0594 |
| 3229. | Incidental | .2717 | .1777 | .1590 | .0442 |
| 3231. | Prom. New Bus. | 1.7280 | 1.1713 | 2.1510 | .6554 |
| 3232. | Taxes | .7313 | .6635 | .9414 | .4955 |
| 3233. | Total | 3.1959 | 2.3553 | 3.6442 | 1.4685 |

| Line. | Item. | 1911. | 1912.* |
|---|---|---|---|
| 3224. | Ex. Salaries | .1336 | .1117 |
| 3225. | Clerical " | .0410 | .0425 |
| 3226. | Gen. Off. Exp. | .0180 | .0167 |
| 3227. | Rent Ex. Off. | .0186 | .0182 |
| 3228. | Legal Exp. | .0610 | .0620 |
| 3229. | Incidental | .0784 | .0575 |
| 3231. | Prom. N. Bus. | .5618 | .2948 |
| 3232. | Taxes | .5960 | 1.0948 |
| 3233. | Total | 1.5084 | 1.6980 |

* Not shown in report.

*Earnings.*

| Line. | Item. | 1903. | 1904. | 1905. |
|---|---|---|---|---|
| 3397. | Gross Earnings | 77,028.30 | 77,958.90 | 91,052.62 |
| 3398. | Opperating Exp. | 53,142.71 | 52,911.26 | 57,467.42 |
| 3399. | Net Earnings | 23,885.59 | 25,047.64 | 33,585.20 |

| Line. | Item. | 1906. | 1907. | 1908. |
|---|---|---|---|---|
| 3397. | Gross Earnings | 116,565.23 | 136,439.55 | 129,283.69 |
| 3398. | Opperating Exp. | 77,977.88 | 96,646.31 | 98,108.25 |
| 3399. | Net Earnings | 38,587.35 | 39,793.24 | 31,175.44 |

| Line. | Item. | 1909. | 1910. | 1911. |
|---|---|---|---|---|
| 3397. | Gross Earnings | 119,008.53 | 139,561.25 | 157,970.75 |
| 3398. | Opperating Exp. | 101,639.28 | 114,005.31 | 125,216.46 |
| 3399. | Net Earnings | 17,369.25 | 25,554.94 | 32,754.29 |

| Line. | Item. | 1912. |
|---|---|---|
| 3397. | Gross Earnings | 168,614.83 |
| 3398. | Opperating Exp. | 129,177.35 |
| 3399. | Net Earnings | 39,437.48 |

*Collection Expenses.*

| Line. | Item. | 1903. | 1904. | 1905. |
|---|---|---|---|---|
| 3213. | Clerical Salaries | 1,114.67 | 1,367.24 | 1,537.32 |
| 3214. | Office Expenses | 341.24 | 389.19 | 457.65 |
| 3215. | Rent of Office | 261.89 | 490.70 | 484.02 |
| 3216. | Delivery Bills | 42.18 | 45.19 | 34.73 |

| | | | | |
|---|---|---|---|---|
| 3217. | Outside Collections | 180.91 | 292.78 | 248.84 |
| | Total | 1,940.89 | 2,585.10 | 2,762.56 |

| Line. | Item. | 1906. | 1907. | 1908. |
|---|---|---|---|---|
| 3213. | Clerical Salaries | 1,861.79 | 2,057.55 | 2,261.71 |
| 3214. | Office Expenses | 443.12 | 458.80 | 382.98 |
| 3215. | Rent of Office | 418.98 | 387.88 | 253.86 |
| 3216. | Delivery Bills | 85.54 | 83.55 | 55.61 |
| 3217. | Outside Collections | 323.48 | 349.60 | 280.33 |
| | Total | 3,132.95 | 3,337.38 | 3,234.49 |

| Line. | Item. | 1909. | 1910. | 1911. |
|---|---|---|---|---|
| 3213. | Clerical Salaries | 1,391.36 | 1,446.34 | 1,629.62 |
| 3214. | Office Expenses | 563.27 | 612.57 | 571.87 |
| 3215. | Rent of Office | 191.49 | 193.67 | 182.31 |
| 3216. | Delivery Bills | 58.80 | 90.81 | 68.11 |
| 3217. | Outside Collections | 260.78 | 402.75 | 417.38 |
| | Total | 2,465.70 | 2,746.14 | 2,869.29 |

| Line. | Item. | 1912. |
|---|---|---|
| 3213. | Clerical Salaries | |
| 3214. | Office Expenses | 1,701.09 |
| 3215. | Rent of Office | 750.58 |
| 3216. | Delivery Bills | 384.85 |
| 3217. | Outside Collections | 77.55 |
| | | 373.61 |
| | Total | 3,287.68 |

847 *Cost of Mains, Lincoln Water Works.*

| Year. | Inch size main. | Number sections dug. | $ Paid for trenching. | Feet length. | Cents per foot. |
|---|---|---|---|---|---|
| 1907..... | 4 | 36. | 36. | 450. | 8. |
| 1909..... | 4 | 131.5 | 131.50 | 1,643.75 | 8. |
| 1910..... | 4 | 501.5 | 501.50 | 6,268.75 | 8. |
| 1911..... | 4 | 419.04 | 419.20 | 5,238. | 8. |
| 1912..... | 4 | 368.5 | 368.50 | 4,606.25 | 8. |
| 1913..... | 4 | 476.38 | 476.21 | 5,954.75 | 8. |
| | | 1,932.92 | 1,932.91 | 24,161.5 | 8. |
| 1907..... | 6 | 249.75 | 249.75 | 3,131.875 | 8. |
| 1908..... | 6 | 125. | 125.00 | 1,562.5 | 8. |
| 1909..... | 6 | 386. | 386.00 | 4,825. | 8. |
| 1910..... | 6 | 364.5 | 364.50 | 4,556.25 | 8. |
| 1911..... | 6 | 747.96 | 747.96 | 9,349.5 | 8. |
| 1912..... | 6 | 302. | 302.00 | 3,775. | 8. |
| | | 2,175.21 | 2,175.21 | 27,190.125 | 8. |
| 1907 to 1913. | 4–6 | 4,108.13 | 4,108.12 | 51,351.625 | 8. |

848 A Standard Section of Water Pipe Trench is 12.5 feet long, 2 feet wide and 5.5 feet deep, and the regular price paid to the man who digs it is one dollar.

*Cost of Trenching per Cubic Foot at $1 per Section.*

| Feet wide trench. | Feet deep trench. | Feet length section. | Cubic feet per section. | Cents cost per cubic foot. |
|---|---|---|---|---|
| 2. | 5.5 | 12.5 | 137.5 | 0.727 |
| 1.6 | 5.5 | 12.5 | 110. | 0.090 |
| 1.5 | 5.5 | 12.5 | 103.1 | 0.969 |

849 *Going Value.*

Alton D. Adams, Natick, Massachusetts.

850 EXHIBIT 412.

Circuit Court of the United States, Southern District of New York.

THE CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

against

JULIUS M. MAYER, as Attorney-General of the State of New York, Defendant.

(Copy.)

*Master's Report.*

Filed June 24th, 1907.

Good Will.

In the present case, the Complainant claims that there should be included among its assets not only its franchises but also its good-will. It is alleged in the bill that,

"In addition to its said franchise rights, your orator is possessed of a large amount of intangible property, which constitutes an integral and important part of said business. Such property consists of the value of the connections between the pipes and mains, of your orator and the various buildings throughout the City of New York, the value of various contracts owned by your orator in connection with its business, the value of the organization of your orator's business and good-will, and various other elements of value which have been created and developed by your orator and its predecessors through intelligent and efficient business management during the past three-quarters of a century and fidelity to their engagements, all of which possess the full attributes of property and materially add to the gross earnings of your orator, upon which it pays an annual tax of one per cent. to the State of New York. By reason of such good-will it would be difficult, if not impossible, for any company in the City of New York, even if vested with similar franchises to those possessed by your orator, to compete in selling gas to consum-

851 ers in the said city; and if your orator elected to sell its tangible property and franchises, it could, apart from these, obtain a large sum for the said good-will, and your orator avers that upon this good-will, as an element of substantial value, it is entitled to a reasonable return, and that, in fixing the price, at which your orator should sell its gas, as hereinbefore stated, the said Commission of Gas and Electricity allowed no return whatever upon the value of the said good-will but wholly eliminated it as an item of substantial value."

In the present case Complainant claims as the value of its good-will the sum of $7,500,000., and in support thereof relies on the opinions of two witnesses, Dr. Humphreys and Mr. Addicks. The Defendants offered no evidence on the subject.

EXHIBIT 412.

Dr. Humphrey's testimony is as follows:

"Q. Assuming, Doctor, that in 1884, six gas light corporations operating in the City of New York were consolidated, forming the complainant company, the Consolidated Gas Company; that one of the constituent companies was incorporated in 1823 and was in operation from 1825 to 1884; and that the other five were incorporated at intervals prior to the consolidation in 1884; that the output of the six companies in gas in 1885 was about 3,942,000,000 feet, and that the output has increased until in 1905 it was 13,283,000,000 feet or thereabouts; that the population of Manhattan Island, on which the Consolidated Gas Company is operating, is over 2,100,000 people; that it shows an increase of something like 50% in population in the last thirty-years or so; that the Consolidated Gas Company has about 390,000 consumers, and is in active operation today, what would you consider to be the value of the good-will of that business, including the value of the established business and its connections with the consumers, and other elements which go to make up good-will as distinguished from its tangible plant?

A. I should estimate it at not less than $7,500,000."

The basis of Mr. Addick's testimony appears more clearly. He said that in his experience where consumers have connections and established relations with a gas company, it requires some
852 special incentive to compel them to change. Such incentive, he said, would be a reduction in rate by a competing company to the minimum extent of 10 per cent. of the selling price of gas. Taking the Complainant's sales for 1905, 13,283,000,000 feet, such percentage would aggregate $1,328,300. This capitalized at, say 7 per cent. would amount to $18,875,000. or at 8 per cent., to $16,-603,750., as the value of the good-will.

EXHIBIT 412.

853 *Going Value Awards.*

EXHIBIT #413.

| Plant location. | Kind. | $ Structural value. | $ Going value. | % Going to structural. |
|---|---|---|---|---|
| Kansas City. | Water.... | 2,714,000 | 286,000 | 10.5 |
| Newburyport. | " .... | 235,000 | 40,000 | 17.0 |
| Gloucester. | " .... | 525,500 | 75,000 | 14.2 |
| Holyoke. | Gas & El.. | 544,324 | 108,864 | 20.0 |
| San Francisco. | Water.... | 24,124,389 | 1,400.000 | 5.8 |
| Knoxville. | " .... | 538,000 | 60,000 | 11.1 |
| Omaha. | " .... | 5,700,583 | 562,712 | 9.8 |

854 *Extracts from Bills to Lincoln Gas & Electric Lt. Co.*

EXHIBIT #421.

| | | |
|---|---|---|
| Voucher No. 6256. | May 1, 1909. | |
| Bricklayers & labor | 46.70 | |
| 1 car Brick of 8,000 M @ 7.25 | 58.00 | |
| Percentage | 5.20 | |
| | | 109.90 |
| Payment | | 250.00 |
| | | 359.90 |
| G 12 Blower for W. G. Mch | 76.05 | |
| Voucher No. 6337. | June 10, 1909. | |
| To 10,000 Brick @ $7.25 per M | 72.50 | |
| Bricklayer | 55.90 | |
| Labor | 25.80 | |
| Percentage | 7.70 | |
| | | 161.90 |

EXHIBIT #420.

| | | |
|---|---|---|
| Voucher No. 3789. | Sept. 6, 1907. | |
| Q31735—10,000 Brick | 6.75 | 67.50 |
| | Sept. 22, 1907. | |
| Aug. 21, C.B.& Q. 15813—4,000 Brick @ | 6.75 | 27.00 |
| 1,700 H. Bl. 5 x 8 x 16 @ | 56.25 | 95.62 |
| Aug. 22, C.B.& Q.19995—13,000 Brick @ | 6.75 | 87.75 |
| 22, C. B. & Q. 24449—300 Brick @ | 6.75 | 20.25 |
| 2,800 H. Bl. 5 x 8 x 16 @ | 56.25 | 157.50 |
| | | 388.12 |

855 *Extracts from Bills to Lincoln Gas & Electric Light Co.*

EXHIBIT #422.

| | | |
|---|---|---|
| Voucher No. 13236. | Yankee Hill Brick Co., Burnham, Nebr. August 30, 1912. | |
| 13,000 Brick at $7.00 | Car #16760 | 91.00 |

856 *Depreciation.*

Lincoln Gas Plant.

Alton D. Adams, Natick, Massachusetts.

857

## Ex. 430.

### Lincoln Gas & Electric Lt. Co.

*Annual Depreciation & Renewals Computed on Cost of Plant, and Repairs, Renewals & Depreciation, as Computed at 9 Cents per M Feet Sold.*

| Year. | $ Depreciation & renewals computed on cost. | $ Repairs, renewals, & depreciation at 9 cents. | $ Excess at 9 cents per M sold. |
|---|---|---|---|
| 1907..... | 6,962.74 | 16,142.94 | 9,180.20 |
| 1908..... | 7,839.18 | 17,585.19 | 9,746.01 |
| 1909..... | 9,243.42 | 18,385.56 | 9,142.14 |
| 1910..... | 9,858.69 | 18,915.21 | 9,056.52 |
| 1911..... | 10,455.93 | 20,454.12 | 9,998.19 |
| 1912..... | 10,914.26 | 21,094.74 | 10,180.48 |

## Ex. 430½.

*Depreciation per M Feet Gas Sold.*

| Year. | M feet gas sold. | $ Depreciation & renewals computed on cost. | Cents per M sold computed on cost. | 9 cents, less computed renewals & depreciation. |
|---|---|---|---|---|
| 1907..... | 179,366 | 6,962.74 | 3.88 | 5.12 |
| 1908..... | 195,391 | 7,839.18 | 4.01 | 4.99 |
| 1909..... | 204,284 | 9,243.42 | 4.52 | 4.48 |
| 1910..... | 210,169 | 9,858.69 | 4.69 | 4.31 |
| 1911 | 227,268 | 10,455.93 | 4.60 | 4.40 |
| 1912..... | 234,386 | 10,914.26 | 4.65 | 4.35 |

Ex. 431—1.

Lincoln Gas & Electric Lt. Co.

*Yearly Depreciation & Renewals Computed on Cost.*

| Plant items. | Year built. | $ Cost. | Years' life. | $ Depreciation, 1907. |
|---|---|---|---|---|
| Buildings: | | | | |
| Purifying House | 1890 | 12,577 | 66.6 | 188.66 |
| Generator House | 1907 | 3,261 | 66.6 | |
| Retort House | 1890 | 6,088 | 66.6 | 91.32 |
| Meter Shop & Booster House | .... | 2,049 | 66.6 | |
| Coal Shed | 1890 | 1,657 | 40.0 | 41.43 |
| Oil Tank House | 1897 | 1,107 | 66.6 | 16.61 |
| Oxide Shed | 1909 | 60 | 25.0 | |
| Stable & Blacksmith Shop | 1897 | 818 | 25.0 | 32.72 |
| District Holder Booster House | 1910 | 518 | 66.0 | |
| Works Equipment: | | | | |
| 7½ Foot Water Gas Set | 1908 | 7,506 | 33.3 | |
| 7½ Foot Water Gas Set | 1912 | 7,506 | 33.3 | |
| Water Gas Condenser & Scrubber | 1908 | 1,206 | 33.3 | |
| Operating Floor for 7½ Ft. Sets | .... | 1,319 | 66.6 | |
| 6½ Ft. Water Gas Set, W. G. C | 1902 | 5,808 | 33.3 | 174.24 |
| 6½ Ft. Water Gas Set Springer | 1888 | 2,904 | 33.3 | 87.12 |
| Operating Floor | 1902 | 1,184 | 66.6 | 17.76 |
| #7 Sturtevant Blower | 1909 | 254 | 40.0 | |
| #7 Sturtevant Blower | 1909 | 258 | 40.0 | |

| | | | | |
|---|---|---|---|---|
| #1 Root Blower | 1901 | 142 | 40.0 | 3.55 |
| #8 Sturtevant Turbo-Blower | 1908 | 1,336 | 33.3 | |
| #8 Sturtevant Blower | 1909 | 559 | 40.0 | |
| #6 Root Exhauster | 1890 | 824 | 40.0 | 20.60 |
| 5″ x 5″ Sturtevant Engine & #6 Exhauster | 1908 | 590 | 40.0 | |
| 10″ McKenzie Exhauster | 1892 | 425 | 40.0 | 10.63 |
| 4″ x 5″ Greenfield Engine | 1897 | 265 | 40.0 | 6.63 |
| 7″ x 6″ Sturtevant Engine | 1909 | 357 | 40.0 | |
| 40 H. P. Motor | 1904 | 250 | 33.3 | 7.50 |
| 35 H. P. Motor | 1904 | 535 | 33.3 | 16.05 |
| Countershafting etc. | 1891 | 77 | 33.3 | 2.31 |
| 3 Benches of 6's ½ Depth | 1892 | 7,034 | 33.3 | 211.02 |
| 3 Benches of 6's ¾ Depth | 1901 | 7,634 | 33.3 | 229.02 |
| Charging Floor | 1897 | 1,605 | 66.6 | 24.08 |
| 4½′ x 25′ Condenser | 1890 | 583 | 40.0 | 14.58 |
| 5½′ x 31′ Scrubber | 1890 | 319 | 40.0 | 7.98 |
| 4½′ x 5′ Rotary Scrubber | 1887 | 2,138 | 40.0 | 53.45 |
| 1 20′ x 24′ x 4′ Purifying Box | 1900 | 1,920 | 50.0 | 38.40 |
| 3 20′ x 24′ x 4′ " " | 1892 | 5,760 | 50.0 | 115.20 |
| 10′ Station Meter | 1907 | 3,940 | 40.0 | 98.50 |
| 6′ Station Meter | 1882 | 1,250 | 40.0 | 31.25 |
| 500,000 Cu. Ft. Gas Holder | 1908 | 41,537 | 66.6 | |
| 200,000 Cu. Ft. Gas Holder | 1890 | 18,000 | 66.6 | 270.00 |

*Depreciation.*

| Plant items. | Year built. | $ Cost. | Years' life. | $ Depreciation, 1907. |
|---|---|---|---|---|
| 50,000 Cu. Ft. Gas Holder | 1882 | 8,000 | 66.6 | 120.00 |
| 20″ Connelly Governor | 1890 | 860 | 50.0 | 17.20 |
| 12″ Reynolds Governor | 1909 | 380 | 50.0 | |
| 6″ x 10″ x 5″ x 10″ Knowles Pump | 1902 | 418 | 25.0 | 16.72 |
| 3″ x 4″ Vertical Pump | 1892 | 186 | 25.0 | 7.44 |
| 3½″ x 4″ x 6″ Gardner Pump | 1906 | 104 | 25.0 | 4.16 |
| 4½″ x 3¾″ x 4″ Worthington Pump | 1910 | 116 | 25.0 | |
| 4½″ x 2¾″ x 4″ Gardner Pump | 1908 | 110 | 25.0 | |
| 4½″ x 2¾″ x 4″ Worthington Pump | 1908 | 110 | 25.0 | |
| 3″ x 2″ x 3″ Worthington Pump | 1911 | 99 | 25.0 | |
| 6″ x 4″ x 6″ Warren Pump | 1892 | 186 | 25.0 | 7.44 |
| 2½″ x 3″ x 4″ Marsh Pump | 1908 | 93 | 25.0 | |
| Otis Platform Elevator | 1908 | 965 | 33.3 | |
| Fairbanks Scale | 1907 | 60 | 33.3 | 1.80 |
| Photometer | 1893 | 300 | 33.3 | 9.00 |
| Calarimeter | 1909 | 200 | 25.0 | |
| Shop Tools | 1905 | 462 | 25.0 | 18.48 |
| Four Tar Tanks 63′ x 16′ | 1892 | 393 | 40.0 | 9.83 |
| Tar Separator | 1905 | 179 | 40.0 | 44.75 |
| Tar Well, 3¼′ x 3¼′ x 10′ | 1892 | 104 | 66.6 | 1.56 |
| Tar Well, 6′ x 20′ x 12′ | 1898 | 472 | 66.6 | 7.08 |
| 2 Steel Tar Tanks, 10½′ x 29½′ | 1910 | 1,056 | 66.6 | |
| 2 Steel Oil Tanks, 10¾′ x 29½′ | 1909 | 1,160 | 66.6 | |

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| | | | | |
|---|---|---|---|---|
| 2 Steel Oil Tanks, one 8′ x 24′ & one 8½′ x 30′ | 1903 | 624 | 66.6 | 9.36 |
| Brick Oil Tank 10′ x 10′ | 1898 | 228 | 66.6 | 3.42 |
| #3 P & A Tar Extractor | 1886 | 775 | 40.0 | 19.38 |
| Water Piping | .... | .... | 33.3 | 13.80 |
| Drain Piping | .... | .... | 40.0 | 15.58 |
| Oil Piping | .... | .... | 33.3 | 4.11 |
| Gas Piping in Yard | .... | .... | 66.6 | 27.30 |
| Steam Piping | .... | .... | 25.0 | 90.00 |
| Tar Piping | .... | .... | 40.0 | 1.38 |
| Works Tools | .... | 462 | 10.0 | 46.20 |
| Horses, wagons & harness | .... | 2,035 | .... | |
| Office Furniture & Fixtures | .... | 1,780 | 25.0 | 71.20 |
| Distribution System: | | | | |
| Cast Iron Mains | .... | .... | 100. | 731.75 |
| Steel Mains | .... | .... | 50. | 794.08 |
| Service Pipes | .... | .... | 40. | 1,145.80 |
| Meters | .... | .... | 40. | 1,048.60 |
| Paving over C. I. Mains | .... | .... | 100. | 186.30 |
| Paving over Steel Mains | .... | .... | 50. | 84.80 |
| Paving over Service Pipes | .... | .... | 40. | 140.25 |
| Distribution Tools | .... | .... | .... | |
| Service Boxes & Cocks | .... | .... | .... | |
| Service Governors | .... | .... | .... | |

860 Ex. 431—3.

*Depreciation.*

| Plant items. | Year built. | $ Cost. | Years' life. | $ Depreciation, 1907. |
|---|---|---|---|---|
| Total | .... | .... | .... | 6,507.24 |
| Engineering, Interest, Taxes & General 7% | .... | .... | .... | 455.50 |
| | | | | 6,962.74 |

861 Ex. 431.

*Depreciation.*

| Plant items. | $ Depreciation. | | | | |
|---|---|---|---|---|---|
| | 1908. | 1909. | 1910. | 1911. | 1912. |
| Buildings: | | | | | |
| Purifying House | 188.66 | 188.66 | 188.66 | 188.66 | 188.66 |
| Generator House | 48.92 | 48.92 | 48.92 | 42.92 | 42.92 |
| Retort House | 91.32 | 91.32 | 91.32 | 91.32 | 91.32 |
| Meter Shop & Booster House | 30.72 | 30.72 | 30.72 | 30.72 | 30.72 |
| Coal Shed | 41.43 | 41.43 | 41.43 | 41.43 | 41.43 |
| Oil Tank House | 16.61 | 16.61 | 16.61 | 16.61 | 16.61 |
| Oxide Shed | ..... | ..... | 2.40 | 2.40 | 2.40 |
| Stable & Blacksmith Shop | 32.72 | 32.72 | 32.72 | 32.72 | 32.72 |
| District Holder Booster House | ..... | ..... | ..... | 7.77 | 7.77 |
| Works Equipment: | | | | | |
| 7½ Foot Water Gas Set | ..... | 225.18 | 225.18 | 225.18 | 225.18 |
| 7½ Foot Water Gas Set | ..... | ..... | ..... | ..... | 225.18 |
| Water Gas Condenser & Scrubber | ..... | 36.18 | 36.18 | 36.18 | 36.18 |

| | | | | | |
|---|---|---|---|---|---|
| Operating Floor 7½ Ft. Sets | ..... | ..... | ..... | 19.79 | 19.79 |
| 6½ Ft. Water Gas Sets WGC | 174.24 | 174.24 | 174.24 | 174.24 | 174.24 |
| 6½ Ft. Water Gas Set Springer | 87.12 | 87.12 | 87.12 | 87.12 | 87.12 |
| Operating Floor | 17.76 | 17.76 | 17.76 | 17.76 | 17.76 |
| #7 Sturtevant Blower | ..... | ..... | 6.35 | 6.35 | 6.35 |
| #7 Sturtevant Blower | ..... | ..... | 6.45 | 6.45 | 6.45 |
| # 1 Root Blower | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 |
| #8 Sturtevant Turbo-Blower | ..... | 40.08 | 40.08 | 40.08 | 40.08 |
| #8 Sturtevant Blower | ..... | ..... | 13.98 | 13.98 | 13.98 |
| #6 Root Exhauster | 20.60 | 20.60 | 20.60 | 20.60 | 20.60 |
| 5″ x 5″ Sturtevant Engine & #6 Exhauster | ..... | 14.75 | 14.75 | 14.75 | 14.75 |
| 10″ McKenzie Exhauster | 10.63 | 10.63 | 10.63 | 10.63 | 10.63 |
| 4″ x 5″ Greenfield Engine | 6.63 | 6.63 | 6.63 | 6.63 | 6.63 |
| 7″ x 6″ Sturtevant Engine | ..... | ..... | 8.93 | 8.93 | 8.93 |
| 40 H. P. Motor | 7.50 | 7.50 | 7.50 | 7.50 | 7.50 |
| 35 H. P. Motor | 16.05 | 16.05 | 16.05 | 16.05 | 16.05 |
| Countershafting etc | 2.31 | 2.31 | 2.31 | 2.31 | 2.31 |
| 3 Benches of 6's ½ Depth | 211.02 | 211.02 | 211.02 | 211.02 | 211.02 |
| 3 Benches of 6's ¾ Depth | 229.02 | 229.02 | 229.02 | 229.02 | 229.02 |
| Charging Floor | 24.08 | 24.08 | 24.08 | 24.08 | 24.08 |
| 4½′ x 25′ Condenser | 14.58 | 14.58 | 14.58 | 14.58 | 14.58 |
| 5½′ x 31′ Scrubber | 7.98 | 7.98 | 7.98 | 7.98 | 7.98 |
| 4½′ x 5′ Rotary Scrubber | 53.45 | 53.45 | 53.45 | 53.45 | 53.45 |
| 1 20′ x 24′ x 4′ Purifying Box | 38.40 | 38.40 | 38.40 | 38.40 | 38.40 |
| 3 20′ x 24′ x 4′ Purifying Box- | 115.20 | 115.20 | 115.20 | 115.20 | 115.20 |
| 10′ Station Meter | 98.50 | 98.50 | 98.50 | 98.50 | 98.50 |
| 6′ Station Meter | 31.25 | 31.25 | 31.25 | 31.25 | 31.25 |
| 500,000 Cu. Ft. Gas Holder | ..... | 623.06 | 623.06 | 623.06 | 623.06 |
| 200,000 Cu. Ft. Gas Holder | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 |
| 50,000 Cu. Ft. Gas Holder | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 |

THIS PAGE

Ex. 431.

*Depreciation.*

| Plant items. | $ Depreciation. | | | | |
|---|---|---|---|---|---|
| | 1908. | 1909. | 1910. | 1911. | 1912. |
| 20″ Connelly Governor | 17.20 | 17.20 | 17.20 | 17.20 | 17.20 |
| 12″ Reynolds Governor | ..... | ..... | 7.60 | 7.60 | 7.60 |
| 6″ x 10″ x 5″ x 10″ Knowles Pump | 16.72 | 16.72 | 16.72 | 16.72 | 16.72 |
| 3″ x 4″ Vertical Pump | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 |
| 3½″ x 4″ x 6″ Gardner Pump | 4.16 | 4.16 | 4.16 | 4.16 | 4.16 |
| 4½″ x 3¾″ x 4″ Worthington Pump | ..... | ..... | ..... | 4.64 | 4.64 |
| 4½″ x 2¾″ x 4″ Gardner Pump | ..... | 4.40 | 4.40 | 4.40 | 4.40 |
| 4½″ x 2¾″ x 4″ Worthington Pump | ..... | 4.40 | 4.40 | 4.40 | 4.40 |
| 3″ x 2″ x 3″ Worthington Pump | ..... | ..... | ..... | ..... | 3.96 |
| 6″ x 4″ x 6″ Warren Pump | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 |
| 2½″ x 3″ x 4″ Marsh Pump | ..... | 3.72 | 3.72 | 3.72 | 3.72 |
| Otis Platform Elevator | ..... | 28.95 | 28.95 | 28.95 | 28.95 |
| Fairbank Scale | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 |
| Photometer | 9.00 | 9.00 | 9.00 | 9.00 | 9.00 |
| Calarimeter | ..... | ..... | 8.00 | 8.00 | 8.00 |
| Shop Tools | 18.48 | 18.48 | 18.48 | 18.48 | 18.48 |
| Four Tar Tanks 63′ x 16′ | 9.83 | 9.83 | 9.83 | 9.83 | 9.83 |
| Tar Separator | 4.48 | 4.48 | 4.48 | 4.48 | 4.48 |
| Tar Well 3¼′ x 3¼′ x 10′ | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 |
| Tar Well 6′ x 20′ x 12′ | 7.08 | 7.08 | 7.08 | 7.08 | 7.08 |
| 2 Steel Tar Tanks 10½′ x 29½′ | ..... | ..... | ..... | 15.84 | 15.84 |
| 2 Steel Oil Tanks 10¾′ x 29½′ | ..... | ..... | 17.40 | 17.40 | 17.40 |
| 2 Steel Oil Tanks, one 8′ x 24′ and one 8½′ x 30′ | 9.36 | 9.36 | 9.35 | 9.36 | 9.36 |
| Brick Oil Tanks 10′ x 10′ | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 |
| #3 P & A Tar Extractor | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|---|---|---|---|---|---|
| Water Piping | 24.63 | 24.63 | 24.63 | 24.63 | 24.63 |
| Drain Piping | 42.08 | 42.08 | 42.08 | 42.08 | 42.08 |
| Oil Piping | 13.29 | 13.29 | 13.29 | 13.29 | 13.29 |
| Gas Piping in Yard | 75.12 | 75.12 | 75.12 | 75.12 | 75.12 |
| Steam Piping | 106.28 | 106.28 | 106.28 | 106.28 | 106.28 |
| Tar Piping | 14.65 | 14.65 | 14.65 | 14.65 | 14.65 |
| Works Tools | 46.20 | 46.20 | 46.20 | 46.20 | 46.20 |
| Horses, wagons & harness | ..... | ..... | ..... | ..... | ..... |
| Office Furniture & Fixtures | 71.20 | 71.20 | 260.76 | 260.76 | 260.76 |
| Distribution System: | | | | | |
| Cast Iron Mains | 663. | 665. | 709. | 718. | 718. |
| Steel Mains | 850. | 978. | 1063. | 1121. | 1180. |
| Service Pipes | 1296. | 1421. | 1539. | 1637. | 1748. |
| Meters | 1230. | 1316. | 1374. | 1391. | 1414. |
| Paving over C. I. Mains | 352.54 | 252.54 | 252.54 | 253.54 | 252.54 |

863 Ex. 431.

*Depreciation.*

| Plant items. | $ Depreciation. 1908. | 1909. | 1910. | 1911. | 1912. |
|---|---|---|---|---|---|
| Paving over Steel Mains | 185.28 | 185.28 | 185.28 | 185.28 | 185.28 |
| Paving over Service Pipes | 266.25 | 266.25 | 266.25 | 266.25 | 266.25 |
| Distribution Tools | ..... | ..... | ..... | ..... | ..... |
| Service Boxes & Cocks | 61.80 | 61.80 | 61.80 | 61.80 | 61.80 |
| Service Governors | ..... | ..... | ..... | 334.13 | 334.13 |
| | 7,326.34 | 8,648.06 | 9,213.73 | 9,771.90 | 10,200.24 |
| Engineering, Int., etc., 7% | 512.84 | 605.36 | 644.96 | 684.03 | 714.02 |
| | 7,839.18 | 9,243.42 | 9,858.69 | 10,455.93 | 10,914.26 |

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864 *Cost of Coal & Oil in Massachusetts Gas Plants, Per Brown's Directory of* 1912.

| Plant. | $ Coal per ton. | Cents oil per gallon. | Candle power. | Heat units. |
|---|---|---|---|---|
| Northampton | 4.95 | 3.36 | 18.15 | 640 |
| North Adams | 5.76 | 3.36 | 18.26 | 640 |
| Taunton | .... | .... | 17. | 650 |
| Pittsfield | .... | .... | 19. | 625 |
| Salem | 3.75 | 2.7 | 18. | ... |
| Brockton | 5.00 | 3.6 | 17. | ... |
| Haverhill | .... | .... | 20.6 | ... |
| Charlestown | 4.00 | .... | 17.25 | 650 |
| East Boston | .... | .... | 17.43 | ... |
| Newton | .... | .... | 18. | ... |
| New Bedford | 3.72<br>4.88 | .... | .... | ... |
| | | 3. | 18.5 | 575 |
| Lawrence | .... | .... | 18.3 | ... |
| Malden | 4.08 | 3.3 | 17.5 | 625 |
| Fall River | .... | .... | 20. | 620 |
| Lowell | 4.64 | 2.75 | 18. | 645 |
| Springfield | 4.20 | 3.5 | 17.5 | 625 |
| Lynn | .... | .... | 18.11 | ... |
| Cambridge | .... | .... | 18.5 | ... |
| Worcester | .... | .... | 18.6 | ... |
| Attleboro | .... | .... | 17.5 | ... |
| Fitchburg | 4.55 | 3.117 | 18. | 600 |
| Beverly | 3.85 | .... | 17.5 | ... |
| Holyoke | 4.40 | 3. | 18. | ... |
| Gloucester | 6.28 | 3.2 | 19.3 | 640 |

865 *Cost of Coal & Oil in Massachusetts Gas Plants, Per Brown's Directory of* 1912.

| Plant. | $ Coal per ton. | Cents oil per gallon. | Candle power. | Heat units. |
|---|---|---|---|---|
| Northampton ..... | 4.95 | 3.36 | 18.15 | 640 |
| North Adams ..... | 5.76 | 3.36 | 18.26 | 640 |
| Taunton ..... | .... | .... | 17. | 650 |
| Pittsfield ..... | .... | .... | 19. | 625 |
| Salem ..... | 3.75 | 2.7 | 18. | ... |
| Brockton ..... | 5.00 | 3.6 | 17. | ... |
| Haverhill ..... | .... | .... | 20.6 | ... |
| Charlestown ..... | 4.00 | .... | 17.25 | 650 |
| East Boston ..... | .... | .... | 17.43 | ... |
| Newton ..... | .... | .... | 18. | ... |
| New Bedford..... | 3.72<br>4.88 | ....<br>3. | ....<br>18.5 | ...<br>575 |
| Lawrence ..... | .... | .... | 18.3 | ... |
| Malden ..... | 4.08 | 3.3 | 17.5 | 625 |
| Fall River ..... | .... | .... | 20. | 620 |
| Lowell ..... | 4.64 | 2.75 | 18. | 645 |
| Springfield ..... | 4.20 | 3.5 | 17.5 | 625 |
| Lynn ..... | .... | .... | 18.11 | ... |
| Cambridge ..... | .... | .... | 18.5 | ... |
| Worcester ..... | .... | .... | 18.6 | ... |
| Attleboro ..... | .... | .... | 17.5 | ... |
| Fitchburg ..... | 4.55 | 3.117 | 18. | 600 |
| Beverly ..... | 3.85 | .... | 17.5 | ... |
| Holyoke ..... | 4.40 | 3. | 18. | ... |
| Gloucester ..... | 6.28 | 3.2 | 19.3 | 640 |

866 *Cost of Coal & Oil in Massachusetts Gas Plants, Per Brown's Directory of* 1912.

| Plant. | $ Coal per ton. | Cents oil per gallon. | Candle power. | Heat units. |
|---|---|---|---|---|
| Northampton | 4.95 | 3.36 | 18.15 | 640 |
| North Adams | 5.76 | 3.36 | 18.26 | 640 |
| Taunton | .... | .... | 17. | 650 |
| Pittsfield | .... | .... | 19. | 625 |
| Salem | 3.75 | 2.7 | 18. | ... |
| Brockton | 5.00 | 3.6 | 17. | ... |
| Haverhill | .... | .... | 20.6 | ... |
| Charlestown | 4.00 | .... | 17.25 | 650 |
| East Boston | .... | .... | 17.43 | ... |
| Newton | .... | .... | 18. | ... |
| New Bedford | 3.72<br>4.88 | .... | .... | ... |
| | | 3. | 18.5 | 575 |
| Lawrence | .... | .... | 18.3 | ... |
| Malden | 4.08 | 3.3 | 17.5 | 625 |
| Fall River | .... | .... | 20. | 620 |
| Lowell | 4.64 | 2.75 | 18. | 645 |
| Springfield | 4.20 | 3.5 | 17.5 | 625 |
| Lynn | .... | .... | 18.11 | ... |
| Cambridge | .... | .... | 18.5 | ... |
| Worcester | .... | .... | 18.6 | ... |
| Attleboro | .... | .... | 17.5 | ... |
| Fitchburg | 4.55 | 3.117 | 18. | 600 |
| Beverly | 3.85 | .... | 17.5 | ... |
| Holyoke | 4.40 | 3. | 18. | ... |
| Gloucester | 6.28 | 3.2 | 19.3 | 640 |

867 Ex. 433.

Lincoln Gas & Electric Lt. Co.

*Cost Specials & All Other Materials Except Pipe per Main Work Orders,* 1905-1912.

| Inch size. | Feet laid. | Cost specials & other materials, except pipe. | |
|---|---|---|---|
| | | $ Total. | Cents per foot. |
| 2 | 184,263 | 752.12 | 0.40 |
| 4 | 27,453 | 564.88 | 2.05 |
| 6 | 2,552 | 73.02 | 2.86 |

867½ Ex. 434.

City of Lincoln.

*Contract Prices per Cubic Yards Excavation for Paving.*

| Year. | Paving district number. | Cents price per yard. | Approx. yards extra excavation. | Location of district. |
|---|---|---|---|---|
| 1914..... | 238 | 48. | 3,010 | 12th Street |
| 1914..... | 273 | 39. | 250 | Ryons Street |
| 1914..... | 276 | 40. | 400 | Sheridan Blvd. |
| 1914..... | 281 | 39. | 130 | Worthington |
| 1913..... | 247 | 37. | 2,000 | 17th Street |
| 1913..... | 257 | 39. | 2,100 | 23rd Street |
| 1913..... | 243 | 39. | 600 | P Street |
| 1913..... | 274 | 40. | 320 | 26th Street |
| 1912..... | 202 | 42. | 2,250 | B Street |
| 1912..... | 89 | 35. | 3,000 | 15th Street |
| 1912..... | 231 | 30. | 7,000 | B Street |
| 1912..... | 221 | 46. | 250 | 18th Street |
| 1911..... | 196 | 50. | 1,090 | 25th Street |
| 1911..... | 204 | 45. | 1,500 | 13th Street |
| 1911..... | 206 | 50. | 300 | 18th Street |
| 1911..... | 72 | 50. | 100 | 19th Street |
| 1910..... | 113 | 50. | .... | B Street |
| 1910..... | 176 | 50. | 5,000 | South Street |
| 1910..... | 177 | 40. | 1,950 | 26th Street |
| 1910..... | 183 | 50. | 5,000 | 19th Street |
| 1909..... | 70 | 40. | 270 | J Street |
| 1909..... | 156 | 35. | .... | 20th Street |
| 1909..... | 146 | 48. | 250 | 7th Street |
| 1909..... | 148 | 40. | 365 | 25th Street |

868 Ex. 434—2.

City of Lincoln.

*Contract Prices per Cubic Yards Excavation for Paving.*

| Year. | Paving district number. | Cents price per yard. | Approx. yards extra excavation. | Location of district. |
|---|---|---|---|---|
| 1908..... | 100 | 30. | 1,047 | E Street |
| 1908..... | 82 | 40. | 850 | O Street |
| 1908..... | 107 | 35. | .... | N Street |
| 1908..... | 95 | 35. | 850 | E Street |
| 1907..... | 106 | 37. | .... | 10th Street |
| 1907..... | 107 | 40. | .... | N Street |
| 1906..... | 85 | 30. | 4,600 | 11th Street |
| 1906..... | 92 | 40. | 1,700 | 12th Street |
| 1906..... | 50 | 30. | .... | R Street |
| 1906..... | 58 | 35. | .... | Cherry Street. |

869 Ex. 435.

City of Lincoln.

*Contract Prices per Cubic Yard for Grading.*

| Year. | Grading district number. | Cents, price per yard. | Location of district. |
|---|---|---|---|
| 1906..... | 1 | 33. | 20th to 28th on Sumner St.; Sumner to A on 25th. |
| 1908..... | 2 | 22.5 | 22nd to 30th on A; Garfield to A on 24th St. |
| 1909..... | .. | 18. | 6th to 8th on F Street. |
| 1908..... | 5 | 24. | 27th to 30th on Garfield St. |
| 1909..... | 6 | 25. | 32nd to 33rd on Q St. |
| 1910..... | 11 | 28. | 20th to 23rd on B St. |
| 1910..... | 12 | 25. | 32nd to 33rd on Starr St. |

870 *Prices Paid Laborers for Digging Trenches Two Feet Wide for Sewers in the City of Lincoln, as Compiled by Adna Dobson, City Engineer.*

| Feet deep. | Cubic feet for 2 feet wide. | Cents per linear foot. | Cents per cubic foot. |
|---|---|---|---|
| 5. | 10. | 8. | .80 |
| 5.25 | 10.5 | 8.25 | .785 |
| 5.50 | 11. | 8.50 | .77 |
| 5.75 | 11.5 | 8.75 | .76 |
| 6. | 12. | 9. | .75 |
| 6.25 | 12.5 | 9.25 | .74 |
| 6.50 | 13. | 9.50 | .73 |
| 6.75 | 13.5 | 9.75 | .72 |
| 7. | 14. | 10. | .71 |
| 7.25 | 14.5 | 10.25 | .70 |
| 7.50 | 15. | 10.50 | .70 |
| 7.75 | 15.5 | 10.75 | .69 |
| 8. | 16. | 11. | .68 |
| 8.25 | 16.5 | 11.50 | .69 |
| 8.50 | 17. | 12. | .70 |
| 8.75 | 17.5 | 12.50 | .71 |
| 9. | 18. | 14. | .77 |
| 9.25 | 18.5 | 14.50 | .78 |
| 9.50 | 19. | 15.50 | .80 |
| 10. | 20. | 16. | .80 |
| 10.25 | 20.5 | 16.50 | .80 |
| 10.50 | 21. | 17. | .80 |

871 *Prices Paid Laborers for Digging Trenches Two Feet Wide for Sewers in the City of Lincoln, as Compiled by Adna Dobson, City Engineer.*

| Feet deep. | Cubic feet for 2 feet wide. | Cents per linear foot. | Cents per cubic foot. |
|---|---|---|---|
| 10.75 | 21.5 | 17.50 | .81 |
| 11. | 22. | 18. | .81 |
| 11.25 | 22.5 | 18.50 | .82 |
| 11.50 | 23. | 19. | .82 |
| 11.75 | 23.5 | 19.50 | .82 |
| 12. | 24. | 20. | .83 |
| 12.25 | 24.5 | 21. | .85 |
| 12.50 | 25. | 22. | .88 |
| 12.75 | 25.5 | 23. | .90 |
| 13. | 26. | 24. | .92 |
| 13.25 | 26.5 | 25. | .94 |
| 13.50 | 27. | 26. | .96 |
| 13.75 | 27.5 | 27. | .98 |
| 14. | 28. | 28. | 1.00 |
| 14.25 | 28.5 | 29. | 1.01 |
| 14.50 | 29. | 30. | 1.03 |
| 14.75 | 29.5 | 31. | 1.05 |
| 15. | 30. | 32. | 1.06 |
| 15.25 | 30.5 | 33. | 1.08 |
| 15.50 | 31. | 34. | 1.09 |
| 15.75 | 31.5 | 35. | 1.11 |
| 16. | 32. | 36. | 1.12 |
| 16.25 | 32.5 | 37. | 1.13 |
| 16.50 | 33. | 38. | 1.15 |
| 16.75 | 33.5 | 39. | 1.16 |
| 17. | 34. | 40. | 1.17 |

872 *Labor Cost of Lincoln Water Mains & Hydrants, with Trenching $1 per Section, 8 Cts. per Foot.*

| Year laid. | Inch size. | Feet long at 12 ft. per length. | $ Total labor cost. | Cents labor per foot. |
|---|---|---|---|---|
| 1909 | 4 | 1,735 | 420.11 | 24.21 |
| 1910 | 4 | 6,870 | 1,458.09 | 21.22 |
| 1911 | 4 | 6,570 | 1,333.49 | 20.29 |
| 1912 | 4 | 6,072 | 1,361.67 | 22.42 |
| 1913 | 4 | 6,636 | 1,629.70 | 24.55 |
| Total | 4 | 27,883 | 6,203.06 | 22.24 |
| 1909 | 6 | 5,060 | 1,487.91 | 29.40 |
| 1910 | 6 | 7,488 | 1,276.88 | 17.05 |
| 1911 | 6 | 9,464 | 2,210.33 | 23.35 |
| 1912 | 6 | 4,251 | 1,182.40 | 27.81 |
| Total | 6 | 26,263 | 6,157.52 | 23.44 |

873 *Labor Cost of Lincoln, Nebr., Water Mains with Hydrants; All Mains with Labor Cost Given.*

| Year. | Inch size. | Feet long. | $ Total labor cost. | Cents labor per foot. |
|---|---|---|---|---|
| 1907 | 4 | 5 | 16.88 | 337.6 |
| 1909 | 4 | 1,739 | 427.78 | 24.59 |
| 1910 | 4 | 6,880 | 1,468.89 | 21.35 |
| 1911 | 4 | 9,415 | 1,892.11 | 20.09 |
| 1912 | 4 | 6,084 | 1,369.18 | 22.50 |
| 1913 | 4 | 12,972 | 3,519.62 | 27.13 |
| Total | | 37,095 | 8,694.46 | 23.44 |
| 1909 | 6 | 5,792 | 1,740.16 | 30.04 |
| 1910 | 6 | 7,836 | 1,301.45 | 16.60 |
| 1911 | 6 | 10,988 | 2,940.88 | 26.76 |
| 1912 | 6 | 4,758 | 1,470.93 | 30.91 |
| 1913 | 6 | 1,692 | 501.16 | 29.61 |
| Total | | 31,066 | 7,954.58 | 25.60 |
| 1910 | 12 | 1,175 | 896.12 | 76.26 |
| 1912 | 12 | 2,508 | 1,397.50 | 55.72 |
| Total | | 3,683 | 2,293.62 | 62.27 |
| 1911 | 16 | 2,068 | 1,803.67 | 87.21 |
| 1912 | 16 | 6,276 | 4,184.52 | 66.67 |
| Total | | 8,344 | 5,988.19 | 71.76 |

874 *Lincoln Sewer Contracts. 8 Inch.*

| Year. | Linear feet sewer. | Cents, price less pipe & laying, per linear foot. | $ Total price. | Cubic feet per linear foot. | Total cubic feet. | Cents per cubic foot. |
|---|---|---|---|---|---|---|
| 1907... | 775 | 21.15 | 163.91 | 13.34 | 12,663.5 | 1.29 |
| 1907... | 1,125 | 19.4 | 218.25 | 11.59 | 13,038.75 | 1.67 |
| 1907... | 1,050 | 23.65 | 248.32 | 16.15 | 16,957.5 | 1.46 |
| 1907... | 1,400 | 44.9 | 628.60 | 21.47 | 30,058. | 2.09 |
| 1907... | 425 | 25.65 | 109.01 | 14.82 | 6,298.5 | 1.73 |
| | 4,775 | | 1,368.09 | | 79,016.25 | 1.73 |
| 1908... | 2,450 | 13.65 | 334.42 | 9.50 | 23,275. | 1.43 |
| 1908... | 800 | 18.65 | 149.20 | 16.72 | 13,376. | 1.11 |
| 1908... | 1,652 | 22.65 | 374.17 | 15.01 | 24,796.52 | 1.50 |
| 1908... | 600 | 26.65 | 159.90 | 20.71 | 12,426. | .128 |
| 1908... | 912 | 26.65 | 243.04 | 19.76 | 18,021.12 | 1.34 |
| 1908... | 1,950 | 21.65 | 432.17 | 17.48 | 34,086. | 1.23 |
| 1908... | 400 | 13.65 | 54.60 | 13.30 | 5,320. | 1.02 |
| | 8,764 | | 1,747.50 | | 131,300.64 | 1.33 |

875 *City of Lincoln Contracts for 8 Inch Pipe Sewers.*

| Year. | Number sewer district. | Linear feet. | $ Contract price per foot. | $ Estimated cost laying per foot. | $ Price, pipe only, per foot. |
|---|---|---|---|---|---|
| 1909..... | 81 | 1,322 | 0.40 | .0935 | 0.14 |
| 1909..... | 85 | 12,533 | 0.50 | .0935 | 0.14 |
| 1909..... | 92 | 1,160 | 0.50 | .0935 | 0.14 |
| 1910..... | 87 | 769 | 0.45 | .0935 | 0.14 |
| 1911..... | 118 | 710 | 0.45 | .0935 | 0.14 |
| 1911..... | 117 | 1,144 | 0.32 | .0935 | 0.14 |
| 1911..... | 115 | 340 | 0.38 | .0935 | 0.14 |
| 1911..... | 54 | 1,300 | 0.50 | .0935 | 0.14 |
| 1912..... | 134 | 638 | 0.50 | .0935 | 0.14 |
| 1912..... | 131 | 305 | 0.50 | .0935 | 0.14 |
| 1912..... | 130 | 275 | 0.45 | .0935 | 0.14 |
| 1912..... | 139 | 350 | 0.50 | .0935 | 0.14 |
| 1912..... | 129 | 330 | 0.50 | .0935 | 0.14 |
| 1912..... | 126 | 440 | 0.50 | .0935 | 0.14 |
| 1912..... | 123 | 445 | 0.45 | .0935 | 0.14 |
| 1912..... | 120 | 910 | 0.45 | .0935 | 0.14 |
| 1912..... | 135 | 850 | 0.55 | .0935 | 0.14 |
| 1912..... | 137 | 570 | 0.50 | .0935 | 0.14 |
| 1913..... | 95 | 918 | 0.45 | .0935 | 0.14 |
| 1913..... | 124 | 1,365 | 0.40 | .0935 | 0.14 |

876 *City of Lincoln Contracts for 8 Inch Sewer Pipe.*

| Year. | Number sewer district. | Linear feet. | $ Contract price per foot. | $ Estimated cost laying per foot. | $ Price, pipe only, per foot. |
|---|---|---|---|---|---|
| 1913..... | 76 | 1,605 | 0.45 | .0935 | 0.14 |
| 1913..... | 104 | 1,490 | 0.40 | .0935 | 0.14 |
| 1913..... | 127 | 962 | 0.45 | .0935 | 0.14 |
| 1913..... | 143 | 440 | 0.50 | .0935 | 0.14 |
| 1913..... | 144 | 475 | 0.50 | .0935 | 0.14 |
| 1913..... | 151 | 400 | 0.50 | .0935 | 0.14 |
| 1913..... | 141 | 650 | 0.60 | .0935 | 0.14 |
| 1913..... | 140 | 1,775 | 0.50 | .0935 | 0.14 |
| 1913..... | 138 | 1,260 | 0.50 | .0936 | 0.14 |
| 1913..... | 132 | 270 | 0.40 | .0935 | 0.14 |
| 1913..... | 136 | 3,962 | 0.45 | .0935 | 0.14 |

877 *City of Lincoln Contracts for 8 Inch Pipe Sewer.*

| Number sewer district. | Feet depth trench. | Feet width trench. | Cubic feet per foot. | $ Contract price less pipe & laying. |
|---|---|---|---|---|
| 81..... | 7.8 | 1.9 | 14.82 | .1665 |
| 85..... | 9.0 | 1.9 | 17.10 | .2665 |
| 92..... | 5.8 | 1.9 | 11.02 | .2665 |
| 87..... | 8.3 | 1.9 | 15.77 | .2165 |
| 118..... | 9.4 | 1.9 | 17.86 | .2165 |
| 117..... | 5.4 | 1.9 | 10.26 | .0865 |
| 115..... | 4.2 | 1.9 | 7.98 | .1465 |
| 54..... | 8.6 | 1.9 | 16.34 | .2665 |
| 134..... | 7.9 | 1.9 | 15.01 | .2665 |
| 131..... | 4.4 | 1.9 | 8.36 | .2665 |
| 130..... | 7.8 | 1.9 | 14.82 | .2165 |
| 139..... | 7.9 | 1.9 | 15.01 | .2665 |
| 129..... | 8.0 | 1.9 | 15.20 | .2665 |
| 126..... | 6.0 | 1.9 | 11.40 | .2665 |
| 123..... | 6.6 | 1.9 | 12.54 | .2165 |
| 120..... | 7.7 | 1.9 | 14.63 | .2165 |
| 135..... | 12.2 | 1.9 | 23.18 | .3165 |
| 137..... | 8.8 | 1.9 | 16.72 | .2665 |
| 95..... | 8.1 | 1.9 | 15.39 | .2165 |
| 124..... | 6.6 | 1.9 | 12.54 | .1665 |
| 76..... | 9.5 | 1.9 | 18.05 | .2165 |
| 104..... | 5.3 | 1.9 | 10.07 | .1665 |

878 *City of Lincoln Contracts for 8 Inch Pipe Sewer.*

| Number sewer district. | Feet depth trench. | Feet width trench. | Cubic feet per foot. | $ Contract price less pipe & laying. |
|---|---|---|---|---|
| 127..... | 8.0 | 1.9 | 15.20 | .2165 |
| 143..... | 9.6 | 1.9 | 18.24 | .2665 |
| 144..... | 7.9 | 1.9 | 15.01 | .2665 |
| 151..... | 8.2 | 1.9 | 15.58 | .2665 |
| 141..... | 11.4 | 1.9 | 21.66 | .3665 |
| 140..... | 9.7 | 1.9 | 18.43 | .2665 |
| 138..... | 10.1 | 1.9 | 19.19 | .2665 |
| 132..... | 5.9 | 1.9 | 11.21 | .1665 |
| 136..... | 7.9 | 1.9 | 15.01 | .2165 |

879 *Certificate.*

I hereby certify that the statement of the evidence hereto attached, consisting of one volume, and the exhibits material to the issues, consisting of volumes 1, 2 and 3, in each of which a copy of this certificate is attached and likewise signed and allowed, and including certain testimony reproduced in the exact words of the witnesses, desired by the parties and ordered to be so set out by the court; the objections to the evidence and the rulings of the court thereon as set out herein, and including the stipulations of counsel, is a true, complete and properly prepared condensed statement of such evidence, stipulations, exhibits, and objections and rulings of the court thereon, properly prepared and submitted, and that the same is hereby signed, settled and allowed, and ordered made a part of the record in the above entitled case under the provisions of Rule 75 of said court, as a true, complete and properly prepared condensed statement of all the evidence upon said trial.

Witness my hand this 12th day of August, 1916.

ROGER MORRIS, *Judge.*

880 This is one of seven volumes of evidence taken before me at the trial of the case of Lincoln Gas and Electric Light Company vs. City of Lincoln, et al., pending in the United States District Court, for the District of Nebraska, Lincoln Division. These volumes, together with the original printed record containing the evidence given on the first trial and certified to the Supreme Court of the United States, constitute the whole of the evidence submitted to me, and upon which my report heretofore filed in this case is based.

JOHN J. SULLIVAN,
*Special Master.*

881 In the District Court of the United States, District of Nebraska, Lincoln Division.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Plaintiff,

vs.

THE CITY OF LINCOLN et al., Defendants.

*Stipulation.*

It is hereby stipulated and agreed that the clerk of the Court in the preparation of the printed record on appeal of this case shall omit th-refrom exhibits 9, 10, 11, 16, 19, 20, 21, 22, 66, 83, 84, 85, 102, 113 to 132 inclusive, 135 to 143 inclusive, 150, 226, 265, to 269 inclusive, 382, 383, and 442, as found in this volume, for the reason that the matters contained in such exhibits are fully covered by the testimony of witnesses or other exhibits, or are deemed by the parties hereto immaterial under the issues on this appeal.

E. C. STRODE,
*Attorneys for Plaintiff.*
C. ROBERT PETERSON,
W. M. MORNING,
*Attorneys for Defendants.*

882 In the United States District Court, District of Nebraska, Lincoln Division.

THE LINCOLN GAS & ELECTRIC LIGHT COMPANY, Plaintiff,

vs.

THE CITY OF LINCOLN, Defendant.

I hereby certify that Volume 1, of exhibits are the original exhibits identified and offered on the hearing of the above entitled case, in connection with Henry I. Lea's testimony.

I further certify that Volume 2, of exhibits are the original exhibits identified and offered on the hearing of the above entitled case, in connection with Alton D. Adams' testimony.

I further certify that Volume 3, of exhibits contains the balance of the original miscellaneous exhibits identified and offered on the hearing of the above entitled case (unless otherwise specified where copies have been substituted by agreement of parties).

I further certify that exhibit #102-134-135-136-137-138-139-140-154 are missing from this Volume 3, but are to be supplied by the plaintiff, the same not having been done at this date.

In testimony whereof I have hereunto set my hand at Lincoln, Nebraska, this 19th day of June, A. D. 1914.

MINOR S. BACON,
*Official Reporter.*

883 EXHIBIT 1.

*Meters in Use October 1st, 1912.*

| | |
|---|---|
| 3 lt. meters | 2,898 |
| 5 " " | 5,179 |
| 10 " " | 67 |
| 20 " " | 87 |
| 30 " " | 10 |
| 45 " " | 14 |
| 60 " " | 1 |
| 100 " " | 5 |
| 150 " " | 1 |
| Total | 8,262 |

Feet of Main in Use October 1st, 1912.

| | |
|---|---|
| 2 inch | 352,465 ft. |
| 4 " | 116,669 " |
| 6 " | 16,474 " |
| 8 " | 4,822 " |
| 10 " | 9,100 " |
| 12 " | 3,950 " |
| 16 " | 1,300 " |
| 20 " | 1,400 " |
| Total | 506,180 " |

Governors in Use October 1st, 1912.

| | |
|---|---|
| ¾" | 7,250 |
| 1¼" | 233 |
| 2" | 6 |
| Total | 7,489 |

1 12" holder governor.

884 EXHIBIT 2.

*Mains in Use December 31st, 1902.*

| | |
|---|---|
| 2" | 140,875 |
| 4" | 69,850 |
| 6" | 11,100 |
| 8" | 1,150 |
| 10" | 9,100 |
| 12" | 3,950 |
| 16" | 1,300 |
| 20" | 1,400 |
| | 238,725 |

Mains Laid 1903.

| | |
|---|---|
| 2″ | 23,558 |
| 4″ | 1,237 |

Mains Taken Up or Abandoned—None.

Mains Laid 1904.

| | |
|---|---|
| 2″ | 7,055 |
| 4″ | 2,005 |
| 6″ | 1,094 |
| 8″ | 938 |

Mains Taken Up or Abandoned—None.

Mains Laid 1905.

| | |
|---|---|
| 2″ | 16,787 |
| 4″ | 8,514 |
| 8″ | 2,734 |

Mains Taken Up or Abandoned—2″, 1711.



Mains Laid 1906.

| | |
|---|---|
| 2″ | 20,126 |
| 4″ | 1,909 |
| 6″ | 1,605 |

Main Taken Up or Abandoned—2″, 1,388.

Mains Laid 1907.

| | |
|---|---|
| 2″ | 15,403 |

Mains Taken Up or Abandoned—None.

Mains Laid 1908.

| | |
|---|---|
| 2″ | 12,653 |
| 4″ | 494 |

Mains Taken Up or Abandoned—None.

Mains Laid 1909.

| | |
|---|---|
| 2″ | 34,533 |
| 4″ | 80 |
| 6″ | 240 |

Mains Taken Up or Abandoned—None.

Mains Laid 1910.

| | |
|---|---|
| 2″ | 22,870 |
| 4″ | 8,288 |
| 6″ | 2,435 |

Mains Taken Up or Abandoned—2″, 4,295.

Mains Laid 1911.

| | |
|---|---|
| 2″ | 15,377 |
| 4″ | 2,434 |

Mains Taken Up or Abandoned—2″, 872.

886 Mains Laid 1912 to Oct. 31st.

| | |
|---|---|
| 2″ | 14,555 |
| 4″ | 579 |

Mains Taken Up or Abandoned—None.

Mains in Use October 31st, 1912.

| | |
|---|---|
| 2″ | 315,526 |
| 4″ | 95,390 |
| 6″ | 16,474 |
| 8″ | 4,822 |
| 10″ | 9,100 |
| 12″ | 3,950 |
| 16″ | 1,300 |
| 20″ | 1,400 |
| | 447,962 |

The 2″ main is standard wrought iron black pipe. All other pipe is standard weight cast iron gas pipe.

The above does not include extensions to University Place and Havelock.

887 Buildings.

Coal Gas Retort House is 33′ wide by 70′ long and 37′ high. It is a brick building, the walls being 12″ thick. The roof is of corrugated iron. This building was erected in 1889 or 1890.

The old water gas house is 32′ by 48′ and 37′ high. It is a brick building with iron roof. The walls are 12″ thick. This building was erected about 1889 or 1890.

The coal and coke shed is a frame building 110′ long and 23′ 6″

wide. The floor of this shed being on the same level with the charging floor of the retort house. It was built about the year 1890.

The condenser room, exhauster room, purifying house and meter rooms and laboratory is a brick building 177′ long by 36′ wide and 30′ high, the walls being 12″ thick. Erected in the year 1890 or 1891.

The oil house is a brick building 35′ by 23′ 6″ and 10′ high.

Street main governor house and booster house is a brick building, 16′ 9″ by 23′ 3″ built in 1907.

Old street main governor house is 12′ by 20′ by 10′ high. Built in 1891.

The new water gas house is 48′ by 32′. It is a brick building with 12″ walls. Built in 1908.

The blower house is 25′ long and 15′ wide. It is also a brick building with 12″ walls. Built in 1908.

The meter shop is a brick building 40′ by 24′ with 12″ walls. Built in 1911.

888 Gas Holders.

50,000 cubic foot holder built by the Stacy Mfg. Company in 1881.

200,000 cubic foot holder built about the year 1890.

500,000 cubic foot holder built by Western Gas Construction Company in 1908.

100,000 cubic foot holder known as the district holder situated at the corner of 32nd and X Streets, built by the Western Gas Construction Company in 1910.

889 EXHIBIT 3.

*Inventory of Water Gas Sets No. 1 & 2.*

One 6′ 6″ Western Gas & Construction water gas set—
- 5 shells.
- 1 seal pot.
- 1 Wort. down run valve.

One 7′ 6″ Springer water gas set—
- 4 shells.
- 1 seal pot.

One Western Gas & Construction Co. oil heater.

One pressure board.

One oil strianer.

Two steel coke buggies.

One chain blocks for raising coke buckets.

One No. 7 B. F. Sturtevant fan blower with 16″ delivery pipe belted to—

One 40 H. P. 500 Volt D. C. motor—975 R. P. M.

Inventory Gas Line from Water Gas Set to Relief Holder.

One 16″ W. G. & C. Co. C. I. valve.
125′ 16″ C. I. pipe.
One 16″x16″x16″ C. I. tee.
Two 16″ drip pots.
Two 16″x12″ reducing nipples 10′ long.
Two 12″x10″ C.I. " " 10′ "
Two 12″ C. I. ells.
One 50,000 cu. ft. relief holder with masonry tank.

890 EXHIBIT 4.

*Mains Laid University Place & Havelock.*

| | | |
|---|---|---|
| 1910 | 16103′ | 2″ |
| | 18500 | 4″ |
| 1911 | 15679 | 2″ |
| | 12779 | 4″ |
| 1912 | 6672 | 2″ |

891 EXHIBIT 5.

*Service Pipe.*

| | | | |
|---|---|---|---|
| In Use. | | | |
| Dec. 31st, 1902 | 2,911 | services. | |
| Put In. | | | |
| 1903 | 691 | services — 56,025 ft. of pipe. | |
| Put In. | | | |
| 1904 | 576 | services. | |
| | 77 | stub services. | |
| Total | 653 | | 49,786 ft. pipe. |
| Put In. | | | |
| 1905 | 610 | complete services. | |
| | 5 | stub. | |
| Total | 615 | | 45,372 ft. pipe. |
| Put In. | | | |
| 1906 | 554 | complete services. | |
| | 34 | stub " | |
| Total | 588 | | 41,193 ft. pipe. |
| Put In. | | | |
| 1907 | 569 | complete services. | |
| | 35 | stub " | |
| Total | 604 | | 43,521 ft. pipe. |
| Put In. | | | |
| 1908 | 468 | complete services. | |
| | 40 | | |
| Total | 508 | | 31,741 ft. pipe. |

| | | | |
|---|---|---|---|
| Put In. | | | |
| 1909.... | 616 complete services | | |
| | 27 stub " | | |
| Total..... | 643 | | 42,083 ft. pipe. |
| Put In. | | | |
| 1910.... | 584 complete services | | |
| | 80 stub " | | |
| Total..... | 664 | | 38,971 ft. pipe. |
| Put In. | | | |
| 1911.... | 480 complete services | | |
| | 129 stub " | | |
| Total..... | 609 | | 32,922 ft. pipe. |

| | | | | |
|---|---|---|---|---|
| Oct. 31st, 1912.... | In use 8,469 services | | | |
| Uni. Place 1910.... | | 114 " | | 8,688 " " |
| " " 1911.... | 48 | | 3,770 | |
| Havelock..... | 79 | 127 | 5,575 | 9,345 " " |
| Oct. 31st, 1912. | | | | |
| Uni. Place..... | 47 | | 3,173 | |
| Havelock..... | 29 | 76 | 2,053 | 5,226 |
| | | 317 | 23,259 | |

892 *Meters.*

| | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 100 | 150 | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| Dec. 31, 1902... | 3,038 | 1,594 | 48 | 13 | 8 | 10 | 4 | 5 | 1 | 4,721 |
| Bought..... | | 793 | | | | | | | | 793 |
| | 3,038 | 2,387 | 48 | 13 | 8 | 10 | 4 | 5 | 1 | 5,514 |
| Discarded..... | 2 | | | | | | | | | 2 |
| Owned Dec. 31, 1903..... | 3,036 | 2,387 | 48 | 13 | 8 | 10 | 4 | 5 | 1 | 5,512 |
| Bought ..... | | 745 | | | | | | | | 745 |
| Discarded ..... | 3,036 | 3,132 | 48 | 13 | 8 | 10 | 4 | 5 | 1 | 6,257 |
| Owned Dec. 31, 1904..... | 3,036 | 3,132 | 48 | 13 | 8 | 10 | 4 | 5 | 1 | 6,257 |
| Bought ..... | | | | | | 3 | 1 | 1 | 1 | 6 |
| | 3,036 | 3,132 | 48 | 13 | 8 | 13 | 5 | 6 | 2 | 6,263 |
| Discarded ..... | 15 | 12 | | | | | | | | 27 |
| Owned Dec. 31, 1905..... | 3,021 | 3,120 | 48 | 13 | 8* | 13 | 5 | 6 | 2 | 6,236 |

There is a mistake in bringing forward number of meters from Dec. 1905 to Jan. 1906. This mistake is in sizes 5 lt. and 30 lt. Number of meters shown in 1906 report.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 3,021 | 3,121* | 48 | 13 | 7 | 13 | 5 | 6 | 2 | 6,236 |
| Bought ..... | | 50 | | | | | | | | 50 |
| | 3,021 | 3,171 | 48 | 13 | 7 | 13 | 5 | 6 | 2 | 6,286 |
| Discarded ..... | 20 | | | | | | | | | 20 |
| Owned Dec., 1906. | 3,001 | 2,171 | 48 | 13 | 7 | 13 | 5 | 6 | 2 | 6,266 |
| Bought ..... | | 350 | | 18 | | | | | | 368 |
| | 3,001 | 3,521 | 48 | 31 | 7 | 13 | 5 | 6 | 2 | 6,634 |
| Discarded ..... | 50 | | | | | | | | | 50 |
| Owned Dec. 31, 1907..... | 2,951 | 3,521 | 48 | 31 | 7 | 13 | 5 | 6 | 2 | 6,584 |

Inventory of meters in use and in stock was taken during Sept. 1907, which showed the meters owned Dec. 31, 1907.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2,933 | 3,688 | 48 | 37 | 9 | 14 | 4 | 6 | 2 | 6,741 |
| Difference ..... | 18 | 167 | | 6 | 2 | 1 | 1 | | | 157 |
| Dec. 31, 1907... | 2,933 | 3,688 | 48 | 37 | 9 | 14 | 4 | 6 | 2 | 6,741 |
| Bought ..... | | 475 | | 12 | | | | | | 487 |
| | 2,933 | 4,163 | 48 | 49 | 9 | 14 | 4 | 6 | 2 | 7,228 |
| Discarded ..... | 2 | | | | | | | | | 2 |
| Owned Dec. 31, 1908..... | 2,931 | 4,163 | 48 | 49 | 9 | 14 | 4 | 6 | 2 | 7,226 |
| Bought ..... | | 554 | 10 | 16 | 2 | | | | | 582 |
| | 2,931 | 4,717 | 58 | 65 | 11 | 14 | 4 | 6 | 2 | 7,808 |
| Discarded ..... | 54 | | 1 | | | | | | | 55 |

893

| | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 100 | 150 | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| Dec. 31, 1909... | 2,877 | 4,717 | 58 | 64 | 11 | 14 | 4 | 6 | 2 | 7,753 |
| Bought ..... | 41 | 325 | 25 | 12 | | | | | | 403 |
| | 2,918 | 5,042 | 83 | 76 | 11 | 14 | 4 | 6 | 2 | 8,156 |
| Discarded ..... | 23 | 2 | | | | | | | | 25 |
| Dec. 31, 1910.... | 2,895 | 5,040 | 83 | 76 | 11 | 14 | 4 | 6 | 2 | 8,131 |
| Bought ..... | | 150 | 6 | 9 | | | | | | 165 |
| | 2,895 | 5,190 | 89 | 85 | 11 | 14 | 4 | 6 | 2 | 8,296 |
| Discarded ..... | 4 | | | | | | | | | 4 |
| Dec. 31, 1911... | 2,891 | 5,190 | 89 | 85 | 11 | 14 | 4 | 6 | 2 | 8,292 |

Inventory of meters in use and stock was taken during May, 1911, which showed the meters owned Dec. 31, 1911.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2,939 | 5,270 | 89 | 85 | 11 | 14 | 4 | 6 | 2 | 8,420 |
| Difference ..... | 48 | 80 | | | | | | | | 128 |
| Owned Dec. 31, 1911..... | 2,939 | 5,270 | 89 | 85 | 11 | 14 | 4 | 6 | 2 | 8,420 |
| Bought ..... | | 150 | | 10 | | | | | | 160 |
| | 2,939 | 5,420 | 89 | 95 | 11 | 14 | 4 | 6 | 2 | 8,580 |
| Discarded ..... | 3 | | | 1 | | | | | | 4 |
| Oct. 31, 1912 ... | 2,936 | 5,420 | 89 | 94 | 11 | 14 | 4 | 6 | 2 | 8,576 |
| Owned Dec. 31, 1902..... | 3,038 | 1,594 | 48 | 13 | 8 | 10 | 4 | 5 | 1 | 4,721 |
| Total Bought ... | 41 | 3,592 | 41 | 77 | 2 | 3 | 1 | 1 | 1 | 3,703 |
| Discarded ..... | 173 | 14 | | 2 | | | | | | 188 |
| Total Oct. 31, 1912. | 2,906 | 5,172 | 89 | 88 | 10 | 13 | 5 | 6 | 2 | 8,291 |
| Error Jan., 1906. | | 1 | | | 1 | | | | | |
| Inv. 1907..... | 18 | 167 | | 6 | 2 | 1 | 1 | | | 157 |
| Inv. 1911..... | 48 | 80 | | | | | | | | 128 |
| | 30 | 248 | | 6 | 1 | 1 | 1 | | | 285 |
| Oct. 31, 1912.... | 2,936 | 5,420 | 89 | 94 | 11 | 14 | 4 | 6 | 2 | 8,576 |

Governors Purchased.

1909 (1,500—¾″; 86—1, ¼″)
1910 (1,722—¾″; 62—1, ¼″; 4—2″)
1911 (2,528—¾″; 75—1, ¼″; 2—2″)
1912 (1,500—¾″; 10—1, ¼″)

894 *Meters in Use and in Stock October* 31, 1912.

| | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 100 | 150 | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| Owned 10/31/12. | 2,936 | 5,420 | 89 | 94 | 11 | 14 | 4 | 6 | 2 | 8,576 |
| In Stock 10/31/12. | 36 | 233 | 24 | 6 | 1 | | 3 | 1 | 1 | 305 |
| In Use 10/31/12. | 2,900 | 5,187 | 65 | 88 | 10 | 14 | 1 | 5 | 1 | 8,271 |
| In Use Havelock & Uni. Place.. | 17 | 271 | | 1 | | | | | | 289 |
| In Lincoln .... | 2,883 | 4,916 | 65 | 87 | 10 | 14 | 1 | 5 | 1 | 7,982 |

895 LINCOLN, NEBRASKA, Dec. 24, 1912.

Mr. B. C. Adams, Vice Pres. & Gen. Mgr., Office.

DEAR SIR: In compliance with your request I wish to respectfully submit for your approval the following figures taken from our Gas Manufacturing report for the year 1911:

| | |
|---|---|
| Gross Earnings ..... | $274,292.95 |
| Operating Expenses ..... | 214,385.05 |
| Net Earnings ..... | 59,907.90 |

The above gross earnings include the sales of Havelock and University Place, based on $1.25 per thousand cubic feet as well as the total sales of Lincoln at $1.20 per thousand. The operating expenses include items for depreciation and the occupation tax.

Very respectfully,

R. E. PHILLIPS,
*Sec'y & Treas.*

896 EXHIBIT 8.

Lincoln Gas and Electric Light Company, Gas Department.

*Inventory, January First,* 1913.

Doherty Operating Company, Sixty Wall Street, New York.

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900 Lincoln Gas and Electric Light Company.

*Gas Plant Inventory, Jan. 1st, 1913.*

Purifier House:

37′ 3″ x 176′ 3″ x 21′ 0″—Foundation, stone; walls, brick; roof, corrugated iron on wood frame; floors, concrete and wood.

| | | |
|---|---|---|
| Excavation | 4536.0 | Cu. Yds. |
| Foundations: | | |
| Stone—Cemented | 505.9 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 4536.0 | Cu. Yds. |
| Walls: | | |
| Brick | 187.843 | M. |
| Pilasters: | | |
| Brick | 4.452 | M. |
| Cornice: | | |
| Brick—Fancy | 5.860 | M. |
| Framing: | | |
| Wood—Rough | .186 | M′ B. M. |
| Covering: | | |
| Wood—T and G—1″ | 259. | Sq. Ft. |
| Roof: | | |
| Framing: | | |
| Wood—S 4 S | 8.102 | M′ B. M. |
| Wood—Rough | .069 | M′ B. M. |
| Steel | 834. | Lbs. |
| Covering: | | |
| Wood—T and G—1″ | 8449. | Sq. Ft. |
| Wood—Rough—1″ | 98. | Sq. Ft. |
| Corr. Iron #24 | 97.16 | Squares. |
| Tar Felt | 9.75 | Squares. |
| Floors: | | |
| Concrete—8″ | 3465. | Sq. Ft. |

| | | |
|---|---|---|
| Framing: | | |
| Wood—Rough | 7.738 | M' B. M. |
| Cast Iron | 805. | Lbs. |
| Steel | 3009. | Lbs. |
| Covering: | | |
| Wood—T and G—1" | 3502. | Sq. Ft. |
| Wood—Rough—2" | 88. | Sq. Ft. |

901

| | | |
|---|---|---|
| Stairways: | | |
| Framing: | | |
| Wood—Rough | 1.129 | M' B. M. |
| Covering: | | |
| Wood—T and G—1" | 56. | Sq. Ft. |
| Doors: | | |
| Single Panel Hinged | 147. | Sq. Ft. |
| Double Panel Hinged | 975. | Sq. Ft. |
| Single Batten " | 439. | Sq. Ft. |
| Double Batten " | 49. | Sq. Ft. |
| Windows: | | |
| Double Sash Box: | | |
| Plain | 144. | Sq. Ft. |
| Mullioned | 126. | Sq. Ft. |
| Storm Type | 462. | Sq. Ft. |
| Double Sash Jamb: | | |
| Plain | 37. | Sq. Ft. |
| Storm Type | 272. | Sq. Ft. |
| Gutters: | | |
| Galv. Iron—U—8" | 50. | Lin. Ft. |
| Downspouts: | | |
| Galv. Corr. Iron 4" | 30. | Lin. Ft. |
| Plaster: | | |
| On Brick | 1940. | Sq. Ft. |
| Painting: | | |
| Water—On Brick | 9348. | Sq. Ft. |
| Water—On Wood | 8546. | Sq. Ft. |
| Plumbing: | | |
| Toilets—Complete | 2. | Each. |
| Electric Wiring: | | |
| Copper Wire: | | |
| W. P. #14 | 420. | Lin. Ft. |
| R. C. #14 | 740. | Lin. Ft. |
| Lamp Cord | 216. | Lin. Ft. |
| Conduit—½" | 215. | Lin. Ft. |
| Outlets | 37. | Each. |

| | | |
|---|---|---|
| Miscellaneous: | | |
| Framing: | | |
| Wood—Rough | .296 | M' B. M. |
| Covering: | | |
| Wood—T and G—1" | 801. | Sq. Ft. |
| Wood—Rough—1" | 499. | Sq. Ft. |
| Wood—Rough—2" | 556. | Sq. Ft. |

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Generator House:

35' 0" x 51' 6" x 30' 6"—Foundations, concrete; walls, brick and tile; roof, corrugated iron on steel frame; floor, concrete.
17' 9" x 26' 3" x 13' 6"—Foundations, concrete; walls, brick and tile; roof, tar felt on wood frame; floor, concrete.
9' 3" x 16' 6" x 33' 0"—Foundation, concrete; walls, corrugated iron on wood frame; roof, tar felt on wood frame; floor, dirt.

| | | |
|---|---|---|
| Excavation | 247.9 | Cu. Yds. |
| Foundations: | | |
| Forms—Wood | 2.425 | M' B. M. |
| Concrete | 82.5 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 247.9 | Cu. Yds. |
| Walls: | | |
| Tile—Hollow | 13.270 | M. |
| Brick | 39.179 | " |
| Pilasters: | | |
| Brick | 2.799 | M. |
| Framing: | | |
| Wood—Rough | 1.583 | M' B. M. |
| Covering: | | |
| Corr. Iron #24 | 16.41 | Squares. |
| Roof: | | |
| Framing: | | |
| Steel | 9479. | Lbs. |
| Wood—Rough | .811 | M' B. M. |
| Covering: | | |
| Corr. Iron #24 | 22.54 | Squares. |
| Wood—Rough—1" | 616. | Sq. Ft. |
| Tar Felt | 6.16 | Squares. |
| Louvers: | | |
| Wood—5 Slat | 130. | Sq. Ft. |
| Floor: | | |
| Concrete—4" | 1942. | Sq. Ft. |

| | | |
|---|---|---|
| Doors: | | |
| Single—Batten-Slide | 68. | Sq. Ft. |
| Double—Batten-Slide | 136. | Sq. Ft. |
| Single—Panel-Hinged | 27. | Sq. Ft. |
| Windows: | | |
| Double Sash Box: | | |
| Plain | 368. | Sq. Ft. |
| Mullioned | 231. | Sq. Ft. |
| Gutters: | | |
| Galv. Iron-Box—6″ | 51. | Lin. Ft. |

903

| | | |
|---|---|---|
| Generator House (continued): | | |
| Downspouts: | | |
| Galv. Corr. Iron—6″ | 30. | Lin. Ft. |
| Plaster: | | |
| On Tile | 1136. | Sq. Ft. |
| Platform: | | |
| Framing: | | |
| Wood—Rough | .901 | M′ B. M. |
| Covering: | | |
| Wood—Rough—2″ | 357. | Sq. Ft. |
| Electric Wiring: | | |
| Copper Wire: | | |
| W. P. #14 | 460. | Lin. Ft. |
| Lamp Cord | 71. | Lin. Ft. |
| Outlets | 21. | Each. |
| Miscellaneous: | | |
| Wood—T and G—1″ | 71. | Sq. Ft. |
| Wood—Rough—1″ | 52. | Sq. Ft. |
| Wood—Rough—2″ | 18. | Sq. Ft. |

904

Retort House:

32′ 9″ x 47′ 3″ x 26′ 9″—33′ 6″ x 70′ 0″ x 19′ 6″—Foundations, stone; walls, brick; roof, corrugated iron on steel frame; floors, concrete.

| | | |
|---|---|---|
| Excavation | 1244.5 | Cu. Yds. |
| Foundations: | | |
| Stone—Cemented | 206.4 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 1244.5 | Cu. Yds. |
| Walls: | | |
| Brick | 157.381 | M. |
| Pilasters: | | |
| Brick | .848 | M. |

| | | |
|---|---|---|
| Cornice: | | |
| Brick—Fancy | 2.311 | M. |
| Framing: | | |
| Wood—Rough | .008 | M' B. M. |
| Covering: | | |
| Wood—T and G—1" | 84. | Sq. Ft. |
| Roof: | | |
| Framing: | | |
| Steel | 14523. | Lbs. |
| Wood—Rough | .022 | M' B. M. |
| Covering: | | |
| Corr. Iron #24 | 51.87 | Squares. |
| Wood—T and G—1" | 52. | Sq. Ft. |
| Tar Felt | .52 | Squares. |
| Floors: | | |
| Concrete—8" | 3390. | Sq. Ft. |
| Framing: | | |
| Wood—Rough | .020 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 36. | Sq. Ft. |
| Doors: | | |
| Single—Batten-Slide | 54. | Sq. Ft. |
| Single—Panel-Hinged | 33. | Sq. Ft. |
| Wood—Galv. Iron Sheathed | 41. | Sq. Ft. |
| Electric Wiring: | | |
| Copper Wire: | | |
| W. P.—#14 | 150. | Lin. Ft. |
| W. P.—#10 | 165. | Lin. Ft. |
| R. C.—#14 | 300. | Lin. Ft. |
| R. C.—#12 | 160. | Lin. Ft. |
| Lamp Cord | 35. | Lin. Ft. |
| Conduit—½" | 145. | Lin. Ft. |
| Outlets | 30. | Each. |
| Miscellaneous: | | |
| Wood—T and G—1" | 125. | Sq. Ft. |

905

Meter Shop and Booster House:

22' 9" x 42' 3" x 13' 6"—15' 9" x 22' 6" x 10' 6"—Foundations, concrete; walls, brick; roof, tar felt and gravel on wood frame; floor, concrete.

10' 9" x 14' 6" x 4' 0"—Foundations, brick; walls, brick; roof, wood shingles on wood frame; floors, concrete and wood.

9' 3" x 14' 0" x 7' 6"—Foundations, wood; walls, wood on wood frame; roof, tar felt on wood frame; floor, dirt.

| | | |
|---|---|---|
| Excavation | 386.0 | Cu. Yds. |
| Foundations: | | |
| Forms—Wood | 2.409 | M' B. M. |
| Concrete | 38.0 | Cu. Yds. |
| Brick | 6.439 | M. |
| Backfilling and Removing Surplus Material | 386.0 | Cu. Yds. |
| Walls: | | |
| Brick | 44.162 | M. |
| Cornice: | | |
| Brick—Fancy | .527 | M. |
| Framing: | | |
| Wood—Rough | .155 | M' B. M. |
| Covering: | | |
| Wood—T and G—1" | 279. | Sq. Ft. |
| Building Paper | 279. | Sq. Ft. |
| Roof: | | |
| Framing: | | |
| Wood—Rough | 2.018 | M' B. M. |
| Covering: | | |
| Wood—Rough—1" | 1429. | Sq. Ft. |
| Wood—T and G—1" | 436. | Sq. Ft. |
| Tar Felt and Gravel | 11.50 | Squares. |
| Tar Felt | 1.57 | Squares. |
| Wood—Shingles | 2.79 | Squares. |
| Floors: | | |
| Concrete—4" | 856. | Sq. Ft. |
| Concrete—8" | 156. | Sq. Ft. |
| Concrete—10" | 354. | Sq. Ft. |
| Framing: | | |
| Wood—Rough | .993 | M' B. M. |
| Covering: | | |
| Wood—Rough—1" | 294. | Sq. Ft. |
| Wood—Rough—2" | 243. | Sq. Ft. |
| Doors: | | |
| Single—Batten-Slide | 35. | Sq. Ft. |
| Single—Batten-Hinged | 19. | Sq. Ft. |
| Single—Panel-Hinged | 42. | Sq. Ft. |
| Windows: | | |
| Double—Sash-Box—Plain | 259. | Sq. Ft. |
| Mullioned | 47. | Sq. Ft. |
| 906 | | |
| Single—Sash-Jamb—Plain | 32. | Sq. Ft. |
| Gutters: | | |
| Galv. Iron-Box—6" | 42. | Lin. Ft. |
| Downspouts: | | |
| Galv. Corr. Iron—4" | 13. | Lin. Ft. |

| | | |
|---|---|---|
| Ventilators: | | |
| "Star"—14" | 1. | Each. |
| Plaster: | | |
| On Brick | 132. | Sq. Ft. |
| Painting: | | |
| Water—On Brick | 2443. | Sq. Ft. |
| Oil—On Wood | 279. | Sq. Ft. |
| Platform: | | |
| Framing: | | |
| Wood—Rough | .095 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 50. | Sq. Ft. |
| Electric Wiring: | | |
| Copper Wire: | | |
| W. P.—#14 | 75. | Lin. Ft. |
| W. P.—#10 | 30. | Lin. Ft. |
| R. C.—#14 | 175. | Lin. Ft. |
| Lamp Cord | 102. | Lin. Ft. |
| Outlets | 16. | Each. |
| Miscellaneous: | | |
| Wrt. Iron Pine—1¼" | 49. | Lin. Ft. |
| Framing: | | |
| Wood—Rough | .007 | M' B. M. |
| Covering: | | |
| Wood—Rough—1" | 8. | Sq. Ft. |
| Wood—Rough—2" | 88. | Sq. Ft. |
| Wood—S 2 S—1" | 141. | Sq. Ft. |

907

Coal Shed:

20' 0" x 111' 0" x 16' 0"—Foundations, stone and brick; walls, roof and floor, wood.

| | | |
|---|---|---|
| Excavation | 146.4 | Cu. Yds. |
| Foundation: | | |
| Stone—Cemented | 63.1 | Cu. Yds. |
| Brick | 3.593 | M. |
| Backfilling and Removing Surplus Material | 146.4 | Cu. Yds. |
| Walls: | | |
| Framing: | | |
| Wood—Rough | 3.532 | M' B. M. |
| Covering: | | |
| Wood—Rough | 2488. | Sq. Ft. |
| Roof: | | |
| Framing: | | |
| Wood—Rough | 3.993 | M' B. M. |
| Covering: | | |
| Wood—Rough—1" | 2775. | Sq. Ft. |

| | | |
|---|---|---|
| Floor: | | |
| Framing: | | |
| Wood—Rough | 7.168 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 2220. | Sq. Ft. |
| Runway: | | |
| Framing: | | |
| Wood—Rough | 1.009 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 34. | Sq. Ft. |
| Wood—T and G—1" | 144. | Sq. Ft. |
| Tar Felt | .48 | Squares. |
| Electric Wiring: | | |
| Copper Wire: | | |
| W. P.—#14 | 300. | Lin. Ft. |
| Outlets | 9. | Each. |

908

Oil Tank House:
22' 9" x 35' 3" x 1' 0"—Foundations, stone; walls, brick; roof, corrugated iron on wood and steel frame; floors, concrete and wood.

| | | |
|---|---|---|
| Excavation | 428.9 | Cu. Yds. |
| Foundation: | | |
| Stone—Cemented | 65.5 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 428.9 | Cu. Yds. |
| Walls: | | |
| Brick | 5.851 | M. |
| Roof: | | |
| Framing: | | |
| Steel | 1514. | Lbs. |
| Wood—Rough | .180 | M' B. M. |
| Covering: | | |
| Wood—T and G—1" | 1124. | Sq. Ft. |
| Corr. Iron #26 | 12.93 | Squares. |
| Floor: | | |
| Concrete—10" | 642. | Sq. Ft. |
| Framing: | | |
| Wood—Rough | .108 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 219. | Sq. Ft. |
| Doors: | | |
| Single—Panel-Hinged | 21. | Sq. Ft. |
| Windows: | | |
| Single—Sash-Jamb—Plain | 5. | Sq. Ft. |

| | | |
|---|---|---|
| Electric Wiring: | | |
| Copper Wire: | | |
| W. P.—#14 | 10. | Lin. Ft. |
| Outlets | 1. | Each. |

909

Oxide Shed:

5′ 6″ x 15′ 0″ x 7′ 6″—Foundations and walls, wood; roof, corrugated iron on wood frame; floors, wood and dirt.

| | | |
|---|---|---|
| Walls: | | |
| Framing: | | |
| Wood—Rough | .219 | M′ B. M. |
| Covering: | | |
| Wood—Rough—2″ | 334. | Sq. Ft. |
| Wood—T and G—1″ | 80. | Sq. Ft. |
| Roof: | | |
| Framing: | | |
| Wood—Rough | .023 | M′ B. M. |
| Covering: | | |
| Wood—Rough—1″ | 90. | Sq. Ft. |
| Wood—T and G—1″ | 28. | Sq. Ft. |
| Corr. Iron #24 | 1.07 | Squares. |
| Floor: | | |
| Framing: | | |
| Wood—Rough | .069 | M′ B. M. |
| Covering: | | |
| Wood—T and G—1″ | 83. | Sq. Ft. |

910

Stable and Blacksmith Shop:

18′ 3″ x 36′ 3″ x 10′ 0″—15′ 3″ x 25′ 3″ x 8′ 3″ 24′ 0″ x 45′ 6″ x 11′ 0″—8′ 0″ x 10′ 6″ x 7′ 6″—5′ 0″ x 10′ 6″ x 9′ 3″—Foundations, wood; walls, wood on wood frame; roof, wood and tar felt on wood frame; floors, wood and dirt.

| | | |
|---|---|---|
| Walls: | | |
| Framing: | | |
| Wood—Rough | 1.937 | M′ B. M. |
| Covering: | | |
| Wood—Shiplap—1″ | 1314. | Sq. Ft. |
| Wood—Rough—1″ | 3352. | Sq. Ft. |
| Roof: | | |
| Framing: | | |
| Wood—Rough | 1.518 | M′ B. M. |
| Covering: | | |
| Wood—Shingles | 4.02 | Squares. |
| Wood—Rough—1″ | 3028. | Sq. Ft. |
| Tar Felt | 22.64 | Squares. |

| | | |
|---|---|---|
| Floor: | | |
| Framing: | | |
| Wood—Rough | .741 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 1142. | Sq. Ft. |
| Doors: | | |
| Single—Batten-Slide | 53. | Sq. Ft. |
| Single—Batten-Hinged | 56. | Sq. Ft. |
| Windows: | | |
| Single—Sash-Jamb—Plain | 81. | Sq. Ft. |
| Painting: | | |
| Oil—On Wood | 1310. | Sq. Ft. |
| Electric Wiring: | | |
| Copper Wire: | | |
| W. P.—#14 | 80. | Lin. Ft. |
| R. C.—#14 | 225. | Lin. Ft. |
| Lamp Cord | 104. | Lin. Ft. |
| Outlets | 22. | Each. |

911

Booster House at Storage Plant:

17' 6" x 21' 3" x 12' 6"—Foundations and walls, brick; roof, tar felt and gravel on wood frame; floors, concrete and wood.

| | | |
|---|---|---|
| Excavation | 155.4 | Cu. Yds. |
| Foundations: | | |
| Brick | 5.829 | M. |
| Backfilling and Removing Surplus Material | 155.4 | Cu. Yds. |
| Walls: | | |
| Brick | 10.307 | M. |
| Roof: | | |
| Framing: | | |
| Wood—Rough | .451 | M' B. M. |
| Covering: | | |
| Wood—T and G—1" | 316. | Sq. Ft. |
| Tar Felt and Gravel | 3.16 | Squares. |
| Floors: | | |
| Concrete—4" | 163. | Sq. Ft. |
| Framing: | | |
| Wood—Rough | .174 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 128. | Sq. Ft. |
| Doors: | | |
| Single—Batten-Hinged | 26. | Sq. Ft. |

| | | |
|---|---|---|
| Windows: | | |
| Double — Sash-Slide Mullioned-Wire Glass | 100. | Sq. Ft. |
| Electric Wiring: | | |
| Cooper Wire: | | |
| W. P.—#14 | 40. | Lin. Ft. |
| Lamp Cord | 30. | Lin. Ft. |
| Outlets | 4. | Each. |
| Milcellaneous: | | |
| Framing: | | |
| Wood—Rough | .020 | M' B. M. |
| Covering: | | |
| Wood—Rough—2" | 14. | Sq. Ft. |

912

Gas Generating Sets:

7' 6"—Western Gas—Water Gas.
Capacity—40,000 Cu. Ft. per Hour.
Generator— 7' 6" x 13' 6"
Superheater— 7' 6" x 19' 6"
Carburetter— 7' 6" x 25' 0"
Wash-Box— 5' 6" x 2' 9"

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 50.3 | Cu. Yds. |
| Forms—Wood | .394 | M' B. M. |
| Concrete | 26.5 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 50.3 | Cu. Yds. |

7' 6"—Western Gas—Water Gas.
Capacity—40,000 Cu. Ft. per Hour.
Generator— 7' 6" x 13' 6"
Superheater— 7' 6" x 19' 6"
Carburetter— 7' 6" x 25' 0"
Wash-Box— 5' 6" x 2' 9"

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 50.3 | Cu. Yds. |
| Forms—Wood | .394 | M' B. M. |
| Concrete | 26.5 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 50.3 | Cu. Yds. |

Condenser— 6' 0" x 20' 0"
Scrubber— 6' 6" x 21' 0"

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 28.2 | Cu. Yds. |
| Forms—Wood | .248 | M' B. M. |
| Concrete | 11.3 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 28.2 | Cu. Yds. |

| | | |
|---|---|---|
| Operating Floor: | | |
| Framing: | | |
| Wrought Iron | 518. | Lbs. |
| Steel | 9830. | " |
| Wood—Rough | .063 | M' B. M. |
| Plates: | | |
| Cast Iron—⅝" | 942. | Sq. Ft. |
| Railing: | | |
| Wrought Iron Pipe—1" | 73. | Lin. Ft. |

913

Gas Generating Sets. (Continued):

6' 6"—Western Gas—Water Gas.
Capacity—30,000 Cu. Ft. per Hour.

| | |
|---|---|
| Generator— | 6' 6" x 13' 0" |
| Superheater— | 6' 0" x 18' 0" |
| Carburetter— | 6' 0" x 24' 0" |
| Wash-Box— | 5' 0" x 2' 6" |
| Condenser— | 5' 6" x 20' 0" |
| Scrubber— | 5' 6" x 20' 0" |

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 41.7 | Cu. Yds. |
| Forms—Wood | .549 | M' B. M. |
| Concrete | 17.5 | Cu. Yds. |
| Brick | 1.809 | M. |
| Backfilling and Removing Surplus Material | 41.7 | Cu. Yds. |

6' 6"—Springer—Water Gas.
Capacity—15,000 Cu. Ft. per Hour.

| | |
|---|---|
| Generator— | 6' 6" x 10' 0" |
| Superheater— | 6' 0" x 31' 3" |
| Wash-Box— | 4' 0" x 2' 6" |
| Scrubber— | 6' 0" x 20' 3" |
| Scrubber— | 4' 0" x 20' 3" |

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 33.1 | Cu. Yds. |
| Forms—Wood | .350 | M' B. M. |
| Concrete | 12.3 | Cu. Yds. |
| Brick | 3.046 | M. |
| Backfilling and Removing Surplus Material | 33.1 | Cu. Yds. |
| Operating Floor: | | |
| Framing: | | |
| Cast Iron | 891. | Lbs. |
| Steel | 8279. | " |
| Plates: | | |
| Cast Iron—½" | 666. | Sq. Ft. |
| Cast Iron—⅝" | 281. | Sq. Ft. |

914

Blowers:
#7—Sturtevant.
Belted.

Foundation:

| | | |
|---|---|---|
| Excavation | 2.0 | Cu. Yds. |
| Forms—Wood | .034 | M′ B. M. |
| Concrete | .8 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 2.0 | Cu. Yds. |

#7—Sturtevant.
Belted.

Foundation:

| | | |
|---|---|---|
| Excavation | 4.3 | Cu. Yds. |
| Forms—Wood | .055 | M′ B. M. |
| Concrete | 1.2 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 4.3 | Cu. Yds. |

#1—Root.
Double Impeller.
Direct Connected.

Foundation:

| | | |
|---|---|---|
| Brick | 2.792 | M. |

915

Turbo-Blower Unit:
#8—Sturtevant.
Turbine Type C 3.
Steam Pressure—100 Lbs.
35 H. P.—1760 R. P. M.

Foundation:

| | | |
|---|---|---|
| Excavation | 10.6 | Cu. Yds. |
| Forms | .082 | M′ B. M. |
| Concrete | 4.6 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 10.6 | Cu. Yds. |

916

Booster:
#8—Sturtevant.
Belted.

Foundation:

| | | |
|---|---|---|
| Forms—Wood | .254 | M′ B. M. |
| Concrete | 9.2 | Cu. Yds. |

917

Exhausters:
#6—Root—16" Connection.
Double Impeller.
Direct Connected.

| | | |
|---|---|---|
| Foundation: | | |
| Brick | 6.894 | M. |

#6—Sturtevant.
Fan Type—Belted.
10" Connection—McKenzie.
Single Impeller—Eccentric.
Connection Flanges Out to Out—27".

918

Steam Engines:
4" x 5"—Greenfield.
Vertical.
5" x 5"—Sturtevant.
Vertical.
High Speed—Automatic.
7" x 6"—Sturtevant.
Vertical.
High Speed—Automatic.

| | | |
|---|---|---|
| Foundation: | | |
| Forms—Wood | .194 | M' B. M. |
| Concrete | 4.3 | Cu. Yds. |

919

Electric Motors:
40 H. P.—General Electric.
Direct Current.
500 Volts—975 R. P. M.

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 10.5 | Cu. Yds. |
| Forms—Wood | .092 | M' B. M. |
| Concrete | 3.2 | Cu. Yds. |
| Wood—Rough | .253 | M' B. M. |
| Backfilling & Removing Surplus Material | 10.5 | Cu. Yds. |

35 H. P.—Fort Wayne.
Direct Current.
Compound Wound—Type M. T.
500 Volts—1045 R. P. M.

| | | |
|---|---|---|
| Foundation: | | |
| Cast Iron | 648. | Lbs. |
| Steel | 177. | " |
| Wood—Rough | .108 | M' B. M. |

920

Countershafting:

| | | |
|---|---|---|
| Hangers: | | |
| Double—Cast Iron—15" | 4. | Each. |
| Shafting: | | |
| Steel—2¾" | 21.5 | Lin. Ft. |
| Pulleys: | | |
| Wood—6" x 12" | 1. | Each. |
| " —6" x 24" | 1. | " |
| Cast Iron—5" x 24" | 2. | " |

921

Gas Generating Sets (Continued):
3 benches—6's—¾ depth, Improved Equipment Co., coal gas; 3 benches—6's—half depth, Missouri Fire Bk. Co., coal gas; capacity—13,500 cu. ft. per hour.

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 159.5 | Cu. Yds. |
| Forms—Wood | .775 | M' B. M. |
| Concrete | 114.8 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 159.5 | Cu. Yds. |
| Operating Floor: | | |
| Framing: | | |
| Cast Iron | 1418. | Lbs. |
| Steel | 9149. | " |
| Plates: | | |
| Cast Iron—½" | 1284. | Sq. Ft. |

Condenser—4' 6" x 25' 0".

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 10.0 | Cu. Yds. |
| Forms—Wood | .092 | M' B. M. |
| Concrete | 3.3 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 10. | Cu. Yds. |

Scrubber—5' 6" x 31' 0".

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 12.2 | Cu. Yds. |
| Forms—Wood | .111 | M' B. M. |
| Concrete | 4.7 | Cu. Yds. |
| Backfilling and Removing Surplus Material | 12.2 | Cu. Yds. |

922

Washer Scrubber:
4′ 6″ x 5′ 0″—Rotor—Smith and Sayre Standard #47 .....

| | | |
|---|---|---|
| Foundation: | | |
| Steel ..... | 1187. | Lbs. |

923

Purifying Boxes:
4 (20′ 0″ x 24′ 0″ x 4′ 0″)—Western gas; boxes, cast iron; covers, steel; center seal, 16″; cover hoist, hydraulic operated; foundation, cast iron and steel.

| | | |
|---|---|---|
| Foundation: | | |
| Cast Iron ..... | 2705. | Lbs. |
| Steel ..... | 19600. | Lbs. |

924

Station Meters:
10′ 0″—McDonald.
Hinman Drum.

| | | |
|---|---|---|
| Foundation: | | |
| Brick ..... | 5.961 | M. |

6′ 0″—American.
Parkinson Drum.

925

Holders:
500,000 Cu. Ft. Capacity.
Three Lifts—Steel Tank.
Diameter of Tank—91′ 6″
Height " " —30′ 0″
Foundation, Concrete.

| | | |
|---|---|---|
| Foundation: | | |
| Excavation ..... | 453.0 | Cu. Yds. |
| Forms—Wood ..... | 2.815 | M′ B. M. |
| Reinforcement—Steel ..... | 4936. | Lbs. |
| Concrete ..... | 661.4 | Cu. Yds. |
| Plaster—Cement: | | |
| On Concrete ..... | 6612. | Sq. Ft. |
| Backfilling and Removing Surplus Material ..... | 456.0 | Cu. Yds. |
| Water: | | |
| For Tank ..... | 197267. | Cu. Ft. |

200,000 Cu. Ft. Capacity.
Two Lifts—Brick Tank, Concrete Bottom.
Inside Diameter of Tank—85′ 6″
" Depth " " —
Maximum—21′ 3″
Minimum— 6′ 0″

| | | |
|---|---|---|
| Tank: | | |
| Excavation | 5649.7 | Cu. Yds. |
| Brick | 191.840 | M. |
| Concrete | 174.0 | Cu. Yds. |
| Stone—Dressed | 8.9 | Cu. Yds. |
| Plaster—Cement: | | |
| On Brick | 5708. | Sq. Ft. |
| On Concrete | 4697. | Sq. Ft. |
| Backfilling and Removing Surplus Material | 5649.7 | Cu. Yds. |
| Water: | | |
| For Tank | 99932. | Cu. Ft. |

926 Holders (continued):

50,000 Cu. Ft. Capacity.
Single Lift—Brick Tank, Concrete Bottom.
Inside Diameter of Tank—57′ 0″
Inside Depth of Tank:
Maximum—21′ 9″
Minimum— 6′ 0″

| | | |
|---|---|---|
| Tank: | | |
| Excavation | 3409.0 | Cu. Yds. |
| Brick | 140.405 | M. |
| Concrete | 85.8 | Cu. Yds. |
| Stone—Dressed | 10.3 | Cu. Yds. |
| Plaster—Cement: | | |
| On Brick | 3895. | Sq. Ft. |
| On Concrete | 3089. | Sq. Ft. |
| Backfilling & Removing Surplus Material | 3409.0 | Cu. Yds. |
| Water: | | |
| For Tank | 43523. | Cu. Ft. |

927

Governors:
20″ Connections—Connolly.
Automatic.
12″ Connections—Reynolds.

928

Reciprocating Pumps:
6″ x 10″ x 5″ x 10″—Knowles.
Simplex-Plunger.
Compound.
3″ x 4″—Vertical.
Steam Driven-Plunger.
3½″ x 4″ x 6″—Gardner.
Duplex.
4½″ x 3¾″ x 4″—Worthington.
Duplex.
4½″ x 2¾″ x 4″—Gardner.
Duplex.

Foundation:
Brick ..... .152 M.
4½″ x 2¾″ x 4″—Worthington.
Duplex.
3″ x 2″ x 3″—Worthington.
Duplex.
6″ x 4″ x 6″—Warren.
Simplex.
2½″ x 3″ x 4″—Marsh.
Simplex.

929

Miscellaneous Gas Plant Apparatus:
Elevator—Otis.
Platform—6′ 0″ x 7′ 0″.
Electrically Operated.
Scale—Fairbanks.
Platform—4′ 0″ x 4′ 0″.
Narrow Gauge.
Photometer—American.
Bar—60″.
Calorimeter—Junkers.
With Extra Meter.
Drill Press—Buffalo Forge Co.
Post Type—#99.
Grind Stone—2″ x 24″.
Foot Power.
Oil Filter—American.
Cylindrical—20″ x 30″.
Lye Tank—Galv. Iron.
Meter Test Tank—Galv. Iron.
Waste Cans—Galv. Iron.
20 Gallons..... 2. Each.
Gauge—U—12″.
Gauge—U—20″.

930

| | | |
|---|---|---|
| Miscellaneous Gas Plant Apparatus (continued): | | |
| Hot Plates—2 Hole | 2. | Each. |
| Clock—Low Grade. | | |
| Oil Tanks—Steel— | | |
| 2′ 0″ x 4′ 6″ x ¼″ | 2. | Each. |
| Steam Traps—Denny—1″ | 3. | Each. |
| Lion Water Heater—#1 | 4. | Each. |
| Pipe Rack: | | |
| Wood—Rough | .036 | M′ B. M. |
| Galv. Iron #24 | .64 | Squares. |
| Pipe Dipping Trough— | | |
| 10″ x 22′ 0″ x 20″. | | |
| Wood—Rough | .217 | M′ B. M. |
| Boilers—63″ x 16′ 0″. | | |
| Used as Tar Tanks. | | |
| No Settings | 4. | Each. |

931

| | | |
|---|---|---|
| Blacksmith Shop Apparatus: | | |
| Drill Press—Buffalo Forge Co. | | |
| Post Type—#90. | | |
| Drill Press—Buffalo Forge Co. | | |
| Post Type—#99. | | |
| Blower—Buffalo Forge Co. | | |
| #2 E—Direct Connected to ¼ H. P. | | |
| Motor. | | |
| Induction Type—110 Volts. | | |
| Forge—Buffalo Forge Co. | | |
| Cast Iron Body—3′ 6″ x 4′ 0″. | | |
| Emery Wheel—Duplex. | | |
| Foot Power. | | |
| Anvils | 2. | Each. |
| Vise—6″ Jaw—Smith. | | |
| Vise—6″ Jaw—Bench. | | |
| Tire Setter. | | |
| Tire Roller. | | |
| Manning Iron. | | |

932

| | | |
|---|---|---|
| Tar Separator: | | |
| 5′ 0″ x 17′ 0″ x 10′ 0″—Walls, etc., | | |
| wood. | | |
| Excavation | 90.9 | Cu. Yds. |
| Framing: | | |
| Wood—Rough | .234 | M′ B. M. |
| Bottom: | | |
| Wood—Rough—2″ | 85. | Sq. Ft. |

| | | |
|---|---|---|
| Walls: | | |
| Wood—Rough—2" | 440. | Sq. Ft. |
| Baffles: | | |
| Wood—Rough—2" | 175. | Sq. Ft. |
| Cover: | | |
| Wood—Rough—2" | 85. | Sq. Ft. |
| Backfilling & Removing Surplus Material | 90.9 | Cu. Yds. |

933

| | | |
|---|---|---|
| Tar Wells: | | |
| 3' 3" x 3' 3" x 10' 0"—Walls, brick; bottom, concrete. | | |
| Excavation | 44.8 | Cu. Yds. |
| Walls: | | |
| Brick | 1.713 | M. |
| Bottom: | | |
| Concrete | .2 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 44.8 | Cu. Yds. |
| 6' 0" x 20' 0" x 12' 0"—Walls, brick. | | |
| Excavation | 243.2 | Cu. Yds. |
| Walls: | | |
| Brick | 5.930 | M. |
| Backfilling & Removing Surplus Material | 243.2 | Cu. Yds. |

934

| | | |
|---|---|---|
| Tar Tanks: | | |
| 2 Steel Tanks: | | |
| Diameter Each—10' 6". | | |
| Length Each—29' 3". | | |
| Thickness of Steel—¼". | | |
| Foundation, Concrete and Wood. | | |
| Tanks: | | |
| Steel | 25540. | Lbs. |
| Foundation: | | |
| Excavation | 38.7 | Cu. Yds. |
| Forms—Wood | 1.581 | M' B. M. |
| Concrete | 40.4 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 38.7 | Cu. Yds. |
| Wood—Rough | .629 | M' B. M. |
| Oil Tanks: | | |
| 2 Steel Tanks: | | |
| Diameter Each—10' 9". | | |
| Length Each—29' 3". | | |
| Thickness of Steel—¼". | | |
| Foundation, Concrete and Wood. | | |

| | | |
|---|---|---|
| Tanks: | | |
| Steel | 25727. | Lbs. |
| Foundation: | | |
| Excavation | 240.9 | Cu. Yds. |
| Forms—Wood | 1.782 | M' B. M. |
| Concrete | 41.1 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 240.9 | Cu. Yds. |
| Wood—Rough | .629 | M' B. M. |

935

Oil Tanks:
Steel Tank:
Diameter— 8′ 0″.
Length —24′ 0″.
Thickness—¼″.
Foundation, Brick.

| | | |
|---|---|---|
| Tank: | | |
| Steel | 7896. | Lbs. |
| Foundation: | | |
| Brick | 3.204 | M. |

Steel Tank:
Diameter— 8′ 6″.
Length —30′ 0″.
Thickness—¼″.
Foundation, Brick.

| | | |
|---|---|---|
| Tank: | | |
| Steel | 10261. | Lbs. |
| Foundation: | | |
| Brick | 4.005 | M. |

936

Oil Tank:
10′ 0″ x 10′ 0″—Walls, brick; bottom, concrete; cover, wood.

| | | |
|---|---|---|
| Excavation | 91.7 | Cu. Yds. |
| Walls: | | |
| Brick | 3.613 | M. |
| Bottom: | | |
| Concrete | 1.5 | Cu. Yds. |
| Cover: | | |
| Wood—Rough—2″ | 104. | Sq. Ft. |
| Backfilling & Removing Surplus Material | 91.7 | Cu. Yds. |

937

Holder at Storage Plant:
100,000 Cu. Ft. Capacity.
Single Lift—Brick Tank, Concrete Bottom.
Inside Diameter of Tank—82′ 0″.
Inside Depth of Tank:
Maximum—22′ 9″.
Minimum— 7′ 0″.

| | | |
|---|---|---|
| Tank: | | |
| Excavation | 5487.5 | Cu. Yds. |
| Forms—Wood | .694 | M′ B. M. |
| Reinforcement—Steel | 1365. | Lbs. |
| Concrete | 225.3 | Cu. Yds. |
| Brick | 176.611 | M. |
| Stone—Dressed | 8.0 | Cu. Yds. |
| Plaster—Cement: | | |
| On Brick | 5861. | Sq. Ft. |
| On Concrete | 5771. | Sq. Ft. |
| Backfilling & Removing Surplus Material | 5487.5 | Cu. Yds. |
| Water: | | |
| For Tank | 98429. | Cu. Fts. |

938

| | | |
|---|---|---|
| Water Piping: | | |
| Pipe: | | |
| Above ground: | | |
| Wrought Iron—¼″ | 4. | Lin. Ft. |
| " " —⅜″ | 22. | " |
| " " —½″ | 224. | " |
| " " —¾″ | 321. | " |
| " " —1″ | 339. | " |
| " " —1¼″ | 164. | " |
| " " —1½″ | 21. | " |
| " " —2″ | 370. | " |
| " " —2½″ | 45. | " |
| Below ground: | | |
| Wrought Iron—¾″ | 190. | Lin. Ft. |
| " " —1″ | 15. | " |
| " " —1¼″ | 374. | " |
| Valves: | | |
| Globes—⅜″ | 4. | Each. |
| " —½″ | 13. | " |
| " —¾ | 13. | " |
| " —1″ | 13. | " |
| " —1¼″ | 4. | " |
| " —1½″ | 1. | " |
| " —2″ | 9. | " |
| " —2½″ | 1. | " |

939

| | | |
|---|---|---|
| Drain Piping: | | |
| Pipe: | | |
| Below ground: | | |
| Terra Cotta— 6" | 216. | Lin. Ft. |
| " " —12" | 920. | " |
| Manholes: | | |
| 7 (4' 6" x 6' 0"). | | |
| Brick—Circular. | | |
| Cast Iron Covers. | | |
| Excavation | 122.2 | Cu. Yds. |
| Walls: | | |
| Brick | 5.294 | M. |
| Backfilling and Removing Surplus Material | 122.2 | Cu. Yds. |
| Covers: | | |
| Cast Iron—36" | 7. | Each. |

940

| | | |
|---|---|---|
| Oil Piping: | | |
| Pipe: | | |
| Above ground: | | |
| Wrought Iron—¾" | 27. | Lin. Ft. |
| " " —1" | 249. | " |
| " " —1¼" | 28. | " |
| " " —1½" | 34. | " |
| " " —2" | 219. | " |
| " " —3" | 2. | " |
| Below ground: | | |
| Wrought Iron—2" | 272. | Lin. Ft. |
| Valves: | | |
| Globes—¾" | 3. | Each. |
| " —1" | 16. | " |
| " —1¼" | 3. | " |
| " —1½" | 1. | " |
| " —2" | 12. | " |

941

| | | |
|---|---|---|
| Gas Piping: | | |
| Pipe: | | |
| Above ground: | | |
| Cast Iron, B. & S.— 6" | 191. | Lin. Ft. |
| " " " —10" | 330. | " |
| " " " —12" | 42. | " |
| " " " —16" | 539. | " |
| " " " —20" | 30. | " |

| | | |
|---|---|---|
| Below ground: | | |
| Cast Iron, B. & S.—10″ | 56. | Lin. Ft. |
| " " " —12″ | 25. | " |
| " " " —16″ | 254. | " |
| " " " —20″ | 320. | " |
| Valves: | | |
| Gates—10″ | 13. | Each. |
| " —16″ | 15. | " |
| " —20″ | 4. | " |
| Checks—16″ | 1. | Each. |
| Angles—16″ | 1. | Each. |
| " —20″ | 2. | " |

942

Steam Piping:

Pipe:

Above ground:

Covered:

| | | |
|---|---|---|
| Wrought Iron—1¼″ | 63. | Lin. Ft. |
| " " —1½″ | 8. | " |
| " " —2″ | 278. | " |
| " " —2½″ | 45. | " |
| " " —3″ | 136. | " |
| " " —4″ | 141. | " |
| " " —6″ | 66. | " |

Uncovered:

| | | |
|---|---|---|
| Wrought Iron—¼″ | 12. | Lin. Ft. |
| " " —⅜″ | 46. | " |
| " " —½″ | 367. | " |
| " " —¾″ | 847. | " |
| " " —1″ | 203. | " |
| " " —1¼″ | 3239. | " |
| " " —1½″ | 134. | " |
| " " —2″ | 420. | " |
| " " —2½″ | 166. | " |
| " " —3″ | 51. | " |
| " " —4″ | 17. | " |
| " " —8″ | 19. | " |

Below ground:

| | | |
|---|---|---|
| Wrought Iron—½″ | 62. | Lin. Ft. |
| " " —¾″ | 278. | " |
| " " —1¼″ | 160. | " |
| " " —2″ | 142. | " |
| " " —3″ | 15. | " |

Valves:

| | | |
|---|---|---|
| Gates—3″ | 1. | Each. |
| " —4″ | 1. | " |
| Checks—1″ | 1. | Each. |
| Globes—¼″ | 1. | " |
| " —⅜″ | 6. | " |

| | | |
|---|---|---|
| " —½" | 23. | " |
| " —¾" | 26. | " |
| " —1" | 15. | " |
| " —1¼" | 24. | " |
| " —1½" | 3. | " |
| " —2" | 18. | " |
| " —2½" | 1. | " |

943

Tar Piping:

Pipe:

Above ground:

| | | |
|---|---|---|
| Wrought Iron—1" | 1. | Lin. Ft. |
| " " —1¼" | 224. | " |
| " " —2" | 85. | " |

Below ground:

| | | |
|---|---|---|
| Wrought Iron—1¼" | 38. | Lin. Ft. |
| " " —2" | 386. | " |
| Cast Iron, B. & S.—3" | 58. | Lin. Ft. |
| " " " —4" | 62. | " |

Valves:

| | | |
|---|---|---|
| Globes—⅜" | 2. | Each. |
| " —¾" | 1. | " |
| " —1" | 1. | " |
| " —1¼" | 9. | " |
| " —2" | 1. | " |

944

Water Piping at Storage Plant:

Pipe:

Above ground:

| | | |
|---|---|---|
| Wrought Iron—½" | 40. | Lin. Ft. |
| Wrought Iron—1¼" | 16. | Lin. Ft. |

Below ground:

| | | |
|---|---|---|
| Wrought Iron—1¼" | 252. | Lin. Ft. |

Valves:

| | | |
|---|---|---|
| Globes—1¼" | 4. | Each. |

Gas Piping at Storage Plant:

Pipe:

Above ground:

| | | |
|---|---|---|
| Cast Iron—B. & S.— 6" | 3. | Lin. Ft. |
| Cast Iron—B. & S.— 8" | 42. | Lin. Ft. |
| Cast Iron—B. & S.—10" | 23. | Lin. Ft. |

Below ground:

| | | |
|---|---|---|
| Cast Iron—B. & S.—10" | 78. | Lin. Ft. |

Valves:

| | | |
|---|---|---|
| Gates— 8" | 2. | Each. |
| Gates—10" | 4. | Each. |

945

Manholes at Storage Plant:

4 (6′ 6″ x 7′ 6″ x 15′ 0″)—Walls, brick, rectangular; bottom, concrete; cast iron covers, circular.

| | | |
|---|---|---|
| Excavation | 699.6 | Cu. Yds. |
| Walls: | | |
| Brick | 17.958 | M. |
| Bottom: | | |
| Concrete | 1.1 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 699.6 | Cu. Yds. |
| Covers: | | |
| Cast Iron—18″ | 4. | Each. |
| Vent Pipes: | | |
| Above ground: | | |
| Cast Iron—5″ | 168. | Lin. Ft. |

946

Electric Motors at Storage Plant:

25 H. P.—General Electric.
Induction Type—Three Phase.
220 Volts—855 R. P. M.—Variable Speed.

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 2.3 | Cu. Yds. |
| Forms—Wood | .088 | M′ B. M. |
| Concrete | 1.0 | Cu. Yds. |
| Backfilling & Removing Surplus Material | 2.3 | Cu. Yds. |

25 H. P.—General Electric.
Induction Type—Three Phase.
220 Volts—1200 R. P. M.

947

Boosters at Storage Plant:

#5—Sturtevant.
Belted.

| | | |
|---|---|---|
| Foundation: | | |
| Excavation | 1.2 | Cu. Yds. |
| Forms—Wood | .018 | M′ B. M. |
| Concrete | .4 | Cu. Yds. |
| Backfiling & Removing Surplus Material | 1.2 | Cu. Yds. |

#5—Sturtevant.
Double Impeller.
Super-arranged.
Positive.
Gear Driven.

Gas Distribution System.

*Inventory.*

Jan. 1st, 1913.

From Map of Mains Corrected to Dec. 31, 1912.

**Street Mains.**

| | | | Lincoln. | State Farm. | Unl. Place. | Havelock. | Unit. |
|---|---|---|---|---|---|---|---|
| **Under wooden blocks:** | | | | | | | |
| Wrought Iron | 2″ | | 1330 | .... | .... | .... | Ft. |
| Cast Iron | 6″ | | 431 | .... | .... | .... | " |
| | | | 1761 | | | | |
| **Under Asphalt on Concrete:** | | | | | | | |
| Wrought Iron | 1¼″ | | 289 | .... | .... | .... | Ft. |
| " " | 2″ | | 54317 | .... | .... | .... | " |
| Cast Iron | 4″ | | 19281 | .... | .... | .... | " |
| " " | 6″ | | 3360 | .... | .... | .... | " |
| " " | 8″ | | 1741 | .... | .... | .... | " |
| " " | 10″ | | 1842 | .... | .... | .... | " |
| " " | 12″ | | 162 | .... | .... | .... | " |
| | | | 80992 | | | | |
| **Under Brick on Concrete:** | | | | | | | |
| Wrought Iron | 1¼″ | | 192 | .... | .... | .... | Ft. |
| " " | 2″ | | 17591 | .... | .... | .... | " |
| Cast Iron | 4″ | | 19526 | .... | .... | .... | " |
| " " | 6″ | | 9129 | .... | .... | .... | " |
| " " | 8″ | | 102 | .... | .... | .... | " |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| " | " | 10" | 457 | .... | .... | .... | " |
| " | " | 12" | 325 | .... | .... | .... | " |
| " | " | 16" | 533 | .... | .... | .... | " |
| | | | 47855 | | | | |
| Under Brick-Double Course: | | | | | | | |
| Wrought Iron | | 1¼" | 1259 | .... | .... | .... | Ft. |
| " | " | 2" | 24281 | .... | .... | .... | " |
| Cast Iron | | 3" | 406 | .... | .... | .... | " |
| " | " | 4" | 22217 | .... | .... | .... | " |
| " | " | 6" | 6354 | .... | .... | .... | " |
| " | " | 8" | 1974 | .... | .... | .... | " |
| " | " | 10" | 964 | .... | .... | .... | " |
| " | " | 12" | 1644 | .... | .... | .... | " |
| " | " | 16" | 330 | .... | .... | .... | " |
| | | | 59429 | | | | |

949 Street Mains (Continued).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Under Unpaved: | | | | | | | |
| Wrought Iron | | 1¼" | 518 | .... | .... | .... | Ft. |
| " | " | 2" | 218189 | .... | 27850 | 12280 | " |
| Cast Iron | | 4" | 33254 | 2010 | 12200 | 8300 | " |
| " | " | 6" | 6598 | .... | .... | .... | " |
| " | " | 8" | 751 | .... | .... | .... | " |
| " | " | 10" | 6547 | .... | .... | .... | " |
| " | " | 12" | 1482 | .... | .... | .... | " |
| " | " | 16" | 406 | .... | .... | .... | " |
| " | " | 20" | 1472 | .... | .... | .... | " |
| | | | 269217 | | | | |

| | | Lincoln. | State Farm | Uni. Place. | Havelock. | Unit. |
|---|---|---|---|---|---|---|
| **Valves. From Valve Map.** | | | | | | |
| **In Wrought Iron Mains:** | | | | | | |
| Gate Valves | 2" | 2 | .... | .... | .... | No. |
| **In Cast Iron Mains:** | | | | | | |
| Gate Valves | 4" | 10 | .... | .... | 1 | No. |
| " " | 6" | 4 | .... | .... | .... | " |
| " " | 8" | 2 | .... | .... | .... | " |
| " " | 10" | 3 | .... | .... | .... | " |
| " " | 12" | 1 | .... | .... | .... | " |
| | | 22 | .... | .... | 1 | |
| **Drips. From Drip Register (Book).** | | | | | | |
| **Siphon Drips:** | | | | | | |
| Size of Main | 2" | 132 | .... | 1 | 4 | No. |
| " " " | 4" | 1 | .... | .... | .... | " |
| " " " | 6" | 1 | .... | .... | .... | " |
| " " " | 8" | 2 | .... | .... | .... | " |
| **Line Drips:** | | | | | | |
| Size of Main | 4" | 27 | .... | 5 | 2 | No. |
| " " " | 6" | 7 | .... | .... | .... | " |
| " " " | 8" | 3 | .... | .... | .... | " |
| " " " | 10" | 4 | .... | .... | .... | " |
| " " " | 12" | 2 | .... | .... | .... | " |
| " " " | 16" | 1 | .... | .... | .... | " |
| " " " | 20" | 1 | .... | .... | .... | " |
| | | 181 | .... | 6 | 6 | |

| | | | | | |
|---|---|---|---|---|---|
| Electric Railway. From City Map: | | | | | |
| Single Track | 153 | .... | 11 | 7 | No. |
| Double " | 103 | .... | .... | .... | " |
| Triple " | 1 | .... | .... | .... | " |
| Steam Railway: | | | | | |
| Single Track | 92 | .... | .... | 1 | No. |
| | 349 | .... | 11 | 8 | |
| | 19 | | | | |
| | 368 | | | | |
| Services. From Manager's Report to Home Office started 1902. | | | | | |
| Av. Length Complete Service | 73 | 73 | 73 | 73 | Ft. |
| Av. Length Stub " | 23 | .... | .... | .... | Ft. |
| Under Wooden Blocks: | | | | | |
| Av. Length Paving | 27 | .... | ... | .... | Ft. |
| Complete 1¼" | 33 | .... | .... | .... | No. |
| Stubs 1¼" | 1 | .... | .... | .... | " |
| Under Asphalt on Concrete: | | | | | |
| Av. Length Paving | 20 | .... | .... | .... | Ft. |
| Complete 1¼" | 1345 | .... | .... | .... | No. |
| Stubs 1¼" | 45 | .... | .... | .... | " |
| Under Asphalt-Brick Gutters: | | | | | |
| Av. Length Paving | 32 | .... | .... | .... | Ft. |
| Complete 1¼" | 213 | .... | ... | .... | No. |
| Stubs 1¼" | 7 | .... | .... | .... | " |
| Under Brick on Concrete: | | | | | |
| Av. Length Paving | 25 | .... | .... | .... | Ft. |

| | Lincoln. | State Farm. | Uni. Place. | Havelock. | Unit. |
|---|---|---|---|---|---|
| Complete 1¼"..... | 746 | .... | .... | .... | No. |
| Stubs 1¼"..... | 25 | .... | .... | .... | " |
| Under Brick-Double Course: | | | | | |
| Av. Length Paving..... | 23 | .... | .... | .... | Ft. |
| Complete 1¼"..... | 1058 | .... | .... | .... | No. |
| Stubs 1¼"..... | 36 | .... | .... | .... | " |
| Forward..... | 3509 | | | | |
| 951 Services (Continued). | | | | | |
| Under Unpaved: | | | | | |
| Complete ¼"..... | 4806 | 13 | 213 | 112 | No. |
| Stubs 1¼"..... | .... | .... | .... | .... | " |
| Lincoln..... | 8315 | | | | |
| | 338 | | | | |
| | 8653 | | | | |
| Meters. Meter Cards Checked by Book. | | | | | |
| Meters in Service #1 A, 10 Lt... | 23 | 1 | 12 | .... | No. |
| " " " #2, 5 " ... | 11 | 1 | .... | .... | " |
| " " " #2 A, 20 Lt... | 15 | .... | .... | .... | " |
| " " " 3 " ... | 2783 | 2 | .... | 16 | " |
| " " " 5 " ... | 5125 | 7 | 168 | 94 | " |
| " " " 10 " ... | 40 | .... | .... | .... | " |
| " " " 20 " ... | 54 | .... | .... | .... | " |
| " " " 30 " ... | 4 | 1 | .... | .... | " |
| " " " 45 " ... | 12 | .... | .... | .... | " |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| " " " | 60 " ... | 1 | 1 | .... | .... | " |
| " " " | 100 " ... | .... | 2 | .... | .... | " |
| " " " | 150 " ... | .... | .... | .... | .... | " |
| | In Lincoln..... | 8068 | | | | |
| Meters in Stock, | #1 A..... | 2 | .... | .... | .... | " |
| " " " | #2 ..... | 1 | .... | .... | .... | " |
| " " " | #2 A..... | 2 | .... | .... | .... | " |
| " " " | 3 Lt... | 89 | .... | .... | .... | " |
| " " " | 5 " ... | 131 | .... | .... | .... | " |
| " " " | 10 " ... | 10 | .... | .... | .... | " |
| " " " | 20 " ... | 3 | .... | .... | .... | " |
| " " " | 45 " ... | 3 | .... | .... | .... | " |
| " " " | 60 " ... | 1 | .... | .... | .... | " |
| " " " | 150 " ... | 1 | .... | .... | .... | " |
| | | 243 | .... | .... | .... | |
| | | 8311 | 15 | 180 | 110 | |
| | Outside of Lincoln..... | 305 | | | | |
| | | 8616 | | | | |
| House Governors. | Company Record. | | | | | |
| Governors in Service | ¾"..... | 6797 | 3 | 149 | 17 | No. |
| " " " | 1¼"..... | 199 | .... | .... | .... | " |
| " " " | 2"..... | 4 | 1 | .... | .... | " |
| | | 7000 | 4 | 149 | 17 | |

| | Lincoln. | State Farm. | Uni. Place. | Havelock. | Unit. |
|---|---|---|---|---|---|
| Governors in Stock ¾"..... | 284 | .... | .... | .... | No. |
| " " " 1¼"..... | 34 | .... | .... | .... | " |
| " " " 2"..... | 1 | .... | .... | .... | " |
| | 319 | | | | |
| In Lincoln..... | 7319 | | | | |
| Outside..... | 170 | | | | |
| | 7489 | | | | |
| **District Governors.** | | | | | |
| Governors in Service 4"..... | 1 | .... | .... | 1 | No. |
| 33rd & Holdredge..... | 1 | | | | |
| Cone Pit 4'0" x 5'0" x 5'0" Service Boxes & Cocks (Asper Lea)..... | 6149 | | | | |

## Siphon Drips.

### Average Bill of Material.

| Size of main. | Pipe. | | | | Street Ells. | | | Plain Ells. | Caps. | Tees. | Bushings. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1″ | 1¼″ | 2″ | 6″ | 1″ | 1¼″ | 2″ | 2″x1″ | 1″ | 2″ | 2″x1¼″ | 1¼x1″ |
| 2″ ..... | 5′ | — | 10′ | — | 2 | — | 1 | 1 | 1 | 1 | — | — |
| 4″ ..... | 5′ | — | 10′ | — | 2 | — | 1 | 1 | 1 | — | 1 | — |
| 6″ ..... | 5′ | 2′ | — | 7′ | — | 2 | — | — | 1 | — | 1 | 1 |
| 8″ ..... | 5′ | 2′ | — | 12′ | — | 2 | — | — | 1 | — | 1 | 1 |

## Line Drips.

### Average Bill of Material.

| Size of main. | Weight pot drip. | Pipe, 1¼″ | St. Ells, 1¼″ | Plain Ells, 1¼″ | Bushings, 1¼″ x 1″ | Caps, 1¼″ |
|---|---|---|---|---|---|---|
| 4″ ..... | 150# | 20′ | 2 | 2 | 1 | 1 |
| 6″ ..... | 200# | 20′ | 2 | 2 | 1 | 1 |
| 8″ ..... | 200# | 20′ | 2 | 2 | 1 | 1 |
| 10″ ..... | 200# | 20′ | 2 | 2 | 1 | 1 |
| 12″ ..... | 200# | 20′ | 2 | 2 | 1 | 1 |
| 16″ ..... | 300# | 20′ | 2 | 2 | 1 | 1 |
| 20″ ..... | 300# | 45′ | 2 | 2 | 1 | 1 |

953 *Building Ages.*

| Building. | Age, years. |
|---|---|
| Purifier House | 22 |
| Generator House | 5 |
| Retort House | 22 |
| Oil Tank House | 15 |
| Meter Shop and Booster House | 5 |
| Coal Shed | 22 |
| Stable and Blacksmith Shop | 15 |
| Oxide Shed | 3 |
| Booster House at Storage Plant | 3 |

954 Apparatus Ages.

| Item. | Size. | Age in years. |
|---|---|---|
| Holder | 500,000 Cu. Ft. | 5 |
| " | 200,000 " | 23 |
| " | 50,000 " | 31 |
| " | 100,000 " | 3 |
| Tar Tanks 2 (10′ 6″ x 29′ 3″) | | 3 |
| Oil Tanks 2 (10′ 9″ x 29′ 3″) | | 4 |
| Purifying Boxes 4 (20′ 0″ x 24′ 0″ x 4′ 0″) | | 11 |

955 *Apparatus Ages.*

| Item. | Size. | Age in years. |
|---|---|---|
| Gas Set | Western Gas—7′ 6″ | 1 |
| " " | " " —7′ 6″ | 3 |
| Condenser | 6′ 0″ x 20′ 0″ | 3 |
| Scrubber | 6′ 6″ x 21′ 0″ | 3 |
| Gas Set | Western Gas—6′ 6″ | 12 |
| " " | Springer—6′ 6″ | 22 |
| Benches | 6 (6's) Half Depth | 22 |
| Condenser | 4′ 6″ x 25′ 0″ | 22 |
| Scrubber | 5′ 6″ x 31′ 0″ | 22 |
| Oil Tank | 8′ 0″ x 24′ 0″ | 18 |
| " " | 8′ 6″ x 30′ 0″ | 18 |

*Holder Pressures.*

| Capacity of holder. | Inches of water. |
|---|---|
| 500,000 | 8.0 |
| 200,000 | 4.5 |
| 50,000 | 2.5 |
| 100,000 | 3.2 |

956 *Apparatus Ages.*

| Item. | Size. | Age in years |
|---|---|---|
| Blower | Sturtevant—#7 | 5 |
| " | " —#7 | 4 |
| " | Root —#1 | 12 |
| Turbo-Blow Unit | Sturtevant—#8 | 4 |
| Booster | Sturtevant—#8 | 4 |
| Countershafting | | 21 |
| Exhauster | Root —#6 | 21 |
| " | Sturtevant—#6 | 5 |
| " | McKenzie —10" | 21 |
| Steam Engines | Greenfield—4" x 5" | 15 |
| " " | Sturtevant—5" x 5" | 5 |
| " " | " —7" x 6" | 4 |
| Governors | Connolly —20" | 21 |
| " | Reynolds —12" | 4 |
| Station Meters | McDonald—10' 0" | 21 |
| " " | American — 6' 0" | 30 |
| Electric Motors | General Electric—40 H. P. | 7 |
| " " | Fort Wayne —35 H. P. | 10 |

957 *Apparatus Ages.*

| Item. | Size. | Age in years. |
|---|---|---|
| Reciprocating Pump. | Knowles—6" x 10" x 5" x 10" | 10 |
| " " | Vertical—3" x 4" | 25 |
| " " | Gardner—3½" x 4" x 6" | 6 |
| " " | Worthington—4½" x 3¾ x 4" | 2 |
| " " | Gardner—4½" x 2¾ x 4" | 4 |
| " " | Worthington—4½" x 2¾" x 4" | 4 |
| " " | " —3" x 2" x 3" | 1 |
| " " | Warren—6" x 4" x 6" | 20 |
| " " | Marsh—2½" x 3" x 4" | 4 |
| Tar Separator | 5' 0" x 17' 0" x 10' 0" | 7 |
| Oil Tank | 10' 0" x 10' 0" | 21 |
| Washer Scrubber | 4' 6" x 5' 0" | 21 |
| Tar Well | 3' 3" x 3' 3" x 10' 0" | 21 |
| " " | 6' 0" x 20' 0" x 12' 0" | 15 |
| Booster at Storage Plant | Sturtevant—#5 | 11 |
| " " " " | " —#5 | New |
| Electric Motor at Storage Plant— | Gen. Electric—25 H. P. | " |
| " " " " " " | " 5 H. P. | 6 |

958 *General Information.*

Excavation:

Based on side slope of 30 degrees from vertical.

Brick Work:

Size of Brick in Generator House, Meter Shop and Oil Tank House 2¼" x 4" x 8".
In Purifier House, Retort House, Coal Shed and Booster House at Storage Plant 2½" x 4" x 8½".
Size of Hollow Tile in Generator House 5" x 7" x 12" (Superficial Area—5" x 12").

Steel Work:

10% added to standard weights for Gussets and Rivets.

Corrugated Iron:

15% added to superficial area for lappage.

Forms for Concrete:

30% added to superficial area for braces etc.

Remaining Quantities:

No per centage added.

959 *Brick and Tile Work.*

| Thickness of wall. | Number per sq. ft. of wall area. | | |
|---|---|---|---|
| | Hollow tile. | Brick. | |
| | 5" x 7" x 12" | 2¼" x 4 x 8" | 2½" x 5" x 8½" |
| 4"..... | .... | 6.2 | 5.3 |
| 7"..... | 2.1 | | |
| 9"..... | .... | 12.3 | 10.7 |
| 13"..... | .... | 18.5 | 16.0 |
| 17"..... | .... | 24.6 | 21.3 |
| 21"..... | .... | 30.8 | 27.0 |
| 25"..... | .... | 37.0 | 32.0 |
| 30"..... | .... | 43.1 | 37.3 |
| 34"..... | .... | 49.3 | 42.6 |
| 38"..... | .... | 55.4 | 48.0 |
| 42"..... | .... | 61.6 | 53.3 |
| 47"..... | .... | 67.8 | 58.6 |
| 51"..... | .... | 73.9 | 64.0 |
| 55"..... | .... | 80.1 | 69.3 |

NOTE.—Thickness of mortar joint assumed as ½".

960 Gas Distribution System.

*Summary of Mains.*

W. I.

| Size of pipe. | Lengths—Feet. Lincoln. | State Farm. | Univ. Place. | Havelock. | Total. | Total miles. |
|---|---|---|---|---|---|---|
| 1¼"..... | 2,258 | .... | .... | .... | 2,258 | .43 |
| 2"..... | 315,708 | .... | 27,850 | 12,280 | 355,838 | 67.39 |
| C. I. | | | | | | |
| 3"..... | 406 | .... | .... | .... | 406 | .08 |
| 4"..... | 94,278 | 2,010 | 12,200 | 8,300 | 116,788 | 22.11 |
| 6"..... | 25,872 | .... | .... | .... | 25,872 | 4.90 |
| 8"..... | 4,568 | .... | .... | .... | 4,568 | .87 |
| 10"..... | 9,810 | .... | .... | .... | 9,810 | 1.86 |
| 12"..... | 3,613 | .... | .... | .... | 3,613 | .68 |
| 16"..... | 1,269 | .... | .... | .... | 1,269 | .24 |
| 20"..... | 1,472 | .... | .... | .... | 1,472 | .28 |
| Feet.. | 459,254 | 2,010 | 40,050 | 20,580 | 521,894 | |
| Miles. | 86.98 | .38 | 7.58 | 3.90 | ..... | 98.84 |

961 Gas Distribution System.

*Summary of Mains.*

Lincoln.

W. I.

| Size of pipe. | Actual distances—Feet. Wood blocks. | Asphalt on concrete. | Brick, on concrete. | Brick, double course. | Unpaved. | Total. |
|---|---|---|---|---|---|---|
| 1¼"..... | .... | 289 | 192 | 1,259 | 518 | 2,258 |
| 2"..... | 1,330 | 54,317 | 17,591 | 24,281 | 218,189 | 315,708 |
| C. I. | | | | | | |
| 3"..... | .... | .... | .... | 406 | .... | 406 |
| 4"..... | .... | 19,281 | 19,526 | 22,217 | 33,254 | 94,278 |
| 6"..... | 431 | 3,360 | 9,129 | 6,354 | 6,598 | 25,872 |
| 8"..... | .... | 1,741 | 102 | 1,974 | 751 | 4,568 |
| 10"..... | .... | 1,842 | 457 | 964 | 6,547 | 9,810 |
| 12"..... | .... | 162 | 325 | 1,644 | 1,482 | 3,613 |
| 16"..... | .... | .... | 533 | 330 | 406 | 1,269 |
| 20"..... | .... | .... | .... | .... | 1,472 | 1,472 |
| Totals.. | 1,761 | 80,992 | 47,855 | 59,429 | 269,217 | 459,254 |

| | | | |
|---|---|---|---|
| State Farm .... | 4" C. I..... | 2,010 | |
| University | 2" W. I..... | 27,850 | |
| " | 4" C. I..... | 12,200 | |
| Havelock | 2" W. I..... | 12,280 | |
| " | 4 C. I..... | 8,300 | |
| | | | 62,640 |
| | | | 521,894 |

962 Gas Distribution System.

*Summary of Mains.*

Lincoln.

W. I.

| Size of pipe. | Scale distances—Feet. Wood blocks. | Asphalt on concrete. | Brick, on concrete. | Brick, double course. | Unpaved. | Total. |
|---|---|---|---|---|---|---|
| 1¼"..... | .... | 285 | 190 | 1,240 | 510 | 2,225 |
| 2"..... | 1,310 | 53,514 | 17,331 | 23,922 | 214,965 | 311,042 |
| C. I. | | | | | | |
| 3"..... | .... | .... | .... | 400 | .... | 400 |
| 4"..... | .... | 18,996 | 19,237 | 21,889 | 32,763 | 92,885 |
| 6"..... | 425 | 3,310 | 8,995 | 6,260 | 6,500 | 25,490 |
| 8"..... | .... | 1,715 | 100 | 1,945 | 740 | 4,500 |
| 10"..... | .... | 1,815 | 450 | 950 | 6,450 | 9,665 |
| 12".. .. | .... | 160 | 320 | 1,620 | 1,460 | 3,560 |
| 16"..... | .... | .... | 525 | 325 | 400 | 1,250 |
| 20"..... | .... | .... | .... | .... | 1,450 | 1,450 |
| Totals.. | 1,735 | 79,795 | 47,148 | 58,551 | 265,238 | 452,467 |

963 Gas Distribution System.

*Compensating Factor for Maps.*

Lincoln.

| Street location. On. | From center. | To center. | Distance—Feet. Actual. | Scaled. | Factor. |
|---|---|---|---|---|---|
| O | 5th | 14th | 3,660 | 3,620 | |
| E | 5th | 14th | 3,660 | 3,620 | |
| 11th | A | O | 5,250 | 5,140 | |
| Totals..... | | | 12,570 | 12,380 | 1.015 |

964 Gas Distribution System.

*Mains Laid under Asphalt—Brick Gutters.*

Lincoln.

| Street location. | | | Main is under. |
|---|---|---|---|
| On. | From— | To— | |
| O | 16th | 27th | Brick |
| N | 10th | 11th | Asphalt |
| N | 12th | 14th | " |
| 13th | M | O | " |
| 12th | M | N | Brick |
| M | 11th | 13th | Asphalt |
| H | 10th | 11th | Brick |
| G | 10th | 12th | " |
| E | 10th | 12th | " |
| 11th | C | J | Asphalt |

965 Gas Distribution System.

*Mains Laid Along Paved Streets, but Not under Paving.*

Lincoln.

Street Location.

| On— | From— | To— |
|---|---|---|
| B | 8th | 19th |
| C | 10th | 18th |
| D | 8th | 20th |
| 15th | N | O |
| Washington | 17th | 19th |

966 Gas Distribution System.

*Summary of Meters.*

Grand Totals.

| Size of meter. | Meters. In service. | In stock. | Totals. |
|---|---|---|---|
| #1 A | 36 | 2 | 38 |
| #2 | 12 | 1 | 13 |
| #2 A | 15 | 2 | 17 |
| 3 Lt. | 2,801 | 89 | 2,890 |
| 5 " | 5,394 | 131 | 5,525 |
| 10 " | 40 | 10 | 50 |
| 20 " | 54 | 3 | 57 |
| 30 " | 5 | .. | 5 |
| 45 " | 12 | 3 | 15 |
| 60 " | 2 | 1 | 3 |
| 100 " | 2 | .. | 2 |
| 150 " | .. | 1 | 1 |
| Totals | 8,373 | 243 | 8,616 |

967 Gas Distribution System.

*Total Meters in Service.*

| Size of meter. | Lincoln. | State Farm. | University Place. | Havelock. | Totals. |
|---|---|---|---|---|---|
| #1 A | 23 | 1 | 12 | .. | 36 |
| #2 | 11 | 1 | .. | .. | 12 |
| #2 A | 15 | .. | .. | .. | 15 |
| 3 Lt. | 2,783 | 2 | .. | 16 | 2,801 |
| 5 " | 5,125 | 7 | 168 | 94 | 5,394 |
| 10 " | 40 | .. | .. | .. | 40 |
| 20 " | 54 | .. | .. | .. | 54 |
| 30 " | 4 | 1 | .. | .. | 5 |
| 45 " | 12 | .. | .. | .. | 12 |
| 60 " | 1 | 1 | .. | .. | 2 |
| 100 " | .. | 2 | .. | .. | 2 |
| Totals | 8,068 | 15 | 180 | 110 | 8,373 |

968 Gas Distribution System.

*Meters in Service.*

Lincoln and State Farm.

| Size of meter. | Lincoln and State Farm. | State Farm. | Lincoln. |
|---|---|---|---|
| #1 A | 24 | 1 | 23 |
| #2 | 12 | 1 | 11 |
| #2 A | 15 | .. | 15 |
| 3 Lt. | 2,785 | 2 | 2,783 |
| 5 " | 5,132 | 7 | 5,125 |
| 10 " | 40 | .. | 40 |
| 20 " | 54 | .. | 54 |
| 30 " | 5 | 1 | 4 |
| 45 " | 12 | .. | 12 |
| 60 " | 2 | 1 | 1 |
| 100 " | 2 | 2 | .. |
| Totals | 8,083 | 15 | 8,068 |

969 Gas Distribution System.

*Summary of Services.*

Lincoln.

| Character of paving. | % of Mains under paving. | Number of complete services under paving. | Number of stub services under paving. |
|---|---|---|---|
| Wood Blocks | .4% | 33 | 1 |
| Asphalt on Concrete | 16.4% | 1,345 | 45 |
| Asphalt-Brick Gutters | 2.6% | 213 | 7 |
| Brick on Concrete | 9.1% | 746 | 25 |
| Brick-Double Course | 12.9% | 1,058 | 36 |
| Unpaved | 58.6% | 4,806 | |
| Totals | 100.0% | 8,201 | 114 |

970 Gas Distribution System.

*Summary of Services.*

Lincoln.

Paving.

| Character. | Length, feet. |
|---|---|
| Wood Blocks | 1,761 |
| Asphalt on Concrete | 75,171 |
| Asphalt Brick Gutters | 11,929 |
| Brick on Concrete | 41,7474 |
| Brick Double Course | 59,429 |
| Unpaved | 269,217 |
| Totals | 459,254 |

971 Gas Distribution System.

*Service Record.*

Lincoln and State Farm.

| Year. | House services. Partial number. | House services. Pipe, feet. | Stub services. Partial number. | Stub services. Pipe, feet. | Net number of services. | Net number of stubs. |
|---|---|---|---|---|---|---|
| Previous .... | ... | ..... | .... | .... | 2,911 | |
| 1903 ..... | 691 | 56,025 | .... | .... | 691 | |
| 1904 ..... | 535 | 48,032 | 77 | 1,676 | 576 | 36 |
| 1905 ..... | 473 | 37,728 | 5 | 201 | 610 | 132 |
| 1906 ..... | 479 | 36,316 | 34 | 665 | 554 | 41 |
| 1907 ..... | 542 | 41,627 | 35 | 699 | 569 | 8 |
| 1908 ..... | 440 | 29,900 | 40 | 645 | 468 | 12 |
| 1909 ..... | 581 | 39,320 | 27 | 492 | 616 | 8 |
| 1910 ..... | 460 | 28,039 | 80 | 1,523 | 470 | 70 |
| 1911 ..... | 326 | 18,671 | 129 | 3,737 | 351 | 102 |
| 1912 ..... | 357 | 22,930 | 115 | 2,801 | 398 | 67 |
| Totals .. | 4884 | 358,588 | 542 | 12,439 | 8,214 | 114 |
| Average Length..... | | 73 | | 23 | | |
| | | | | State Farm.... | 13 | |
| | | | | Lincoln ..... | 8,201 | 114 |

972 Gas Distribution System.

*Service Record.*

University Place and Havelock.

University Place.

| Year. | House services. Number. | Feet of pipe. | Average length feet. | Total. number. |
|---|---|---|---|---|
| 1910 ..... | 114 | 8,688 | .... | 114 |
| 1911 ..... | 48 | 3,770 | .... | 48 |
| 1912 ..... | 49 | 3,289 | .... | 49 |
| Totals ..... | 211 | 15,747 | 75 | 211 |
| Havelock. | | | | |
| 1911 ..... | 79 | 5,575 | .... | 79 |
| 1912 ..... | 33 | 2,379 | .... | 33 |
| Totals ..... | 112 | 7,954 | 71 | 112 |

973 *Items Appearing in Valuation and Not Consistent with Inventory.*

Buildings:

| | |
|---|---|
| Purifying House, | 2 Toilets omitted.<br>Painting obscure. |
| Generator House, | Painting obscure. |
| Retort House, | Painting obscure. |
| Meter Shop, etc., | Painting obscure.<br>Miscellaneous Framing omitted. |
| Oil Tank House, | Painting obscure. |
| Stable, etc. | Painting omitted. |

Apparatus:

Purifying Boxes, Footings should not appear.
Pump, Gardner, 4½" x 2¾" x 4", Foundation omitted.
Oil Tanks, 2 (10' 9"), Foundation, Concrete should be 41.1 C. Y.
Tar Piping, 1" 1' 0" omitted.
Belting, all omitted.

Distribution System:

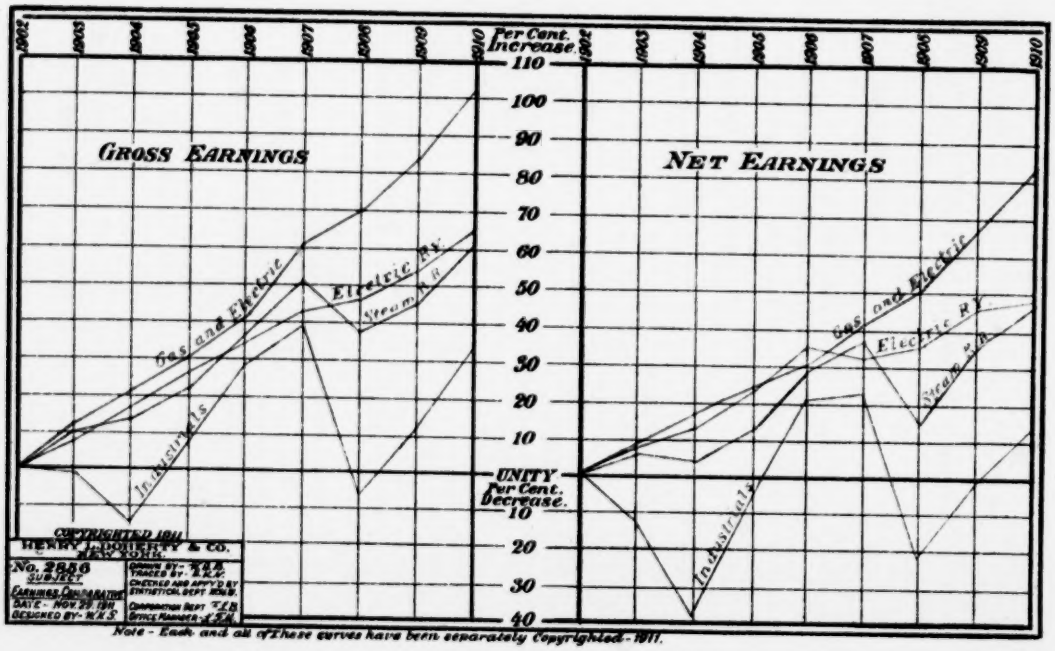
Drips outside of Lincoln ojitted.
Valves outside of Lincoln omitted.
Governor, District, outside of Lincoln omitted.
Meters, Complaint, omitted.

Net Construction Costs.

| Paving. | Lea shows. | Should be— | Difference. | Unit cost. | Valuation. Loss. | Valuation. Gain. |
|---|---|---|---|---|---|---|
| Mains—2″ (Feet): | | | | | | |
| Brick on Concrete | 15,896 | 17,591 | 1,695 | $.935 | .... | $1,585 |
| Brick-Double Course | 24,342 | 24,281 | 61 | .717 | $44 | .... |
| Unpaved | 263,717 | 218,189 | 45,528 | .232 | 10,562 | .... |
| Complete Services (Number): | | | | | | |
| Asphalt on Concrete | 1.222 | 1,345 | 123 | $19.09 | .... | $2,348 |
| Asphalt, Brick Gutters | 189 | 213 | 24 | 12.78 | .... | 307 |
| Brick on Concrete | 656 | 746 | 90 | 18.31 | .... | 1,648 |
| Brick-Double Course | 968 | 1,058 | 90 | 16.84 | .... | 1,516 |
| Unpaved | 5,133 | 4,806 | 327 | 13.56 | $4,434 | .... |
| | | | | | $15,040 | $7,404 |
| Net Loss | | | | | $7,636 | |

(Here follow diagrams marked pages 975, 976, 977, and 978.)

HENRY L. DOHERTY & COMPANY
BANKERS
SIXTY WALL STREET
NEW YORK



Note - Each and all of these curves have been separately Copyrighted - 1911.

These tables show the relative increases and decreases of the gross and of the net earnings of steam railroads, of electric railways, of gas and electric companies, and of "industrials" for each of the nine years from 1902 to 1910.

We obtained the gross and net earnings of all the steam railroads of the United States, of all "industrials" listed on the New York Stock Exchange which could be traced back to 1902 and whose aggregate gross for that year amounted to about $1,250,000,000.00; we obtained the gross and net earnings of the electric railways in most of the larger cities of the country and similar gas and electric light figures, using all amounts available without selection, but exclusive of New York City.

All of these great barometer sets of figures we standardized at Unity for 1902 and calculated the percentage of their subsequent increases and decreases based on 1902.

The resulting curves shown above prove that the gross and net earnings from the gas and electric business increased the most rapidly and that they are practically unaffected in their rate of increase even by such panic conditions as those of 1907 and 1908.

December 20th. 1911.

Henry L Doherty & Co.

979 EXHIBIT 18.

Henry L. Doherty & Company, Bankers, Sixty Wall Street, New York.

*Six Per Cent Cumulative Preferred Stock of Cities Service Company.*

Organized in September 1910 by Henry L. Doherty & Company, Sixty Wall Street, New York.

Capitalization.

| | Authorized. | Outstanding. |
|---|---|---|
| Preferred Stock (6% Cumulative).. | $30,000,000 | $10,195,360 |
| Common Stock..... | 20,000,000 | $5,499,430 |

Statement of Earnings.

| | |
|---|---|
| Gross earnings for 12 months ending June 30th, 1912 ..... | $1,098,177.82 |
| Expenses ..... | 74,741.30 |
| Net earnings ..... | 1,023,436.52 |
| Dividends on Preferred Stock..... | 565,874.28 |
| Balance for Common Stock..... | 457,562.24 |
| Dividends on Common Stock..... | 183,005.48 |
| Surplus for 12 months..... | 274,556.76 |
| Total surplus to June 30th, 1912..... | $465,354.56 |

| Twelve months ending | Net earnings. | Ratio of net earnings to dividends paid and accrued on average amount of preferred stock outstanding for the year. | Percent earned on average amount of common stock outstanding for the year. |
|---|---|---|---|
| Jan. 31, 1912..... | 941,361.77 | 178.41 | 8.41 |
| Feb. 29, " ..... | 958,767.18 | 179.45 | 8.54 |
| Mar. 31, " ..... | 974,186.79 | 180.00 | 8.61 |
| Apr. 30, " ..... | 990,780.26 | 180.30 | 8.69 |
| May 31, " ..... | 1,007,640.06 | 180.60 | 8.75 |
| June 30, " ..... | 1,023,436.52 | 180.86 | 8.81 |

Dividends.

Dividends are paid monthly at the rate of 6% per annum on preperred stock and 4% per annum on common stock.

Cities Service Company has paid dividends continuously since its

organization at the rate of 6% per annum on its preferred stock. On the common stock dividends were paid at the rate of 3% per annum up to January 1st, 1912, since which time the common stock dividend rate has been 4%. In addition to paying these dividends the Company has accumulated a surplus since its organization of $465,-354.56.

It is the plan of the Company to increase the dividends on the Common Stock one per cent each year, until six per cent is reached.

Thereafter the increased dividends will probably be paid in Common Stock.

980 Cities Service Company.

Is a holding company for the stocks of Gas and Electric properties operated and managed by the Doherty Organization and now controls through stock ownership the following properties:

The Denver Gas and Electric Light Company Denver, Colorado.

Spokane Gas and Fuel Company Spokane, Washington.

The Empire District Electric Company Joplin, Missouri and adjacent territory including neighboring cities in Missouri and Kansas.

The Brush Electric Company Galveston, Texas.

The total population served by the above companies is over 500,000.

Gas and electric properties have many strong points in their favor, tending to establish stability of earning power and safety of their securities.

Their business is the selling of a public necessity.

In good times or bad times their product is in demand. Luxuries may be foregone in times of financial stress, travel may be curtailed, and in many ways the public's expenses may be reduced, but light and heat are a necessity of every day life and are among the last things to be affected by general conditions in business.

In the present day of continual development of new adaptations and uses for gas and electricity, as well as the steady increase in the population of our American cities, there are many opportunities for expansion and growth in the business of well managed and aggressive Gas and Electric Companies.

The efficiency, cleanliness and economy of electrical power is continually becoming more apparent to large manufacturers throughout the world, and as a result, electricity furnished from large central stations is rapidly displacing individual steam plants for the production of power of practically all manufacturing purposes and offers opportunity for large increases in earning power of the companies.

Statistics show a gradual but steady increase in earnings of such properties much in excess of the rate of increase in earnings of other industries.

The safety and stability of the business when competently managed is thoroughly established by statistical records.

The properties managed and operated by the Doherty Organization have shown consistent increases and growth and the constant endeavor on the part of the management to obtain the good will and cooperation of the public by rendering the highest type of service, at

the least cost possible, has obtained for each company the hearty support of its consumers.

981 Properties Owned.

The Denver Gas and Electric Light Company, known to gas and electric men everywhere as one of the model plants in the United States is the only Company in the City of Denver, furnishing gas and electricity for light, power and heat—also steam for heating purposes.

Denver is known as the "City of Lights" because of the brilliancy of its municipal street lighting and the lavish electric sign display of its enterprising citizens.

While the population of Denver has grown from 133,859 in 1900, to 213,381 in 1910—a gain of 59%—the gross revenue of the Denver Gas and Electric Light Company has increased more than 400% during the same period.

Spokane Gas and Fuel Company supplies Gas for lighting and for domestic and industrial fuel purposes in the rapidly growing City of Spokane, Washington, whose population increased from 36,000 in 1900, to 104,000 in 1910. In the three years of the Doherty management of this property the gross earnings have been increased more than 50%.

The Empire District Electric Company serves a population of more than 100,000 in the greatest lead and zinc mining district in the world, embracing the cities of Joplin, Carthage, Webb City, and Carterville, Missouri—Galena and Columbus, Kansas. The power demand in this district exceeds 150,000 horse power, mostly in the mines, which number more than 700 and which are gradually substituting electric power for the small steam or gas engine plants previously operated.

For sixty years these mines have been steadily worked and the volume of business has increased from year to year; yet only a very small fraction of the ore bodies has been mined.

The field is recognized as a permanent one and the mining business in this district is now on a practical, substantial and solid basis as a manufacturing industry.

The earnings of the Empire District Electric Company are growing rapidly and will continue to increase even more rapidly in the future.

The Brush Electric Company supplies electricity for light and power in the City of Galveston, Texas, which has a population of approximately 40,000 people and is growing very rapidly. Galveston is the second city in the United States in the value of its export trade and its position will be even more important when the Panama Canal is opened. Millions of dollars have been spent for the improvement and protection of the city by the construction of a great sea wall, a large part of this work having been done by and under the supervision of the United States Government. This is an indication of the importance of Galveston as a port.

The earnings of this property have shown continual increases and should continue to do so, even more rapidly than in the past, because

of the rapid growth of the community and the introduction of the Doherty business getting methods.

981½ Cities Service Company having a large amount of treasury stock, will from time to time, add other desirable properties to its holdings.

It will be the policy of the Company, as other properties are acquired and new stock is issued for their purchase, to offer the new stock, first to stockholders, and if not all subscribed by them to offer the balance to the public at a less attractive price—the intention being to give the stockholders this advantage over other investors.

The Directors of Cities Service Company are:
Dennis Sullivan, Denver, Col.
Wm. F. Hoffman, Columbus, O.
Henry L. Doherty New York.
William B. Joyce, New York.
Frank W. Frueauff, Denver, Col.
Edward W. Rollins, Boston.
Holton H. Scott, New York.
Leslie M. Shaw, Philadelphia.
Charles T. Brown, New York,
Warren W. Foster, New York.
Burton G. Tremaine, Cleveland, O.
Howard E. Mitchell, Philadelphia.
Chas. A. Frueauff, New York.
Jas. M. Satterfield, Dover, Del.
Carle B. Gilbert, New York.

We recommend the Preferred stock of Cities Service Company as a very desirable, safe and conservative investment. At prsent market price it yields a return of more than 6½% and the unique method of payment of dividends, one half of one per cent monthly, by check, has proved very attractive and satisfactory to present stockholders.

The stock has a wide market and is listed on the Stock Exchange in Cincinnati, Cleveland, Columbus, Detroit, Indianapolis, Louisville, Minneapolis, St. Louis, and Toledo.

Many Bankers and Brokers in New York, Chicago, Philadelphia, St. Paul, Minneapolis, Boston, Providence, New Haven, Buffalo, Grand Rapids, Denver, and other cities are familiar with the Company's affairs and the stocks are bought and sold freely in these markets. A large amount of this stock has also been sold in England and it is listed on the London Stock Exchange.

For further particulars call or write to

HENRY L. DOHERTY & COMPANY,
*Bankers, Sixty Wall Street, New York City.*

(Here follow diagrams marked pages 982 and 983, omitted in printing.)

984–1021

Copy.

PLAINTIFF'S EXHIBIT 23.

EXHIBIT "A."

*Modified Order.*

Now on this 12th day of July, 1911, this matter came on to be heard upon the petition of Lincoln Gas & Electric Light Company for modification of an order entered by the Nebraska State Railway Commission July 13th, 1911, authorizing it to issue and sell $500,000.00 face value of its 6 per cent three-year notes at not less than 96, and to issue $750,000.00 preferred stock, and other relief as in said order mentioned.

It appears from the petition and the evidence that the applicant has outstanding $2,250.00 common stock, $333,000. 6 per cent bonds of the original Lincoln Gas Company, which become due and payable September 1, 1911, and $1,500,000.00 of 5 per cent first consolidated mortgage bonds of the Lincoln Gas & Electric Light Company due and payable in 1914, of which amount $796,600.00 are outstanding in the hands of the public, $333,000.00 are held by the trustee of said mortgage bonds to take up and provide for the payment and cancellation of the said $333,000.00 of Lincoln Gas Company bonds, and $370,400.00 are pledged as collateral to company's obligations; that there was outstanding as of May 1, 1911, $121,500.00 of bills payable; that the market for long time bonds carrying a low rate of interest is unfavorable; that the applicant has made arrangements whereby it can place its 6 per cent three-year notes in the amount of $500,000.00 at a price of not less than 96; that it proposes to amend its articles of incorporation so that the authorized issue of the capital of the corporation shall be $2,250,000.00 divided into 22,500 shares of the par value of $100.00 each, of which
1022 amount $1,500,000.00 shall be common stock and $750,000.00 shall be cumulative preferred stock, preferred both as to assets and dividends, at the rate of not to exceed 8 per cent per annum; that in the event said amendment shall be authorized in the manner provided by law, the said Lincoln Gas & Electric Light Company proposes to offer to its stockholders $250,000.00 par value of said cumulative preferred stock for, and in exchange for $750,000.00 par value of its present outstanding common stock, such offer to be made to each of the present stockholders of Lincoln Gas & Electric Light Company, ratably in proportion to their holdings, and the event that any stockholder shall not desire to avail himself of such privilege of exchange, other stockholders have the right to take up such undesired amount; that upon receipt of said amount of common stock the said amount will be cancelled and such preferred stock issued in lieu thereof, the remainder of such preferred stock, to-wit: $500,000.00 par value, to be sold from time to time as may be required and ordered by the directors of the company, for the purpose of raising

funds for the payment of said $500,000.00 three-year 6 per cent notes above authorized.

The Commission therefore, being duly advised in the premises, and upon consideration thereof, does hereby state that in its opinion the use of the capital to be secured by the issuance and sale of the said notes and the issuance, exchange and sale of the said preferred stock, is reasonably required for the discharge or lawful refunding of said bonds of Lincoln Gas Company, due September 1, 1911, and of bills payable, and for the acquisition of property and the improvement of the company's facilities.

*Order.*

It is therefore ordered by the Nebraska State Railway Com-
1023 mission that the said Lincoln Gas & Electric Light Company be and it is hereby empowered, through its directors, to issue not to exceed five hundred thousand dollars ($500,000.00) face value of three (3) year notes, to draw interest at not to exceed the rate of six (6) per cent per annum and to be secured by the deposit, under a suitable trust agreement, with a suitable trustee, of three hundred thirty-three thousand dollars ($333,000.00) face value of bonds of Lincoln Gas Company, secured by an indenture between said Lincoln Gas Company and the Farmers Loan & Trust Company, dated August 10, 1891 (time of payment of said bonds to be duly extended), provided that upon the surrender of said three hundred thirty-three thousand dollars ($333,000.00) of Lincoln Gas Company bonds to The Trust Company of America the same shall be cancelled as provided by the mortgage; said five hundred thousand dollars ($500,000.00) of three (3) year six (6) per cent notes to be further secured by the deposit, under a suitable trust agreement, with a suitable trustee, of four hundred thousand dollars ($400,000.00) face value of the first consolidated mortgage bonds of the Lincoln Gas & Electric Light Company, secured by an indenture between said Lincoln Gas & Electric Light Company and The Trust Company of America, dated December 1, 1901, and due December, 1941; provided, that said five hundred thousand dollars ($500,000.00) of three (3) year six (6) per cent notes shall be sold for not less than ninety-six (96) cents on the dollar of face value, and the proceeds therefrom used for the purchase of Lincoln Gas Company bonds due September 1, 1911, and the liquidation of bills payable, the acquisition of property
and the improvement of the Company's facilities; and it is
1024 further, provided, that arrangements for the liquidation *fo* said notes by the issuance of five hundred thousand dollars ($500,000.00) cumulative preferred stock, which is hereby authorized by the Nebraska State Railway Commission, may be carried out, and the directors may cause to be called a meeting of stockholders of the company upon thirty (30) days' notice to each stockholder of record, and in the event of favorable action by said stockholders, as by law provided, that the same shall be considered as duly approved on behalf of said Lincoln Gas & Electric Light Company; provided

further, that said five hundred thousand dollars ($500,000.00) of cumulative preferred stock shall be sold for not less than ninety-six (96) cents cash per one dollar ($1.00) of face value, and the proceeds therefrom, as received, used for the payment of three (3) year six (6) per cent notes hereby authorized; provided further, that an amortization fund shall be created out of earnings, or out of any accumulated surplus, from which capital account is to — reimbursed, within three (3) years of date of issue of said cumulative preferred stock, for any discount allowed thereon.

It is further ordered that said applicant be, and the same hereby is, authorized to issue two hundred fifty thousand dollars ($250,000.00) of its cumulative preferred stock, in addition to the five hundred thousand dollars ($500,000.00) above authorized, in exchange for seven hundred fifty thousand dollars ($750,000.00) of common stock now outstanding, which said common stock shall be thereupon cancelled, conditioned, however, upon the amending of the articles of incorporation as aforesaid, at a meeting duly called and held of the stock-holders of said applicant company.

1025 It is further ordered that said Lincoln Gas & Electric Light Company be, and the same hereby is, required to file with the Commission verified statements showing the proceeds derived from the sale of said notes, and the purposes in detail to which such proceeds have been applied, said statements to be filed within thirty (30) days of the time when the unreported amount received or expended exceeds the sum of one hundred thousand dollars ($100,000.00).

It is further ordered that the said Lincoln Gas & Electric Light Company be, and the same hereby is, required to file with the Commission five hundred thousand dollars ($500,000.00) cumulative preferred stock and the purposes in detail to which such proceeds have been applied, said statements to be filed within thirty (30) days of the time when the unreported amount received or expended exceeds the sum of one hundred thousand dollars ($100,000.00).

It is further ordered that the said Lincoln Gas & Electric Light Company be, and the same hereby is, required to file with the Commission verified statements showing the details of the exchange of two hundred fifty thousand dollars ($250,000.00) cumulative preferred stock for seven hundred fifty thousand dollars ($750,000.00) common stock, said statements to be filed within thirty (30) days of the time when said exchange shall have been completed.

Made and entered at Lincoln, Nebraska this 12 day of July, 1911.

NEBRASKA STATE RAILWAY COMMISSION.
H. J. WINNETT, *Chairman.*

Attest:

[SEAL.] CLARK PERKINS, *Secretary.*

1026 *Ordinance No. 732.*

An ordinance providing for the levy and collection of an occupation tax upon the business of furnishing electric current and gas for lighting and other purposes and to repeal chapters 64 and 66 of the Consolidated Ordinances of 1908.

Be it ordained by the Mayor and Council of the City of Lincoln, Nebraska:

Section 1. Every person or corporation engaged in the business of selling electricity or gas in the city of Lincoln, Nebraska, is hereby assessed and required to pay as an occupation tax a sum and amount equal to three (3) per cent of the gross receipts arising from such business.

Section 2. Such payment shall be made on the 15th day of each month and be based and computed upon the gross receipts of such business for the preceding month and all payments shall draw interest at the rate of one per cent per month from and after the same becomes due and after payment has been in default for six months a penalty of five per cent shall be added thereto in addition to said interest.

Section 3. Such corporation shall on the 15th day of each month file with the City Clerk a full, complete and detailed statement of the income and gross receipts of said business for the preceeding month duly verified and sworn to by the person in charge of such business, and the city of Lincoln shall have right at any and all times during business hours through its proper officers or representatives to inspect books and records of any such corporation for the purpose of verifying such report.

Section 4. In case such corporation shall fail to make payment of said occupation tax, interest and penalties as herein provided, the City Treasurer is hereby authorized to issue a distress warrant for the collection thereof and the officer to whom the same is delivered shall collect the amount of such tax by levy upon and sale of the personal property of the person or corporation owing the same in like manner as provided by statute for the levy and sale under distress warrant issued for the collection of personal property tax. The city of Lincoln may also sue such corporation in any court of competent jurisdiction for the amount of said occupation tax and may recover therein a judgment against such corporation for the amount so due with interest and penalties and may have execution thereon.

Section 5. Said occupation tax shall be paid to the city Treasurer and he shall deliver his receipt therefor and the amount paid shall be credited to the general fund of said city.

Section 6. Chapters Sixty-four and Sixty-six of the General Revised and Consolidated Ordinances of the City of Lincoln of 1908 providing for the levy of an occupation tax upon the electric light and gas companies of such city are hereby repealed. Provided however, that such repeal, and enactment of this ordinance shall in no-

wise affect the liability for the payment of any occupaton
1027 tax, interest and penalty levied under the provisions of such ordinance so repealed and shall not in anywise affect the right of the city of Lincoln to commence or prosecute any actions or proceedings for the collection of any such tax.

Section 7. This ordinance shall take effect and be in force from and after its passage, approval and publication according to law.

WM. SCHROEDER.
THOS. H. PRATT.
B. A. GEORGE.

O. K.

L. A. FLANSBURG,
*Deputy City Att'y.*

Passed Dec. 13, 1909.

Approved Dec. 16, 1909.

D. L. LOVE, *Mayor.*

Attest:

R. C. OZMAN,
*City Clerk.*

1028 STATE OF NEBRASKA,
*Lancaster County, ss:*

I, Theo. H. Berg, City Clerk of the City of Lincoln, County and State aforesaid, do hereby certify that the attached is a true and correct copy of Ordinance No. 732, which was passed by the City Council December 13, 1909, with reference to levy and collection of 3% occupation tax on gas and electric light business, as shown by the records and files of my office in said city.

In witness whereof I have hereunto set my hand officially and affixed the seal of said city, this 13th day of June, 1914.

[Seal City of Lincoln, Lancaster County, Nebraska.]

THEO. H. BERG,
*City Clerk.*

1029 EXHIBIT 25.

Occupation Tax Ordinance #732.

(Here follow fac-simile gas reports for years 1908, 1909, 1910, 1911, 1912, marked pages 1030-1142.)

Lincoln Gas & Electric Light Co.

Manufacturing and Expense Reports

OF

# GAS DEPARTMENT

FOR 12 months ENDING December 1908.

EXHIBIT 26

# General Rules for Reporting

1. The Company's name should be stamped on report covers, and on the first page, and the name of the City or Plant at the head of every other page in the report.

2. Date of reports should be stamped at the top of every page.

3. Decreases should be in red.

4. Never use copying ink.

5. Special or unusual entries, corrections of back errors, changes in cumulative figures, discrepancies between annual and monthly reports, should invariably be explained.

6. Carry per unit costs four decimal places.

7. Items which do not apply to your Company's business, and cannot be filled in, should be checked, excepting large sections such as lines 1200-22, which should be ruled out.

8. Zeros should be filled in; don't leave blank lines.

9. Where statistical information asked for is not given, state reasons for omitting.

10. Figure "per meter" data on meters at close of month, less company and sub-meters.

11. Figure "per consumer" data on consumers at close of month.

12. Show residuals, lines 1004 to 1007, **"per ton of coal carbonized."**

13. Line 1425 should show the sum total of lines 905 and 906 on previous month's report, plus line 907 on current month's report.

14. Each copy of the report sent to the New York Office should be signed by the Secretary, Department Superintendent and by the General Manager or Acting General Manager.

15. The Manager or Acting Manager should inclose with every report to the New York Office a letter in duplicate reviewing the report and calling attention to all items of interest or of marked change.

REPORT FOR 12 months. '08

## GROSS EARNINGS

| | FROM SALE OF GAS | AMOUNTS This Year | AMOUNTS Last Year | Increase or Decrease | Receipts per M. Sold This Year | Receipts per M. Sold Last Year |
|---|---|---|---|---|---|---|
| 900 | Illuminating Purposes, | | | | | |
| 901 | Domestic Fuel " | | | | | |
| 902 | Industrial Fuel " | | | | | |
| 903 | Power " | | | | | |
| 904 | Street Lamp " | | | | | |
| 905 | Total from Gas Sales, | 233 857 75 | 214 516 57 | 19 341 18 | 1.1970 | 1.1960 |
| 906 | Meter charge on Minimum Bills, | 704 14 | 693 53 | 10 61 | .0036 | .0038 |
| 907 | Forfeited Discount, | 2 785 62 | 3 041 10 | 255 48 | .0142 | .0169 |
| 908 | Total Earnings from Gas, | 237 347 51 | 218 251 20 | 19 096 31 | 1.2148 | 1.2167 |
| 909 | Bad Debts, | 3 000 00 | 2 475 00 | 525 00 | .0154 | .0138 |
| 910 | Gross Earnings Gas Dep't, | 234 347 51 | 215 776 20 | 18 571 31 | 1.1994 | 1.2029 |
| 911 | Operating Expenses (Total) (917) | 137 090 35 | 144 924 37 | 4 834 02 | .7016 | .7912 |
| 912 | Net Earnings Gas Dept. | 97 257 16 | 73 851 83 | 23 405 33 | .4978 | .4117 |

## SUMMARY OF OPERATING EXPENSES

| | Flood | Plant '00 00 | Output | Consumers | Meters | TOTAL COST This Year '00 00 | TOTAL COST Last Year |
|---|---|---|---|---|---|---|---|
| 913 | Manufacturing (1200) | 10 704 54 | 70 029 92 | | | 80 734 46 | 86 233 19 |
| 914 | Distribution (1300) | 9 050 76 | | 3 487 14 | 3 342 59 | 15 879 99 | 17 978 05 |
| 915 | Collection (1400) | | | 6 980 56 | 2 952 55 | 9 933 11 | 8 597 75 |
| 916 | General (1500) | 30 442 79 | | | | 20 442 79 | 29 115 38 |
| 917 | Totals | 50 297 30 | 70 029 92 | 10 467 70 | 6 295 14 | 137 090 35 | 141 924 37 |

## SUMMARY OF OPERATING EXPENSES. PER UNIT

| | Flood | Per M. Sold: Plant | Output | Consumers | Meters | Total This Year | Total Last Year | Per Consumer: Consumers Charges | Meter Charges | Total C. & M. | Per Meter: Consumer Charges | Meter Charges | Total C. & M. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 913a | Manufacturing (1200) | 0086 0548 | 3584 | | | 0086 4132 | 4808 | | | | | | |
| 914a | Distribution (1300) | 0463 | | 0178 | 0171 | 0812 | 1002 | 5400 | 5176 | 1.0576 | 5326 | 5'05 | 1.0431 |
| 915a | Collection (1400) | | | 0357 | 0151 | 0508 | 0479 | 10810 | 4572 | 1.5382 | 10660 | 4509 | 1.5169 |
| 916a | General (1500) | 1558 | | | | 1558 | 1623 | | | | | | |
| 917a | Totals, | 2575 | 3584 | 0535 | 0322 | 7016 | 7912 | 1.6210 | 9748 | 2.5958 | 1.5986 | 9614 | 2.5600 |

## SUMMARY OF GAS SALES. (POPULATION THIS YEAR 47500 LAST YEAR 47000 )

| | | Total Sales (Cu. Ft.) This Year | Total Sales (Cu. Ft.) Last Year | No. of Meters. This Year | No. of Meters. Last Year | Average Sale per Meter This Year | Average Sale per Meter Last Year | Avg. Sale per Capita This Year | Avg. Sale per Capita Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 918 | Illuminating Gas, | | | | | | | | |
| 919 | Dom. Fuel Gas, | | | | | | | | |
| 920 | Ind. Fuel Gas, | | | | | | | | |
| 921 | Power Gas, | | | | | | | | |
| 922 | Total Fuel Gas, | 195 391 800 | 179 366 300 | | | 28990 | | 3 816 | |
| 923 | Total Private Sales | 195 391 800 | 179 366 300 | 6 547 | 6 2025 | 29870 | 28990 | 4 112 | 3 816 |
| 924 | Street Lamps, | | | No. Lamps | | Av'g per Lamp | | | |
| 925 | Total Sales, | 195 391 800 | 179 366 300 | | | | | | |

## CONSUMERS

| | | No. Using Ill'tg Gas Only | No. Using Fuel Gas Only | No. Using Both | Total No. Consumers | Total Using Ill'tg Gas | Total Using Fuel Gas |
|---|---|---|---|---|---|---|---|
| 926 | First of Month, 1yr | | | | 6 244 | | |
| 927 | New during Month, 1yr | | | | 3 666 | | |
| 928 | Total, | | | | 9 910 | | |
| 929 | Off during Month, 1yr | | | | 3 280 | | |
| 930 | Close of Month, 1yr | | | | 6 630 | | |
| 931 | First of Year, | | | | 6 244 | | |
| 932 | Gain or Loss, | | | | 386 | | |

## CONSUMER DATA

| | | This Year | Last Year | | This Year | Last Year |
|---|---|---|---|---|---|---|
| 941 | Ill'tg Sales per Ill'tg Consumer, | | | Inhabitants per Ill'tg Consumer | | |
| 942 | Dom. F. " " Dom. F. " | | | " " Dom. Fuel " | | |
| 943 | Indust'l " " Ind. " | | | " " Ind. Fuel " | | |
| 944 | Power " " Power " | | | " " Power " | | |
| 945 | Average Sales per Consumer, | 30250 | 29269 | 1032 " Consumer | 7164 | 7609 |

REPORT FOR 12 Months '08

## MANUFACTURING DEPARTMENT. COAL GAS

| | | Plant Expense | Output Expense | Output per. M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| | 12.68 Ns Slk @ 2.53 Young | | | | | | | |
| 1000 | Coal Carbonized 5552.76 Tons @ | | 32 437 01 | .2829 | 32 487 01 | 42 903 46 | .3829 | .6148 |
| 1001 | Enricher " " " @ | | | | | 178 41 | | .0025 |
| 1002 | Bench Fuel 507.40 " Slk @ 18370 " Coke @ | | 3 479 84 | .0625 | 3 479 84 | 5 286 42 | .0625 | .0757 |
| 1003 | Total Cost C. G. Mfg. Mat'l | | 35 916 85 | .6454 | 35 916 85 | 48 370 29 | .6454 | .6930 |
| 1004 | Coke Residual 3177.11 " Breeze 3722.14 " Zone coke | | 16 347 69 | .2938 | 16 347 69 | 20 537 73 | .2938 | .2943 |
| 1005 | Tar " 49418 " Tons | | 988 36 | .0177 | 988 36 | 1 248 26 | .0177 | .0179 |
| 1006 | Ammonia " @ | | | | | | | |
| 1007 | Carbon " @ | | | | | | | |
| 1008 | Total Residuals | | 17 336 05 | .3115 | 17 336 05 | 21 785 99 | .3115 | .3122 |
| 1009 | Net Cost C. G. Mfg. Material | | 18 580 80 | .3340 | 18 580 80 | 26 684 30 | .3340 | .3809 |
| 1010 | Retort House Labor | 600 00 | 4 567 13 | .0821 | 5 167 13 | 5 708 18 | .0929 | .0818 |
| 1011 | Bench Repairs | | 2 425 77 | .0436 | 2 425 77 | 4 022 24 | .0436 | .0576 |
| 1012 | Retort House Expense | | 195 39 | .0035 | 195 39 | 201 54 | .0035 | .0029 |
| 1013 | Total Cost Generating Coal Gas | 600 00 | 25 769 09 | .4632 | 26 369 09 | 36 516 26 | .4740 | .5232 |
| 1014 | Steam | | 1 456 76 | .0262 | 1 456 76 | 1 649 97 | .0262 | .0237 |
| 1015 | Purifying C. G. Labor, Exp. & Repairs | | 210 87 | .0038 | 210 87 | 386 68 | .0038 | .0055 |
| 1016 | " Material | | 200 47 | .0036 | 200 47 | 389 13 | .0036 | .0056 |
| 1017 | General Works, Bldgs., Repairs (C. G.) | 85 76 | | | 85 76 | 812 40 | .0015 | .0116 |
| 1018 | " Apparatus " (C. G.) | 334 67 | | | 334 67 | 908 62 | .0060 | .0130 |
| 1019 | Sundry Labor (C. G.) | 806 71 | | | 806 71 | 1 303 51 | .0145 | .0187 |
| 1020 | Works Expense and Supplies (C. G.) | 746 37 | | | 746 37 | 878 50 | .0134 | .0126 |
| 1021 | General Supervision (C. G.) | 800 99 | | | 800 99 | 1 052 67 | .0144 | .0151 |
| 1022 | District Holder Station (C. G.) | | | | | | | |
| 1023 | Total Purification and Storage | 2 774 50 | 1 868 10 | .0336 | 4 642 60 | 7 381 48 | .0834 | .1058 |
| 1024 | Total Cost Coal Gas in Holder | 3 374 50 | 27 637 19 | .4968 | 31 011 69 | 43 897 74 | .5574 | .6290 |

### COAL GAS STATISTICS

| | | This Year. | Last Year |
|---|---|---|---|
| 1029 | Coal Gas Made | 55,647,100 Cu. ft. | 69,789,600 Cu. ft. |
| 1030 | Kind of Coal used | Young. | Young |
| 1031 | Coal Carbonized | 5565.38 Tons | 7098.57 Tons |
| 1032 | Yield per lb. Coal | 5.0 Cu. ft. | 4.9 Cu. ft. |
| 1033 | Cost of Coal per ton delivered (with freight @ $ per ton shipped) | $5.714 | $5.955 |
| 1034 | Average number retorts in use | 14.5 | 1.88 |
| 1035 | Average charge per retort | 350. Lbs. | 344 Lbs. |
| 1036 | Average make per retort Per 24 hrs. | 10530 Cu. ft. | 10170 Cu. ft. |
| 1037 | Average make per man charged acc't No. 1010 Per 24 Hrs. | 24080 Cu. ft. | 27300 Cu. ft. |
| 1038 | Coke made per ton Coal Carbonized | 1275 Lbs. | 1250 Lbs. |
| 1039 | Coke used for Bench Fuel per ton Coal Carbonized | 51.6 Lbs. | 14.3 Lbs. |
| 1040 | Coal used for Bench Fuel " " | 31.4 Lbs. | 16.2 Lbs. |
| 1041 | Receipts for Coke per ton sold | $6.362 | $7.13 |
| 1042 | " " " per ton Coal Carbonized | $7.122 | $4.46 |
| 1043 | Tar made per ton Coal Carbonized | 8.88 Gals. | 9 Gals. |
| 1044 | Receipts for Tar per " | .366 ¢ | .283 ¢ |
| 1045 | " " " per lb. sold | .0392 ¢ | .0287¢ |
| 1046 | Ammonia made per ton Coal Carbonized | ✓ Lbs. | ✓ Lbs. |
| 1047 | Receipts for Ammonia " | ✓ ¢ | ✓ ¢ |
| 1048 | " " " per lb. sold | ✓ ¢ | ✓ ¢ |
| 1049 | Carbon sold | ✓ Tons | ✓ Tons |
| 1050 | Price received for Carbon per ton | ✓ $ | ✓ $ |
| 1051 | Gas Purified per bu. per charge | ✓ Cu. ft. | ✓ Cu. ft. |
| 1052 | Spent Oxide sold Tons @ $ per ton | ✓ | ✓ |
| 1053 | Illuminating Power Max. | 17.5 C. P. | ✓ C. P. |
| 1054 | Illuminating Power Min. | 15.8 C. P. | ✓ C. P. |
| 1055 | Illuminating Power Avg. | 16.6 C. P. | ✓ C. P. |
| 1056 | Heat Units (B. T. U.) Max. | 719.6 B. T. U. | ✓ B. T. U. |
| 1057 | Heat Units (B. T. U.) Min. | 640.3 B. T. U. | ✓ B. T. U. |
| 1058 | Heat Units (B. T. U.) Avg. | 684.3 B. T. U. | ✓ B. T. U. |
| 1059 | | | |
| 1060 | | | |
| 1061 | | | |

REPORT FOR 12 months '08

## MANUFACTURING DEPARTMENT. WATER GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1100 | Steam for Generating Water Gas | | 3 577 33 | .0221 | 3 577 33 | 4 183 74 | .0221 | .0315 |
| 1101 | Generator Fuel, 32127 Tons Gas Coke | | 16 742 07 | .1037 | 16 742 07 | 14 491 19 | .1037 | .1090 |
| 1102 | Enricher, 608176 Gals. | | 22 713 06 | .1406 | 22 713 06 | 20 623 74 | .1406 | .1551 |
| 1103 | Total W. G. Making Materials | | 43 032 46 | .2664 | 43 032 46 | 39 298 67 | .2664 | .2956 |
| 1104 | Water Gas Tar Residual Acc't. | | 1 938 12 | .0120 | 1 938 12 | 916 14 | .0120 | .0069 |
| 1105 | Net Cost W. G. Mfg. Material, | | 41 094 34 | .2544 | 41 094 34 | 38 382 53 | .2544 | .2887 |
| 1106 | Gas Making Labor, | | 4 603 71 | .0285 | 4 603 71 | 3 737 66 | .0285 | .0281 |
| 1107 | Repairs to W. G. Gen. Apparatus, | | 1 151 24 | .0071 | 1 151 24 | 1 045 53 | .0071 | .0079 |
| 1108 | W. G. Generating House Expense, | | 107 74 | .0007 | 107 74 | 24 03 | .0007 | .0002 |
| 1109 | Total Cost Generating W. G., | | 46 957 03 | .2907 | 46 957 03 | 43 189 75 | .2907 | .3249 |
| 1110 | Steam, | | 2 421 07 | .0150 | 2 421 07 | 880 78 | .0150 | .0066 |
| 1111 | Purifying W. G. Labor, Exp. and Rep., | | 574 26 | .0036 | 574 26 | 799 10 | .0036 | .0060 |
| 1112 | Purifying W. G. Material, | | 503 34 | .0031 | 503 34 | 392 04 | .0031 | .0030 |
| 1113 | General Works Repairs, Buildings, | 106 53 | | | 106 53 | 253 03 | .0007 | .0019 |
| 1114 | General Apparatus Repairs, | 669 01 | | | 669 01 | 996 16 | .0041 | .0075 |
| 1115 | Sundry Labor, | 2 079 02 | | | 2 079 02 | 2 266 18 | .0129 | .0170 |
| 1116 | Works Expense and Supplies, | 2 109 35 | | | 2 109 35 | 1 662 97 | .0130 | .0125 |
| 1117 | General Supervision, | 2 366 13 | | | 2 366 13 | 2 084 52 | .0146 | .0157 |
| 1118 | District Holder Station, | | | | | | | |
| 1119 | Total Cost Purification and Storage, | 7 330 04 | 3 498 67 | .0217 | 10 828 71 | 9 334 78 | .0672 | .0702 |
| 1120 | Total Cost Water Gas in Holder, | 7 330 04 | 50 455 70 | .3124 | 57 785 74 | 52 524 53 | .3579 | .3951 |

### WATER GAS STATISTICS

| | | This Year. | Last Year. |
|---|---|---|---|
| 1130 | Water Gas Made, | 161.516.450 Cu. ft. | 132.930.600 Cu. ft. |
| 1131 | Enricher Used, | 608.176 Gals. | 495024 Gals. |
| 1132 | Enricher Used per M., | 5.764 Gals. | 3.7 Gals. |
| 1133 | Candles per Gal. Enricher, | 5.39 | ✓ |
| 1134 | Boiler Fuel per M., | ✓ Lbs. | ✓ Lbs. |
| 1135 | Generator Fuel per M., | 41.6 Lbs. | 40.6 Lbs. |
| 1136 | Number of Runs, | 37.725 | 30.649 |
| 1137 | Average Make per Run, | 4.280 Cu. ft. | 4.330 Cu. ft. |
| 1138 | Average Make per Gas Maker per 24 Hours, | 99.690 Cu. ft. | 91.000 Cu. ft. |
| 1139 | Gas Purified per Bu. Material per Change, | ✓ Cu. ft. | ✓ Cu. ft. |
| 1140 | | | |
| 1141 | Tar Made per M. Cu. Ft. Gas, | .6 Gals. | .35 Gals. |
| 1142 | Tar Made per M. Gal. Oil Used, | 159.35 Gals. | 94.6 Gals. |
| 1143 | | | |
| 1144 | | | |
| 1145 | Illuminating Power Water Gas — Max. | 21.5 C.P. | C.P. |
| 1146 | Illuminating Power Water Gas — Min | 18.7 C.P. | C.P. |
| 1147 | Illuminating Power Water Gas — Avg. | 20.3 C.P. | C.P. |
| 1148 | Heat Units, (B. T. U.) — Max. | 677.3 B.T.U. | B.T.U. |
| 1149 | Heat Units, (B. T. U.) — Min. | 594.8 B.T.U. | B.T.U. |
| 1150 | Heat Units, (B. T. U.) — Avg. | 629.2 B.T.U. | B.T.U. |
| 1151 | | | |
| 1152 | | | |
| 1153 | | | |
| 1154 | | | |

### MIXED GAS STATISTICS

| | | | | |
|---|---|---|---|---|
| 1155 | Illuminating Power, | Max. | 19.3 C.P. | C.P. |
| 1156 | Illuminating Power, | Min. | 17.7 C.P. | C.P. |
| 1157 | Illuminating Power, | Avg. | 18.5 C.P. | C.P. |
| 1158 | Heat Units, (B. T. U.) | Max. | 663.2 B.T.U. | B.T.U. |
| 1159 | Heat Units, (B. T. U.) | Min. | 617.9 B.T.U. | B.T.U. |
| 1160 | Heat Units, (B. T. U.) | Avg. | 644.1 B.T.U. | B.T.U. |
| 1161 | Sulphur Contents, | Max. | | |
| 1162 | Sulphur Contents, | Avg. | | |
| 1163 | Oxygen Contents, | Max. | | |
| 1164 | Oxygen Contents, | Avg. | | |
| 1165 | | | | |

REPORT FOR 12 months '08

## MANUFACTURING DEPARTMENT. PURCHASED GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1200 | Crude Gas Purchased, | | | | | | | |
| 1201 | Power for Pumping, | | | | | | | |
| 1202 | Enricher, | | | | | | | |
| 1203 | | | | | | | | |
| 1204 | | | | | | | | |
| 1205 | Total Cost Materials, | | | | | | | |
| 1206 | Tar, | | | | | | | |
| 1207 | Ammonia, | | | | | | | |
| 1208 | Total Residuals, | | | | | | | |
| 1209 | Net Cost Materials, | | | | | | | |
| 1210 | Steam, | | | | | | | |
| 1211 | Purifying Pur. Gas, Labor, Exp. & Rep., | | | | | | | |
| 1212 | " " Material, | | | | | | | |
| 1213 | General Works Rep. Bldgs., | | | | | | | |
| 1214 | General Apparatus Repairs, | | | | | | | |
| 1215 | Sundry Labor, | | | | | | | |
| 1216 | Works Expense and Supplies, | | | | | | | |
| 1217 | General Supervision, | | | | | | | |
| 1218 | District Holder Station, | | | | | | | |
| 1219 | | | | | | | | |
| 1220 | | | | | | | | |
| 1221 | Total Purification and Storage, | | | | | | | |
| 1222 | Total Cost Purchased Gas in Holder, | | | | | | | |
| 1223 | | | | | | | | |
| 1224 | | | | | | | | |
| 1225 | | | | | | | | |
| 1226 | | | | | | | | |
| 1227 | | | | | | | | |
| 1228 | | | | | | | | |
| 1229 | | | | | | | | |

## MANUFACTURING DEPARTMENT. MIXED GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1250 | Total Cost Manuf'g Coal Gas, | 3 374 50 | 27 637 19 | .4968 | 31 011 69 | 43 897 74 | .5574 | .6290 |
| 1251 | " " " Water Gas, | 7 330 04 | 50 455 70 | .3124 | 57 785 74 | 52 224 53 | .3577 | .3951 |
| 1252 | " " " Coal & Water Gas, | 10 704 54 | 78 092 89 | .3546 | 88 797 43 | 96 422 27 | .4089 | .4756 |
| 1253 | " " " Gas Purchased, | | | | | | | |
| 1254 | " " All Gas Manufacturing Dept. | 10 704 54 | 78 092 89 | .3596 | 88 797 43 | 96 422 27 | .4089 | .4756 |
| 1255 | Output Cost Gas Lost and Unacc'd for, | | 7 784 31 | .0358 | 7 784 31 | 9 947 75 | .0358 | .0491 |
| 1256 | " " " Used by Co., | | 138 71 | .0007 | 138 71 | 245 40 | .0007 | .0012 |
| 1257 | Total Deductions from Manuf'g Costs, | | 7 923 02 | .0365 | 7 923 02 | 10 193 15 | .0365 | .0503 |
| 1258 | Net Cost in Holder of Gas Charged Stock Acc't, | 10 704 54 | 70 169 87 | .3231 | 80 874 41 | 86 229 12 | .3724 | .4253 |
| 1259 | Difference Stock on Hand First and Last of Mo., | | 129 95 | .0007 | 129 95 | 4 07 | .0007 | .0000 |
| 1260 | Net Cost in Holder of Gas Sold, | 10 704 54 | 70 039 92 | .3584 | 80 704 46 | 86 233 19 | .3717 | .4253 |

## GAS ACCOUNT CUBIC FEET

| | | This Year | Last Year | Increase | Decrease | Per Cent. of Totals |
|---|---|---|---|---|---|---|
| 1280 | Gas on Hand First of Month, | 213 700 | 1 460 100 | | 1 246 400 | |
| 1281 | Coal Gas Made during Month, | 55 647 100 | 69 789 600 | | 14 142 500 | 2560 |
| 1282 | Water " " " | 161 516 450 | 132 930 600 | 28 585 850 | | 7440 |
| 1283 | Gas Purchased " | | | | | |
| 1284 | Total Gas Made and Purch'd, | 217 163 550 | 202 720 200 | 14 443 350 | | 100% |
| 1285 | Total Gas to Account for, | 217 377 250 | 204 180 300 | 13 196 950 | | 100% |
| 1286 | Gas on Hand at Close of Month, | 650 250 | 213 700 | 436 550 | | |
| 1287 | Gas Delivered to Mains, | 216 727 000 | 203 966 600 | 12 760 400 | | 100% |
| 1288 | Gas Sold, | 195 391 800 | 179 366 700 | 16 025 100 | | 9013 |
| 1289 | Gas Used by Co., | 372 300 | 586 700 | | 214 400 | 0019 |
| 1290 | Total Gas Sold and Used, | 195 764 100 | 179 953 400 | 15 811 100 | | 9032 |
| 1291 | Gas unaccounted for, | 20 962 900 | 24 013 600 | | 3 050 700 | 968 |

REPORT FOR 12 months 1908.

## DISTRIBUTION DEPARTMENT EXPENSE

| | | Charge Plant Amount | Charge Plant Per M Sold | Charge Consumers Amount | Charge Consumers Per Cons. | Charge Meters Amount | Charge Meters Per Meter | Total Cost This Year | Total Cost Last Year | Total Cost per M. Sold This Yr. | Total Cost per M. Sold Last Yr. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | Street Main Maint'n'c, | 795 75 | .0041 | | | | | 795 75 | 1 147 28 | .0041 | .0064 |
| 1301 | Service " | | | 293 52 | .0455 | | | 293 52 | 385 17 | .0015 | .0021 |
| 1302 | Street Dep't Expense, | 470 20 | .0024 | 940 39 | .1456 | | | 1410 59 | 797 48 | .0072 | .0044 |
| 1310 | Pumping Gas, | | | | | | | | | | |
| 1303 | Meter Maintenance, | | | | | 1 723 02 | .2632 | 1 723 02 | 1 338 31 | .0088 | .0075 |
| 1304 | Meter Dep't Expense, | | | | | 1 165 72 | .1780 | 1 165 72 | 458 60 | .0060 | .0026 |
| 1305 | Setting & Rem. Meters | | | 876 87 | .1358 | 463 85 | .0693 | 1 330 72 | 2011 93 | .0068 | .0112 |
| 1306 | Gratuitous Work, | | | 1376 36 | .2131 | | | 1376 36 | 1891 53 | .0070 | .0105 |
| 1307 | Total above Items, | 1 265 95 | .0065 | 3 487 14 | .5400 | 3 342 59 | .5105 | 8 095 68 | 8 030 30 | .0414 | .0447 |
| 1308 | Gas Lost & Unacct. for | 7 784 31 | .0398 | | | | | 7 784 31 | 9 947 75 | .0398 | .0555 |
| 1309 | Total Distrib'n Ex. | 9 050 26 | .0463 | 3 487 14 | .5400 | 3 342 59 | .5105 | 15 879 99 | 17 978 05 | .0812 | .1002 |

## DISTRIBUTION DEPARTMENT DATA

### METER ACCOUNT

| | | | EQUITABLE NO. | NO. | NO. | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | Owned by Co. first of Yr. | | | | | 2933 | 3688 | 48 | 37 | 9 | 14 | 4 | 2 | 6 | 2 | | | | 6741 |
| 1321 | Bought during Yr. | | | | | | 475 | | 12 | | | | | | | | | | 487 |
| 1322 | Total, | | | | | 2933 | 4163 | 48 | 49 | 9 | 14 | 4 | 2 | 6 | 2 | | | | 7228 |
| 1323 | Condemned & Dest'd, | | | | | 2 | | | | | | | | | | | | | 2 |
| 1324 | Owned this Date, | | | | | 2931 | 4163 | 48 | 49 | 9 | 14 | 4 | 2 | 6 | 2 | | | | 7226 |
| 1325 | IN USE THIS DATE — Illuminating, | | | | | 2587 | 4101 | 38 | 49 | 5 | 13 | 4 | 2 | 6 | 2 | | | | 6805 |
| 1326 | IN USE THIS DATE — Domestic Fuel, | | | | | | | | | | | | | | | | | | |
| 1327 | IN USE THIS DATE — Industrial " | | | | | | | | | | | | | | | | | | |
| 1328 | IN USE THIS DATE — Power, | | | | | | | | | | | | | | | | | | |
| 1329 | IN USE THIS DATE — Sub-Meters, | | | | | | | | | | | | | | | | | | |
| 1330 | IN USE THIS DATE — Company, | | | | | 6 | 1 | 1 | | | | | | | | | | | 8 |
| 1331 | IN USE THIS DATE — Total, | | | | | 2593 | 4102 | 39 | 49 | 5 | 13 | 4 | 2 | 6 | 2 | | | | 6813 |
| 1332 | IN STOCK — Shop, | | | | | 338 | 61 | 9 | | 4 | 1 | | | | | | | | 413 |
| 1333 | IN STOCK — Locked, | | | | | | | | | | | | | | | | | | |
| 1334 | IN STOCK — Total, | | | | | | | | | | | | | | | | | | |
| 1335 | Total Owned, | | | | | 2931 | 4163 | 48 | 49 | 9 | 14 | 4 | 2 | 6 | 2 | | | | 7226 |
| 1336 | Increase or Decrease, | | | | | | | | | | | | | | | | | | |
| 1337 | Meters in use first of Year, | | | | | | | | | | | | | | | | | | |

### METERS

| | | Per Mile Main This Yr. | Per Mile Main Last Yr. | Per 1000 Popul'n This Yr. | Per 1000 Popul'n Last Yr. | No. Set This Yr. | No. Set Last Yr. | No. Removed This Yr. | No. Removed Last Yr. | | No. | % of Total No. | Cost Each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1340 | Illuminating, | | | | | | | | | Meters Tested "Regular Test" | 3443 | 5787 | |
| 1341 | Domestic Fuel, | | | | | | | | | " " "Routine Test" | | | |
| 1342 | Industrial " | | | | | | | | | " Repaired, | 1389 | 2039 | |
| 1343 | Power Gas, | | | | | | | | | " Set, | 4319 | 6340 | |
| 1344 | Total Meters, | 102.3 | 99.5 | 143.4 | 131.9 | | | | | " Removed, | 3960 | 5817 | |
| 1345 | No. Consumers, | 99.7 | 99.1 | 139.6 | 121.4 | 4319 | 3607 | 3960 | 3451 | " Transferred, | | | |
| 1346 | No. Service Pipes, | 95.9 | 90.2 | 134.3 | 118.7 | | | | | No. Leaks of Meters, | 147 | 0215 | |
| 1350 | Cost meter Maintenance per Meter passing through Shop, | | | | | | | | | | .1253 | | |
| 1351 | " " " " in Use, | | | | | | | | | | .2523 | | |
| 1352 | No. Leaks at Connections, | | | | | | | | | | | | |
| 1353 | | | | | | | | | | | | | |
| 1354 | | | | | | | | | | | | | |
| 1356 | Service Maintenance per Complete Service in Use, | | | | | | | | | | $.0460 | | |
| 1357 | " Repairs per Service handled | | | | | | | | | | 143 57 | | |
| 1358 | No. Services Repaired, | | | | | | | | | 12 ; Cost each, | | ; | |
| 1359 | No. Services Renewed, | | | | | | | | | 5 ; " " | | ; | |
| 1360 | No. Services Changed, | | | | | | | | | 27 ; " " | | ; | |
| 1361 | No. Services Cleaned, | | | | | | | | | ; " " | | ; | |
| 1362 | No. Leaks at Services, | | | | | | | | | 6 ; " " | | ; | |
| 1363 | No. Leaks in Broken Mains, | | | | | | | | | 2 ; " " | | ; | |
| 1364 | No. Leaks Account Defective Main Joints, | | | | | | | | | ; " " | | ; | |
| 1365 | Pumping Drip 5.40 Filling Ditches 6.00 | | | | | | | | | | | | |
| 1366 | Removing Lamp Posts 1.20 | | | | | | | | | | | | |
| 1367 | Leakage per Mile Actual Main This Year | 320 477 | Cu. ft.; | Last Year, | 381 441 | Cu. ft. | | | | | | | |
| 1368 | " " 3-inch " " " | 302 370 | " ; | " " | 360 363 | " | | | | | | | |

REPORT FOR 12 months '08

## COLLECTION DEPARTMENT

| | | Charge Consumers Amount | Charge Consumers Per Cons. | Charge Meters Amount | Charge Meters Per Meter | Total Cost This Year | Total Cost Last Year | Total per M. Sold This Year | Total per M. Sold Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 1400 | Reading Meters, | 609 54 | .0944 | 304 76 | .0465 | 914 30 | 952 10 | .0047 | .0053 |
| 1401 | Collection Clerical Salaries, | 4210 25 | .6520 | 2105 16 | .3215 | 6315 51 | 5355 20 | .0323 | .0298 |
| 1402 | Collection Office Expense, | 644 63 | .0998 | 322 33 | .0492 | 966 96 | 770 14 | .0049 | .0043 |
| 1403 | Rent of Collection Office, | 440 66 | .0682 | 220 30 | .0336 | 660 96 | 634 42 | .0034 | .0035 |
| 1404 | Delivering Bills, | 218 86 | .0339 | | | 218 86 | 176 76 | .0011 | .0010 |
| 1405 | Outside Collections, | 856 52 | .1326 | | | 856 52 | 709 63 | .0044 | .0040 |
| 1406 | Total Collect'n Expenses, | 6980 56 | 1.0804 | 2952 55 | .4508 | 9933 11 | 8599 75 | .0508 | .0479 |

## COLLECTION DEPARTMENT DATA

### READING METERS

| | | First Reading Total Hours | First Reading Av. Time Each | First Reading No. Rdg. pr. Hr. | First Reading Cost Each | Stragglers and Retakes No. | Stragglers and Retakes Hours | Stragglers and Retakes Cost Ea. | Total No. | Total Exp. (1400) per Meter This Year | Total Exp. (1400) per Meter Last Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1410 | Meters, | 7809 | .0384 | 26.03 | .0101 | 7894 | 425.3 | .0232 | 75125 | | |
| 1411 | Meter Readers, | | | | | | | | | | |

### CLERICAL SALARIES

| | | No. Clerks | Ave. Pay Each | Amount | Cost per Meter This Year | Cost per Meter Last Year | Cost per Consumer This Year | Cost per Consumer Last Year |
|---|---|---|---|---|---|---|---|---|
| 1415 | Total Acc't No. 1401, | 8 | 789 44 | 6315 51 | 96 48 | | 97 80 | |

### DELIVERING BILLS

| | | No. Bills | Labor | Expense | Total Cost | Tot. per Bill |
|---|---|---|---|---|---|---|
| 1420 | By Mail, | 1 140 | | 27 80 | 27 80 | .02 |
| 1421 | By Co.'s Employees, | 70 679 | 218 86 | | 218 86 | .0031 |
| 1422 | Called for at Office, | 1 192 | | | | |
| 1423 | Totals, | 71 011 | 218 86 | 27 80 | 241 66 | .0033 |

### COLLECTIONS

| | | Gas Bills No. | Gas Bills Amount | Per Cent. of Total No. | Per Cent. of Total Amt. | Cost of Collection Amount | Cost of Collection Per Bill | Cost of Collection Per Cent. |
|---|---|---|---|---|---|---|---|---|
| 1425 | Total Private Gas Bills, (Line 908 previous month.) | | 241 007 65 | | | | | |
| | COLLECTIONS | | | | | | | |
| 1426 | At Office by Mail, | 2 846 | 14 037 74 | 4.107 | 5.930 | 589 03 | .2070 | |
| 1427 | At Office by Tellers, | 62 070 | 201 913 54 | 89.566 | 85.310 | 8473 94 | .1365 | |
| 1428 | Bills Deposited in Banks, | 1 947 | 9 119 06 | 2.810 | 3.853 | 382 72 | .1965 | |
| 1429 | Total at Office, | 66 863 | 225 070 34 | 96.483 | 95.093 | 9445 69 | .1413 | |
| 1430 | By Co.'s Salaried Collectors, | 2 437 | 11 619 47 | 3.517 | 4.907 | 487 42 | .2000 | |
| 1431 | By Co.'s Pay Stations, | | | | | | | |
| 1432 | By Express Co.'s, | | | | | | | |
| 1433 | | | | | | | | |
| 1434 | Total Outside Collections, | 2 437 | 11 619 47 | 3.517 | 4.907 | 487 42 | .2000 | |
| 1435 | Total Collections, | 69 300 | 236 689 81 | 100.0 | 100.0 | 9933 11 | .1433 | |
| 1436 | Balance Outstanding Close of Month, | | 4 317 84 | | | | | |

### ARREARS FOR CURRENT MONTH

| | Arrears | Amount Charged to Arrears Each Date | Collected During Mo. on Each Month's Arrears, | Previous Collections Reported | Total Collections on Each | Balance Outstand'g on Each at Close of Month | Amount of Each Considered Collectible | |
|---|---|---|---|---|---|---|---|---|
| 1441 | Jan. 31, 1908, Balance Arrears Dec. | 5 105 59 | 148 99 | 4 202 05 | 4 351 04 | 754 55 | | |
| 1442 | Feb. 29, 1908, Arrears for Jan'y, | 1 275 16 | 9 90 | 964 61 | 974 51 | 300 65 | | |
| 1443 | March 31, 1908, Arrears for Feb'y, | 1 406 99 | 6 95 | 1 174 24 | 1 181 19 | 225 80 | | |
| 1444 | April 30, 1908, Arrears for March, | 1 338 17 | 16 95 | 801 48 | 818 43 | 519 74 | | |
| 1445 | May 31, 1908, Arrears for April, | 1 138 92 | 6 96 | 631 59 | 638 55 | 500 37 | | |
| 1446 | June 30, 1908, Arrears for May, | 1 064 59 | 9 94 | 823 36 | 833 30 | 231 29 | | |
| 1447 | July 31, 1908, Arrears for June, | 1 203 33 | 9 99 | 828 12 | 838 11 | 365 77 | | |
| 1448 | Aug. 31, 1908, Arrears for July, | 765 76 | 13 54 | 498 59 | 512 13 | 253 63 | | |
| 1449 | Sept. 30, 1908, Arrears for Aug., | 1 012 75 | 126 93 | 565 73 | 692 66 | 320 09 | | |
| 1450 | Oct. 31, 1908, Arrears for Sept., | 955 67 | 68 41 | 540 07 | 608 48 | 347 19 | | |
| 1451 | Nov. 30, 1908, Arrears for Oct., | 1 569 52 | 1 093 30 | | 1 093 30 | 476 22 | | |
| 1452 | Dec. 31, 1908, Arrears for Nov., | 1 094 79 | | | | 1 094 79 | | |
| 1453 | Totals, | 17 921 24 | 1 511 86 | 11 029 84 | 12 541 70 | 6389 54 | | |
| 1460 | | | | | | | | |

| | | This Year | Last Year |
|---|---|---|---|
| 1461 | | | |
| 1462 | Gross Earnings Gas Dept., 12 months ending last month (13A) | | |
| 1463 | Total Arrears up to end of this month (1453) | | |
| 1464 | Per cent. of Arrears (1463) to Gross Earnings (1462) 1037 | | |

REPORT FOR 12 months '08.

## EXECUTIVE DEPARTMENT, GENERAL EXPENSES

| | | PLANT | TOTALS This Year | TOTALS Last Year | PER M. SOLD This Yr. | PER M. SOLD Last Yr. |
|---|---|---|---|---|---|---|
| 1500 | Executive Salaries, | 5 001 41 | 5 001 41 | 3 215 52 | .0256 | .0179 |
| 1501 | General Clerical Salaries, | 513 00 | 513 00 | 394 80 | .0026 | .0022 |
| 1502 | General Office Expense, | 663 38 | 663 38 | 478 25 | .0034 | .0027 |
| 1503 | Incidental Expense, | 2 679 81 | 2 679 81 | 1 723 38 | .0137 | .0096 |
| 1504 | Rent of Executive Offices, | 724 94 | 724 94 | 664 04 | .0037 | .0037 |
| 1505 | Legal Expenses, | 1 796 33 | 1 796 33 | 2 160 31 | .0092 | .0120 |
| 1506 | Total Above Items, | 11 378 87 | 11 378 87 | 8 636 30 | .0582 | .0481 |
| 1507 | Promoting New Business, | 11 634 96 | 11 634 96 | 13 394 04 | .0596 | .0747 |
| 1508 | Taxes, | 7 428 96 | 7 428 96 | 7 083 04 | .0380 | .0395 |
| 1509 | Total General Expenses, | 30 442 79 | 30 442 79 | 29 115 38 | .1558 | .1623 |

## ANALYSIS OF SPECIAL EXPENSE ACCOUNTS NOS. 1819, 1820, 1821, 1822. NEW BUSINESS

| | | Domestic Fuel Total | Domestic Fuel Per Consumer | Illuminating Total | Illuminating Per Consumer | Industrial Fuel Total | Industrial Fuel Per Consumer | Power Total | Power Per Consumer | Totals Amounts | Totals Per Consumer |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1520 | a. Advertising, Newspaper, etc | | | | | | | | | 768 88 | 4286 |
| 1521 | b. Circulars and Distr'n, | | | | | | | | | | |
| 1522 | c. Bonuses and Commissions, | | | | | | | | | | |
| 1523 | d. Exhibition Expenses, | | | | | | | | | 460 20 | 0717 |
| 1524 | e. Salaries, Wages and Miscins. Expenses | | | | | | | | | 4188 75 | 6486 |
| 1525 | Totals | | | | | | | | | 7420 83 | 1.1489 |
| 1526 | Cost of Appliances sold, | | | | | | | | | 1905 04 | 2.9500 |
| 1527 | Appliance Expense, | | | | | | | | | 376 09 | .5825 |
| 1528 | Total cost Appliances, | | | | | | | | | 2282 13 | 3.5335 |
| 1529 | Received for Appliances, | | | | | | | | | 2247 19 | 3.4800 |
| 1530 | f. Loss on Appliances, | | | | | | | | | 34 94 | 0.0535 |
| 1531 | f. Profit on Appliances, | | | | | | | | | | |
| 1532 | Piping and Connections — Material | | | | | | | | | 296 77 | .4593 |
| 1533 | Piping and Connections — Labor | | | | | | | | | 1918 37 | .2970 |
| 1534 | Piping and Connections — Miscins. Exp. | | | | | | | | | 839 33 | .1299 |
| 1535 | Piping and Connections — Totals | | | | | | | | | 5723 97 | .8862 |
| 1536 | Piping and Connections — Charged Consumers | | | | | | | | | 1853 90 | .2870 |
| 1537 | Piping and Connections — Net Cost g. | | | | | | | | | 3870 07 | .5992 |
| | Total cost items a to g | | | | | | | | | 11638 79 | 1.8002 |

## APPLIANCES INTRODUCED AND CONNECTED

### DOMESTIC FUEL

| | Class | No. | No. Cons. | Per Unit Items | |
|---|---|---|---|---|---|
| 1550 | Ranges (new) | 446 | | Feet Pipe per App'l | 10.47 |
| 1551 | " (old) | 1328 | | Cost Pipe & Fit'gs per Ap. | 1.850 |
| 1552 | Hot Plates, | 353 | | Cost Labor connecting Ap. | .860 |
| 1553 | Water Heaters, | 95 | | Total Cost connecting Ap. | 2.190 |
| 1554 | Heaters and Grates, | 31 | | Total Cost connecting per foot pipe | .2426 |
| 1555 | Misel. | 77 | | Pipe for | 25248 |
| 1556 | | | | | |
| 1557 | | | | | |

### ILLUMINATING

| Class | No. | No. Cons. | Per Unit Items |
|---|---|---|---|
| Houses piped by Co | | | Ave. rooms per house |
| Houses piped by contract | | | Cost Pipe & Fit'gs per House |
| | | | Cost Labor per House |
| Gas Arcs | | | Cost Pipe and Labor per House |
| Misel. | | | Cost Pipe and Labor per foot Pipe |

### INDUSTRIAL FUEL

| | | | | | |
|---|---|---|---|---|---|
| 1560 | | | | Feet Pipe per App'l | |
| 1561 | | | | Cost Pipe & Fit'gs per Ap. | |
| 1562 | | | | Total Cost connecting Ap. | |
| 1563 | | | | Cost Labor connecting Ap. | |
| 1564 | | | | Total Cost connecting per foot pipe | |
| 1565 | | | | | |
| 1566 | | | | | |
| 1567 | | | | | |

### POWER

| | | | | | |
|---|---|---|---|---|---|
| | | | | Below 5 H. P. | |
| | | | | 5 to 9 H. P. | |
| | | | | 10 to 14 H. P. | |
| | | | | 15 to 24 H. P. | |
| | | | | 25 to 39 H. P. | |
| | | | | 50 H. P. & Upwards | |

1570
1571
1572
1573
1574

REPORT FOR

## DETAILS OF GAS SALES

| | | Rate | THIS YEAR Cu. Ft. | THIS YEAR Amount | LAST YEAR Cu. Ft. | LAST YEAR Amount | Inc. or Dec. Cu. Ft. | % Inc. or Dec. |
|---|---|---|---|---|---|---|---|---|
| 1600 | | | | | | | | |
| 1601 | | | | | | | | |
| 1602 | Illuminating Gas | | | | | | | |
| 1603 | | | | | | | | |
| 1604 | | | | | | | | |
| 1605 | Gross Sales, | | 195 827 700 | 285 101 73 | 179 970 300 | 215 755 07 | 15 856 900 | 8.81 |
| 1606 | Less Rebates and Allowances | | 435 400 | 1 243 98 | 604 000 | 1 238 50 | 168 600 | 27.96 |
| 1607 | Net Sales | | 195 391 800 | 283 857 75 | 179 366 300 | 214 516 57 | 16 025 500 | 8.88 |
| 1608 | | | | | | | | |
| 1609 | Domestic | | | | | | | |
| 1610 | Fuel | | | | | | | |
| 1611 | Gas | | | | | | | |
| 1612 | | | | | | | | |
| 1613 | Gross Sales, | | | | | | | |
| 1614 | Less Rebates and Allowances | | | | | | | |
| 1615 | Net Sales | | | | | | | |
| 1616 | | | | | | | | |
| 1617 | Industrial | | | | | | | |
| 1618 | Fuel | | | | | | | |
| 1619 | Gas | | | | | | | |
| 1620 | | | | | | | | |
| 1621 | Gross Sales | | | | | | | |
| 1622 | Less Rebates and Allowances | | | | | | | |
| 1623 | Net Sales | | | | | | | |
| 1624 | | | | | | | | |
| 1625 | Gas | | | | | | | |
| 1626 | for | | | | | | | |
| 1627 | Power | | | | | | | |
| 1628 | | | | | | | | |
| 1629 | Gross Sales | | | | | | | |
| 1630 | Less Rebates and Allowances | | | | | | | |
| 1631 | Net Sales | | | | | | | |
| 1632 | Total Sales | | 195 391 800 | 283 857 75 | 179 366 300 | 214 516 57 | 16 025 500 | 8.88 |

## STREET LAMPS

| | No. of Lamps | GROSS EARNINGS | | | Amount | Amount per Lamp | Hours Burning | Gas per Hr. | Total Gas Consumed |
|---|---|---|---|---|---|---|---|---|---|
| 1633 | | Open Flame Burners | @ | per year | | | | | |
| 1634 | | do | @ | " | | | | | |
| 1635 | | do | @ | " | | | | | |
| 1636 | | Incandescent Burners | @ | " | | | | | |
| 1637 | | do | @ | " | | | | | |
| 1638 | | do | @ | " | | | | | |
| 1639 | | | | | | | | | |
| 1640 | | Totals | | | | | | | |

**EXPENSES**

| | | | Remarks |
|---|---|---|---|
| 1641 | Lighting and Extinguishing | | |
| 1642 | Repairing | | |
| 1643 | Cleaning | | |
| 1644 | Thawing | | |
| 1645 | Rental | | |
| 1646 | Inspecting and Testing | | |
| 1647 | | | |
| 1648 | | | |
| 1649 | | | |
| 1650 | | | |
| 1651 | | | |
| 1652 | | | |
| 1653 | Total Expense | | |
| 1654 | Net Earnings | | per M. ft. Gas |

REPORT FOR 12 months '08

## LOW PRESSURE STREET MAINS (FEET)

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1700 | 2 | 220 705 | 12 653 | | | 233 358 | | | | | 233 358 |
| 1701 | 3 | | | | | | | | | | 84 012 |
| 1702 | 4 | 83 518 | 494 | | | 84 012 | | | | | 13 799 |
| 1703 | 6 | 13 799 | | | | 13 799 | | | | | 4 822 |
| 1704 | 8 | 4 822 | | | | 4 822 | | | | | 9 100 |
| 1705 | 10 | 9 100 | | | | 9 100 | | | | | 3 950 |
| 1706 | 12 | 3 950 | | | | 3 950 | | | | | 1 300 |
| 1707 | 16 | 1 300 | | | | 1 300 | | | | | 1 400 |
| 1708 | 20 | 1 400 | | | | 1 400 | | | | | |
| 1709 | 24 | | | | | | | | | | |
| 1710 | 30 | | | | | | | | | | |
| 1711 | 36 | | | | | | | | | | |
| 1712 | FEET Totals | 338 594 | 13 147 | | | 351 841 | | | | | 351 841 |
| 1713 | Miles | 64 1 | | | | 66 5 | | | | | 66 5 |
| 1713a | Miles on 8-inch Basis | | | | | | | | | | |

## BOOSTER MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1714 | | | | | | | | | | | |
| 1715 | | | | | | | | | | | |
| 1716 | | | | | | | | | | | |
| 1717 | | | | | | | | | | | |
| 1718 | | | | | | | | | | | |
| 1719 | Totals | | | | | | | | | | |

## PUMPING MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1720 | | | | | | | | | | | |
| 1721 | | | | | | | | | | | |
| 1722 | | | | | | | | | | | |
| 1723 | | | | | | | | | | | |
| 1724 | | | | | | | | | | | |
| 1725 | Totals | | | | | | | | | | |

## COST OF STREET MAINS. (ALL KINDS)

| | | COST MAINS LAID THIS MONTH — Amount | | | Per Foot | | | COST MAINS LAID THIS YEAR — Amount | | | Per Foot | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Size | Labor | Material | Total | Labor | Mat'l | Total | Labor | Material | Total | Labor | Mat'l | Total |
| 1726 | 2 | | | | | | | 1314 40 | 1448 13 | 2762 53 | 104 | .114 | .218 |
| 1727 | 3 | | | | | | | | | | | | |
| 1728 | 4 | | | | | | | 62 20 | 157 93 | 220 13 | .126 | .319 | .445 |
| 1729 | 6 | | | | | | | | | | | | |
| 1730 | 8 | | | | | | | | | | | | |
| 1731 | 10 | | | | | | | | | | | | |
| 1732 | 12 | | | | | | | | | | | | |
| 1733 | 16 | | | | | | | | | | | | |
| 1734 | 20 | | | | | | | | | | | | |
| 1735 | 24 | | | | | | | | | | | | |
| 1736 | 30 | | | | | | | | | | | | |
| 1737 | 36 | | | | | | | | | | | | |
| 1738 | Totals | | | | | | | 1376 60 | 1606 06 | 2982 66 | 105 | .122 | .227 |

| | | THIS MONTH | THIS YEAR | RECAPITULATION | |
|---|---|---|---|---|---|
| 1739 | Cost Low Pressure Mains laid | $ . . | $ 2.984 66 | Miles Low Pressure Main | 66. 5 |
| 1740 | " Booster " " | $ . . | $ . . | " Booster Main | |
| 1741 | " Pumping " " | $ . . | $ . . | " Pumping Main | |
| 1742 | Total cost Mains laid | $ . . | $ 2.982.66 | Total Main Mileage | 66 5 |
| 1743 | Deduct value of Mains taken up | $ . . | $ . . | | |
| 1744 | Net cost of Mains | $ . . | $ 2.982.66 | | |

REPORT FOR 12 months '08.

## SERVICE PIPES LAID

| | | No. Laid This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Year | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1745 | Main to Meter (Old Main) | | | 310 | 4862 | 5172 | | 5172 |
| 1746 | " " (New Main) | | | 130 | 769 | 899 | | 899 |
| 1747 | Curb to Meter (Extension) | | | 28 | 280 | 308 | | 308 |
| 1748 | Total complete services, | | | 468 | 5911 | 6379 | | 6379 |
| 1749 | Main to Curb (acc't paving) | | | 40 | 130 | 170 | | 170 |
| 1750 | Total No. services | | | 508 | 6041 | 6549 | | 6549 |

## COST OF SERVICES

| | | Gross Cost | Charged Consumers | Net Cost | GROSS COST Per Service | GROSS COST Per Foot | NET COST Per Service | NET COST Per Foot |
|---|---|---|---|---|---|---|---|---|
| 1751 | Labor, | 2828 42 | | | | | | |
| 1752 | Material, | 3036 47 | | | | | | |
| 1753 | Total this month, | 5864 87 | 3059 95 | 2804 92 | | | | |
| 1754 | Previously reported, | | | | | | | |
| 1755 | Total this year, | 5864 87 | 3059 95 | 2804 92 | 12 13 | | 6 35 | .092 |
| 1756 | Cost last year, | 80636 | 1941 25 | 5122.25 | 13 44 | | 8 55 | .177 |

| | | THIS MONTH | | THIS YEAR | |
|---|---|---|---|---|---|
| 1757 | Pipe used for complete services, | | feet. | 24900 | feet. |
| 1758 | " " " service extensions, | | feet. | 1196 | feet. |
| 1759 | " " " total complete services, | | feet. | 31096 | feet. |
| 1760 | " " " services to curb, | | feet. | 645 | feet. |
| 1761 | Total, | | feet. | 31741 | feet. |

## APPLIANCES

| | | DOMESTIC FUEL APPLIANCES | | | | | | IR APPLIANCES | GAS ENGINES | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Ranges | Hot Pl. | W. H. | Heaters and Grates | Miscls | Total | No. | No. | H. P. |
| 1762 | First of Month, | 6458 | 770 | 864 | 169 | 234 | 8495 | | | |
| 1763 | New during Month, | 1774 | 353 | 95 | 31 | 77 | 2330 | | | |
| 1764 | Total, | 8282 | 1123 | 959 | 200 | 311 | 10825 | | | |
| 1765 | Off during Month, | 696 | 12 | 7 | 3 | 1 | 719 | | | |
| 1766 | Close of Month, | 7586 | 1111 | 952 | 197 | 310 | 10106 | | | |
| 1767 | First of Year, | 6458 | 770 | 864 | 169 | 234 | 8495 | | | |
| 1768 | Gain or Loss, | 1078 | 341 | 88 | 28 | 76 | 1611 | | | |

## STREET LAMPS

| | | No. Installed This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Yr. | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1769 | Lamp Services, | | | | | | | |
| 1770 | Boulevard Posts, | | | | | | | |
| 1771 | Common Posts, | | | | | | | |
| 1772 | | | | | | | | |
| 1773 | Total, | | | | | | | |

## PLANT DATA

| | | MAXIMUM CAPACITY 24 hrs. | MAXIMUM CAPACITY 1 hr. | Max. Make 24 hrs. This Mo. | % of Make to Cap. 24 hours | Max. Make 24 hrs. To Date | % of Make to Cap. 24 hours | Least Reserve Capacity |
|---|---|---|---|---|---|---|---|---|
| 1775 | Coal Gas Benches, | | | | | | | |
| 1776 | Water Gas Machines. | | | | | | | |
| 1777 | Total, | | | | | | | |
| 1778 | | | | | | | | |
| 1779 | | | | | | | | |
| 1780 | | | | | | | | |
| 1781 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| 1782 | Storage Capacity | | Purifying Capacity Cu. Ft. Material | |
| 1783 | Max. Send out 24 hrs. | | Cross Section Sq. Ft. (Basis Single flow boxes) | |
| 1784 | " " 1 hr. | | | |
| 1785 | % Storage to send out 24 hrs. | | | |
| 1786 | " " " " 1 hr. | | | |
| 1787 | " " " 24 hr. capacity | | | |
| 1788 | | | | |

REPORT FOR 12 months '08.

## SPECIAL EXPENSE ACCOUNT

| No. | ACCOUNT | Total Expense | CHARGED TO No. | Account | Amount | Bal. Special Accounts Close Month Debit | Credit |
|---|---|---|---|---|---|---|---|
| 1800 | Coal Stock Expense. | 1 013 72 | 500 | Coal Stock. | 1 013 72 | | |
| 1801 | Coke Stock Expense. | 1 786 79 | 502 | Coke Stock. | 1 786 79 | | |
| 1802 | Tar Stock Expense. | 480 98 | 503 | Tar Stock. | 480 98 | | |
| 1803 | Ammonia Stock Expense. | | 504 | Ammonia Stock. | | | |
| 1804 | Pur. Dept. and St. Room. | 2 670 23 | | | | | |
| 1805 | Barn Expense. | 3 025 16 | | See Details, next page. | | | |
| 1806 | Preliminary Expense. | | | | | | |
| 1806a | Depreciation | 42 235 28 | (Bal C, pg. 26) | | 42 235 28 | | |
| 1806b | Accumulation Int. | 7 030 43 | ( " " 26) | | 7 030 43 | | |
| 1807 | Lamps Discontinued. | | 1818h | St. Lamp Mntc. | | | |
| 1808 | Mains Abandoned. | | 1300 | St. Main Mntc. | | | |
| 1809 | Steam. | 8 635 66 | | | | | |
| | | | 1304b | Meter Dept. Exp. | See Details, next page. | | |
| 1810 | Rent. | 3 673 63 | 1402 | Coll. Off. Rent. | | | |
| | | | 1504 | Exc. Off. Rent. | | | |
| | | | 1805 | Barn Exp. | | | |
| 1811 | Contingent Bench Repairs. | | 1011 | Bench Repairs. | | | |
| | | | 1017 | Bldgs. Rep. C.G. | 35 77 | | |
| 1812 | Gen. W'ks Bldgs. Repairs. | 187 10 | 1113 | " " W.G. | 141 33 | | |
| | | | 1213 | " " P.G. | | | |
| | | | 1018 | App. Rep. C.G. | 178 71 | | |
| 1813 | General Apparatus Repairs. | 734 97 | 1114 | " " W.G. | 556 26 | | |
| | | | 1214 | " " P.G. | | | |
| | | | 1019 | Sund. Lab. C.G. | 390 32 | | |
| 1814 | Sundry Labor. | 1 506 07 | 1115 | " " W.G. | 1 115 75 | | |
| | | | 1215 | " " P.G. | | | |
| | | | 1020 | Tn. Tr. & Hse. C.G. | 746 37 | | |
| 1815 | Works Expense and Supplies. | 2 855 72 | 1116 | " " W.G. | 2 109 35 | | |
| | | | 1216 | " " P.G. | | | |
| | | | 1021 | Gen. Sup., C.G. | 800 99 | | |
| 1816 | General Supervision. | 3 167 12 | 1117 | " " W.G. | 2 366 13 | | |
| | | | 1217 | " " P.G. | | | |
| | | | 1022 | Dis. H. Sta. C.G. | | | |
| 1817 | Dist. Holder Station. | | 1118 | " " W.G. | | | |
| | | | 1218 | " " P.G. | | | |
| | | | 1507 | Prem. N. Bus. | | | |
| 1819 | Domestic Fuel App'ns. | 11 830 29 | 308 | Const., | | | |
| | | | 1507 | Prem. N. Bus. | 11 634 96 | | |
| 1820 | Illg. Fixt. and Fixtures. | 738 52 | 309 | Const., | | | |
| | | | 1507 | Prem. N. Bus. | | | |
| | Industrial Gas App'ns. | 43 19 | 310 | Const., | | | |
| | | | 1507 | Prem. N. Bus. | | | |
| 1822 | Gas Engines and Piping. | | 311 | Const., | | | |
| | | | 1508 | Taxes, Gas | 7 478 96 | | |
| 1823 | Taxes Accrued. | 11 143 32 | | Elec. | 3 714 36 | | |
| | | | 200 | Interest, Gas | 42 700 67 | | |
| 1824 | Interest Accrued. | 64 050 95 | | Elec | 21 350 28 | | |
| | | | 900 | Bad Debts, Gas | 3 000 00 | | |
| 1825 | Bad Debts. | 4 800 00 | 900 | Bad Debts, Elec | 1 800 00 | | |
| 1826a | Surfacing Mtl. | 706 44 | 1015a | | 188 95 | | |
| | | | 1111a | | 517 49 | | |
| 1826B | " " | 30 86 | 1015B | | 9 76 | | |
| | | | 1111B | | 21 17 | | |
| 1840 | Gas Office | 633 24 | 1402a | | 234 51 | | |
| | | | 1502a | | 76 66 | | |
| | | | 1202 | | 1 45 29 | | |
| | | | 1204 | | 58 14 | | |
| | | | 1814L | | 98 62 | | |
| | | | 3231L | | 60 10 | | |
| | Total. | | | | 1042 | | |

# PAY ROLL DATA — MONTH OF

| | Collection Expense | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| 2038 | Reading Meters | | | | | |
| 2039 | a First Reading | 1400a | 766 97 | 893 93 | .0024 | .0044 |
| 2040 | b Retakes | 1400a | 62 28 | | .0003 | |
| 2041 | Clerical Salaries | 1401 | 6 206 61 | 5 344 65 | .0325 | .0292 |
| 2042 | Addressing Machine | 1402c | 263 06 | 347 25 | .0013 | .0019 |
| 2043 | Del. Receipted Bills | 1402a | | | | |
| 2044 | Delivering Bills | 1404 | 190 11 | 158 09 | .0010 | .0009 |
| 2045 | Outside Collection | 1405 | 892 89 | 668 61 | .0042 | .0037 |
| 2046 | | | | | | |
| 2047 | Total | | 8 413 88 | 7 297 12 | .0420 | .0406 |
| 2048 | | | | | | |
| 2049 | Gen'l Exp. | | | | | |
| 2050 | Executive Salaries | 1500 | 1 78 41 | 1 664 70 | .0091 | .0093 |
| 2051 | Clerical Salaries | 1501 | 5,13 00 | 394 80 | .0026 | .0022 |
| 2052 | Legal Expense | 1505x | 47 | | | |
| 2053 | Total | | 2 296 88 | 2 059 50 | .0117 | .0115 |
| 2054 | | | | | | |
| 2055 | Stock Accounts | 501 | | 276 | | |
| 2056 | Making New Oxide | 505 | 9989 | 134 75 | .0005 | .0007 |
| 2057 | Main Stock | 506 | | 44 64 | | .0002 |
| 2058 | Steel Pipe Stock | 507 | | 11 00 | | .0001 |
| 2059 | Fittings " | 508 | | | | |
| 2060 | Service " | 509 | | | | |
| 2061 | Appliance " | 512 | | | | |
| 2062 | Miscellaneous | 513 | | | | |
| 2063 | | | | | | |
| 2064 | Total | | 94 89 | 182 15 | .0005 | .0010 |
| 2065 | | | | | | |
| 2066 | Coal Stock Exp. | | | | | |
| 2067 | Unloading Coal | 1800a | 946 87 | 2 485 62 | | |
| 2068 | Weighing Coal | 1800a | | | | |
| 2069 | Piling-Trimming-Shed | 1800a | | | | |
| 2070 | Rep. Shed-Conveyors | 1800c | | | | |
| 2071 | COKE STOCK EXP. | | | | | |
| 2072 | Coke Buggy | 1801a | 596 69 | 1 507 54 | | |
| 2073 | Work on Pile | 1801a | | | | |
| 2074 | Hauling Ret. to Yard | 1801b | 218 18 | 377 77 | | |
| 2075 | Marketing | 1801b | 241 36 | 339 441 | | |
| 2076 | Rep. Apparatus | 1801d | | | | |
| 2077 | Forward | | 2 197 84 | | | |

| | Special Expense Accounts | Acct. No. | Total Wages This Year | Total Wages Last Year | ThisYr. | LastYr. |
|---|---|---|---|---|---|---|
| | Tar Stock Exp. | | 2 187 84 | | Per Gall. | |
| | a Distilling | 1802a | 154 86 | 531 37 | | |
| | b Tar Plant Rep. | 1802b | 18 65 | 42 86 | | |
| | Ammonia Stock Exp. | | | | Per Lb. | |
| | a Concentrating, etc. | 1803a | | | | |
| | b Apparatus Rep. | 1803b | | | | |
| | Purchasing Dept. | | | | Per M. Mfg. | |
| | a Pur. Agt. & Clerks | 1804a | 656 38 | 599 99 | — | — |
| | b Handling Stock | 1804b | 1 181 44 | 638 94 | — | — |
| | Barn Expense | 1805 | 86 23 | 862 03 | — | — |
| | Prelimin. Exp. New W'k. | 1806 | | | — | — |
| | Steam O.A.&G.Co. | | 61 50 | | | |
| | a Fireman's Wages | 1809a | 1005 97 | | | |
| | b Hauling Ashes | 1809c | 36 23 | 61 13 | | |
| | c Sundry Labor | 1809c | | | | |
| | d Haul'g Coal to Boilers | 1809a | | | | |
| | e Boiler Repairs | 1809d | | | | |
| | f Boiler Changes | 1809c | | | | |
| | Rent—Janitors, etc. | 1810 | 567 14 | 585 15 | — | — |
| | Gen'l Works Blg. Rep. | 1812c | 101 96 | 100 41 | .0005 | .0005 |
| | " App. Repairs | 1813c | 444 94 | 448 31 | .0022 | .0022 |
| | Sundry Labor | 1814 | 1 505 57 | 2 495 68 | .0074 | .0123 |
| | Bench Repairs | 1811 | | 648 28 | | .0032 |
| | Works Expense | 1815 | 31 70 | 2 75 | .0002 | .0000 |
| | General Supervision | | | | | |
| | a Chemist | 1816a | | 1 481 63 | | .0023 |
| | b Clerical Salaries | 1816b | 1 038 96 | | .0005 | |
| | c Gen'l Supervision | 1816c | 1 998 93 | 1 325 82 | .0099 | .0065 |
| | Dist. Holder Sta. | 1817 | | | | |
| | New Bus. Expense | | | | Per M. Sold | |
| | a Advertising Men | | 475 65 | 2 771 74 | .0024 | .0135 |
| | b Demonstrator-Ass'ts | F | 10 02 | 17 21 | .0001 | .0001 |
| | c Solicitors | G | 1 216 44 | 1 495 97 | .0058 | .0073 |
| | d Clerks | H | 2 461 20 | 1 607 01 | .0126 | .0089 |
| | e App'l Connections | 1845 | 4 186 78 | 3 610 40 | .0214 | .0201 |
| | | 1840 | 47 94 | 723 91 | .0002 | .0035 |
| | | 1846 | 548 89 | 941 89 | .0028 | .0020 |
| | | 1850A | 706 44 | 787 17 | .0036 | .0044 |
| | | 1863 | | 47 83 | | .0024 |
| | Total | | 21 813 41 | 26 278 52 | | |

| | Construction | | Total Wages This Year | Total Wages Last Year | Per M. ThisYr. | Per M. LastYr. |
|---|---|---|---|---|---|---|
| | Gas Works | 300 | 2 270 63 | 80 98 | — | — |
| | Mains | 301 | 1 772 54 | 1 592 65 | — | — |
| | Services | 302 | 2 750 05 | 3 091 01 | — | — |
| | Meters | 303 | 17 35 | | — | — |
| | Street Lamps | 304 | | | — | — |
| | Tar Plant | 305 | | | — | — |
| | Pintsch Plant | 309 | | | — | — |
| | Total | | 6 411 57 | 5 764 62 | — | — |
| | Summary | | | | | |
| 2057 | Manufacturing | 2057 | 17 514 21 | 17 425 35 | | |
| 2057 | Distribution | 2057 | 6 335 31 | 6 343 79 | | |
| 2047 | Collection Exp. | 2047 | 8 413 88 | 7 297 13 | | |
| 2053 | General Exp. | 2053 | 2 296 88 | 2 059 50 | | |
| 2064 | Stock Accounts | 2064 | 94 89 | 182 15 | — | — |
| 2077 | Special Expenses | 2077 | 21 813 41 | 26 273 52 | | |
| 2063 | Construction | 2063 | 6 411 57 | 5 764 62 | — | — |
| | Total | | 57 876 15 | 64 486 06 | | |

REPORT FOR

## PAY ROLL DATA

| | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day |
|---|---|---|---|---|---|---|---|---|
| 2070 | **Mfg. Dept.** | | | | **Office and General** | | | |
| 2071 | Foremen, | | | | Cashiers, | | | |
| 2072 | Stokers, | | | | Ass't Cashiers, | | | |
| 2073 | " Helpers, | | | | Bookkeepers Gen., | | | |
| 2074 | | | | | " Cons., | | | |
| 2075 | Water Gas Makers, | | | | " Petty Led., | | | |
| 2076 | " " " Helpers, | | | | | | | |
| 2077 | | | | | Clerks:—New Bus. Dept., | | | |
| 2078 | Furnace Men, | | | | Application " | | | |
| 2079 | Coke Men, | | | | Contract " | | | |
| 2080 | Coal Men, | | | | Appl. Sales " | | | |
| 2081 | | | | | Tabulating " | | | |
| 2082 | Hydraulic Main, | | | | Collection " | | | |
| 2083 | Patchers, | | | | Auditing " | | | |
| 2084 | | | | | Filing " | | | |
| 2085 | Purifying, | | | | Pay Roll " | | | |
| 2086 | | | | | Distribution " | | | |
| 2087 | Laborers, | | | | Purchasing " | | | |
| 2088 | | | | | Store-room " | | | |
| 2089 | Engineers, | | | | Coke & Tar " | | | |
| 2090 | Works Mechanics, | | | | | | | |
| 2091 | Carpenters, | | | | | | | |
| 2092 | | | | | | | | |
| 2093 | Chemists, | | | | Representatives, | | | |
| 2094 | | | | | Ass't Representatives, | | | |
| 2095 | Works Clerks, | | | | | | | |
| 2096 | | | | | Floor Salesmen, | | | |
| 2097 | **Street Dept.** | | | | Collectors, | | | |
| 2098 | S. & M. Gang Foremen, | | | | | | | |
| 2099 | " " " Laborers, | | | | Stenographers, | | | |
| 2100 | | | | | Office Boys, | | | |
| 2101 | **Fitting Dept.** | | | | | | | |
| 2102 | Fitters, | | | | Meter Readers, | | | |
| 2103 | " Helpers, | | | | Troublemen, | | | |
| 2104 | | | | | | | | |
| 2105 | Meter Dept. Foremen, | | | | Branch Office, | | | |
| 2106 | " " Repairers, | | | | | | | |
| 2107 | " " Clerks, | | | | **Special Men** | | | |
| 2108 | | | | | | | | |
| 2109 | Arc Repairers, | | | | " | | | |
| 2110 | " Lighters, | | | | | | | |
| 2111 | | | | | | | | |
| 2112 | | | | | | | | |
| 2113 | **Engineering Dept.** | | | | **Dept. Heads & Supts.** | | | |
| 2114 | | | | | | | | |
| 2115 | | | | | | | | |
| 2116 | | | | | | | | |
| 2117 | | | | | | | | |
| 2118 | | | | | | | | |
| 2119 | | | | | | | | |
| 2120 | **Pintsch Dept.** | | | | | | | |
| 2121 | | | | | | | | |
| 2122 | | | | | | | | |
| 2123 | | | | | | | | |
| 2124 | | | | | | | | |
| 2125 | | | | | | | | |
| 2126 | **Tar Dept.** | | | | | | | |
| 2127 | | | | | | | | |
| 2128 | | | | | | | | |
| 2129 | | | | | | | | |
| 2130 | | | | | | | | |
| 2131 | | | | | | | | |
| 2132 | | | | | | | | |
| 2133 | Total, | | | | Total, | | | |

REPORT FOR 12 months '08

## REPAIR AND MAINTENANCE ACCOUNT

| | | | This Year | | | | | | | Last Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Labor | | Material | | Total | | Per M. Mfd. | Total | | Per M. Mfd. |
| 2175 | Coal Shed and Apparatus | (1800c) | | | | | | | | | | |
| 2176 | Coke Yard " | (1801d) | | | | | | | | 15 | 09 | .0001 |
| 2177 | Tar Dep't " | (1802b) | 16 | 25 | 25 | 71 | 41 | 96 | .0002 | 199 | 10 | .0010 |
| 2178 | Ammonia " | (1803b) | | | | | | | | | | |
| 2179 | Drawing and Charging Machinery, | (1010b) | 1317 | 05 | | | 1317 | 05 | .0060 | | | |
| 2180 | Retort House Conveyors, | (1010c) | 297 | 40 | | | 297 | 40 | .0013 | | | |
| 2181 | Bench Renewals, | (1011b) | | | 2296 | 25 | 2296 | 25 | .0106 | 3813 | 48 | .0188 |
| 2182 | Miscellaneous Bench Repairs, | (1011a) | 81 | 38 | 33 | 90 | 115 | 28 | .0005 | 207 | 76 | .0010 |
| 2183 | Water Gas Generating Apparatus, | (1107) | 505 | 37 | 625 | 22 | 1130 | 59 | .0052 | 935 | 64 | .0046 |
| 2184 | Boiler Repairs | (1800d) | | | | | | | | | | |
| 2185 | General Works Repairs, Building | (1017, 1113, 1213) | 30 | 82 | 157 | 88 | 188 | 70 | .0009 | 899 | 95 | .0045 |
| 2186 | " " " Apparatus | (1018, 1114, 1214) | 329 | 25 | 774 | 83 | 1004 | 08 | .0046 | 1807 | 94 | .0089 |
| 2187 | | | | | | | | | | | | |
| 2188 | | | | | | | | | | | | |
| 2189 | Total Mfg. Dept. | | 2477 | 52 | 3913 | 79 | 6391 | 31 | .0297 Per M. Sold | 7879 | 94 | .0387 Per M. Sold |
| 2190 | Mains | (1300) | 80 | 61 | 61 | 26 | 861 | 87 | .0044 | 1145 | 66 | .0064 |
| 2191 | Services | (1301) | 240 | 20 | 54 | 52 | 294 | 72 | .0015 | 383 | 91 | .0021 |
| 2192 | Meters | (1308) | 1607 | 81 | 294 | 91 | 1902 | 72 | .0097 | 1347 | 60 | .0075 |
| 2193 | Lamps | (1818) | | | | | | | | | | |
| 2194 | Total Dist'n and Lamp Dept. | | 2648 | 62 | 410 | 69 | 3059 | 31 | .0156 | 2877 | 17 | .0160 |
| 2195 | Total All Dep'ts. | | 5126 | 14 | 4324 | 48 | 9450 | 62 | .0484 | 10757 | 16 | .0600 |

## GAS USED BY COMPANY

| | WHERE USED | Cu. Ft. | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2200 | Gas Works | 6 700 | 1815 | | 2 47 | |
| 2201 | Elect Works | 1 200 | 3008 | | 2 65 | |
| 2202 | Meter Shop | 60 100 | 1304B | | 21 86 | |
| 2203 | Offices | 288 530 | 1840 | | 108 03 | |
| 2204 | Exhibition | | | | | |
| 2205 | Dem. Hall | | | | | |
| 2206 | Store Room | 3 700 | 1804B | | 1 49 | |
| 2207 | Elect meter Shop | 6 000 | 3264a 3292a | | 2 17 | |
| 2208 | | | | | | |
| 2209 | | | | | | |
| 2210 | | | | | | |
| 2211 | | | | | | |
| 2212 | | | | | | |
| 2213 | | | | | | |
| 2214 | Totals | 37 2 200 | | | 138 67 | |

## COKE USED BY COMPANY

| | WHERE USED | Weight | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2215 | Bench Fuel | 143.51 | 1002 | | 717 55 | |
| 2216 | Boiler Fuel Breeze | 256.50 | ~~1800~~ | | 448 88 | |
| 2217 | Pintsch Bench Fuel | | 2401 | | | |
| 2218 | Generator Fuel | 3312.77 | 1101 | | 1681 37 | |
| 2219 | Street Department | | 1300 | | | |
| 2220 | Meter Shop | | 1304b | | | |
| 2221 | | | | | | |
| 2222 | Drying out water Gas mch. | 7.60 | 35 | | 39 38 | |
| 2223 | | | | | | |
| 2224 | | | | | | |
| 2225 | | | | | | |
| 2226 | | | | | | |
| 2227 | Totals | 3720.28 | | | 1803 18 | |

12 months '08

## COAL USED BY COMPANY

| | | Tons | Cost | WHERE USED | Acct. No. | Tons | Cost |
|---|---|---|---|---|---|---|---|
| 2228 | Used during month (2304) | 6676 43 | 36052 79 | Coal Carbonized Ko. 2&4 | 1000 | 17 68 / 5552 70 | 32 08 / 31787 92 |
| 2229 | | | | Boiler Fuel | 1009 | | |
| 2230 | From Elect Stock 550 | 25 20 | 62 42 | Bench Fuel | 1002 | 89 10 / 25 20 | 312 74 / 63 42 |
| 2231 | | | | Street Department | 1300 | 759 60 | 2229 86 |
| 2232 | | | | Electric Dept. | 3000a | 194 50 | 1100 05 |
| 2233 | | | | Sold | | 6 83 | 34 14 |
| 2234 | Total | 6701 63 | 36115 21 | | Total | 6701 63 | 36115 21 |

## TAR SOLD AND USED

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2235 | Sold and Used (2344) | 112 034 | 3237 77 | Sold | | 52 058 | 2038 25 |
| 2236 | | | | Used in Pitch Plant | | | |
| 2237 | | | | Used for Gas Making | | | |
| 2238 | | | | Elect. Dept. | 3000a | 59 976 | 1199 52 |
| 2239 | Total | 112 034 | 3237 77 | | Total | 112 034 | 3237 77 |

## OIL USED BY COMPANY

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2240 | Used during Month (2376) | 608 176 | 22713 06 | Enricher | 1102 | 608 176 | 22713 06 |
| 2241 | | | | Pintsch | 2400 | | |
| 2242 | | | | | | | |
| 2243 | | | | | | | |
| 2244 | | | | | | | |
| 2245 | Total | 608 176 | 22713 06 | | Total | 608 176 | 22713 06 |

## COAL STOCK

| | | BITUMINOUS GAS COAL | | | | | | STEAM COAL | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tons | Cost | Per Ton | Tons | Cost | Per Ton | Tons | Cost | Per Ton |
| 2300 | First of Month | 1491 89 | 8687 72 | 5 822 | | | | | | |
| 2301 | Rec'd during Mo. | 543 25 | 2948 49 | 5 513 | 781 00 | 2177 00 | 2 788 | | | |
| 2302 | Coal Stock Exp. | | 906 77 | 167 | | 107 00 | 137 | | | |
| 2303 | Total Cost | 6923 14 | 39542 93 | 5 712 | 781 00 | 2284 00 | 2925 | | | |
| 2304 | Used during Mo. | 5904 16 | 33790 85 | 5 724 | 772 28 | 2261 94 | 2928 | | | |
| 2305 | Close of Mo. | 1018 99 | 5752 08 | 5 651 | 8 72 | 22 06 | 2 830 | | | |
| 2307 | Coal Stock Expense | | (1800a) | | $ | | | | | |
| 2308 | do | | (1800b) | | | | | | | |
| 2309 | do | | (1800c) | | | | | | | |
| 2311 | | | | | | | | | | |
| 23 | Total Expense | | (to line 2302) | | $ | | | | | |

| | | COKE STOCK | | | BREEZE STOCK | | |
|---|---|---|---|---|---|---|---|
| | | Total Tons | Total Cost | Av. Per Ton | Total Tons | Total Cost | Av. Per Ton |
| 2320 | Stock first of month | 675 85 | 3385 04 | 5 009 | | | |
| 2321 | Received or made during month | 3830 00 | 17378 29 | 4 536 | | | |
| 2322 | Coke Expense as below | | 1786 79 | | | | |
| 2323 | Total Cost | 4505 85 | 22550 12 | | | | |
| 2323a | Coke used under Benches | | | | | | |
| 2323b | Used elsewhere than under Benches | | | | | | |
| 2324 | Total Coke used during Month | 3720 28 | 18037 18 | | | | |
| 2325 | Sold during month | 623 07 | 2963 30 | | | | |
| 2326 | Total Sold and Used | 4343 30 | 21000 48 | | | | |
| 2327 | Stock close of month | 162 55 | 549 64 | | | | |
| 2328 | Coke Stock Expense | Coke (1801a) | $ | | Breeze (1801e) | $ | |
| 2329 | do | (1801b) | | | (1801f) | | |
| 2330 | do | (1801c) | | | (1801g) | | |
| 2331 | do | (1801d) | | | (1801h) | | |
| 2332 | do | | | | | | |
| 2333 | Total Expense | (to line 2322) | | | | | |

## Clerical Salaries Data.

| | No. Clerks | Total Salaries | Charged To | Amount |
|---|---|---|---|---|
| Gas Works | 1 | 615.70 | 1816. Wks. Supervision | 615.70 |
| Collection Office | 8 | 6315.51 | 1401. Coll. Cler. Sal. | 6315.51 |
| General Office | 1 | 513.00 | 1501. General Office | 513.00 |
| Purchasing Dept. | 1 | 550.00 | 1600A. Purch. Dept. | 550.00 |
| Appliance Dept. | 1 | 530.00 | Appliance Dept. | 530.00 |
| New Business Dept | 1 | 600.00 | Prom. New. Business | 600.00 |
| Total | 13 | 9124.21 | Total | 9124.21 |

## TAR STOCK

| | | Coal Gas Tar | | | Water Gas Tar | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2340 | Stock first of month | 38500 | 701 74 | | 58735 | 1061 68 | |
| 2341 | Made and bought during month | 49418 | 988 36 | | 96906 | 1938 12 | |
| 2342 | Tar Expense as below | | 378 67 | | | 102 31 | |
| 2343 | Total Cost | 87918 | 2068 77 | | 155641 | 3202 01 | |
| 2344 | Sold and used during month | 63377 | 2071 71 | | 48657 | 1166 06 | |
| 2345 | Stock close of month | 24541 | 397 | | 106984 | 2035 95 | |

| | | | |
|---|---|---|---|
| 2347 | Tar Stock Expense | (1802a) | $ . |
| 2348 | do | (1802b) | . |
| 2349 | do | (1802c) | . |
| 2350 | | | . |
| 2351 | | | . |
| 2352 | Total Expense | (to line 2342) | $ |

## AMMONIA STOCK

| | | Pounds | Cost | Per Lb. |
|---|---|---|---|---|
| 2360 | Stock first of month | | | |
| 2361 | Made during month | | | |
| 2362 | Ammonia Expense as below | | | |
| 2363 | Total Cost | | | |
| 2364 | Sold during month | | | |
| 2365 | Stock close of month | | | |

| | | | |
|---|---|---|---|
| 2367 | Ammonia Expense | (1803a) | $ . |
| 2368 | do | (1803b) | . |
| 2369 | do | (1803c) | . |
| 2370 | Total Expense | (to line 2362) | $ |

## OIL STOCK

| | | GAS OIL | | | PINTSCH OIL | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2372 | Stock first of month | 22783 | 796 02 | | | | |
| 2373 | Received during month | 604731 | 22 237 83 | | | | |
| 2374 | Oil Expense | | 35 00 | | | | |
| 2375 | Total Cost | 627464 | 23 068 85 | | | | |
| 2376 | Used during month | 608176 | 22 713 06 | | | | |
| 2377 | Stock close of month | 19288 | 655 79 | | | | |

Page 19 Item 1806b - Depreciation 5% on valuation $844,705.69 carried in suspense pending determination of exact amount by court in Dollar Gas suit - $42,235.28

Page 19 Item 1806c - Occupation tax of 3% on Gross receipts - $234,347.51 @ $1.25 per M carried in suspense pending determination of exact amount, if any by the court $703.04.

**REPORT FOR**

## PINTSCH DEPARTMENT

| | MANUFACTURING | Plant | Output | Output per M | TOTAL This Year | TOTAL Last Year | Total per M. ThisYr. | Total per M. LastYr. |
|---|---|---|---|---|---|---|---|---|
| 2400 | Oil, Gals. @ | | | | | | | |
| 2401 | Bench Fuel, Tons @ | | | | | | | |
| 2402 | " @ | | | | | | | |
| 2403 | Total Cost Material, | | | | | | | |
| 2404 | Tar | | | | | | | |
| 2405 | Hydrocarbon Oil, | | | | | | | |
| 2406 | Total Residuals, | | | | | | | |
| 2407 | Net Cost Materials, | | | | | | | |
| 2408 | Retort House Labor, | | | | | | | |
| 2409 | Bench Repairs, | | | | | | | |
| 2410 | Retort House Expense, | | | | | | | |
| 2411 | Steam, | | | | | | | |
| 2412 | Purification, | | | | | | | |
| 2413 | Works Repairs, | | | | | | | |
| 2414 | Sundry Labor, | | | | | | | |
| 2415 | Works Expense and Supplies, | | | | | | | |
| 2416 | Total Manufacturing, | | | | | | | |
| | DISTRIBUTION | | Receiver Expense | Receiver per M. | | | | |
| 2420 | Car Fillers, | | | | | | | |
| 2421 | Pipe Line Repairs, | | | | | | | |
| 2422 | Hose, | | | | | | | |
| 2423 | Sundries, | | | | | | | |
| 2424 | Total, | | | | | | | |
| 2425 | Gas Lost, | | | | | | | |
| 2426 | Total Distribution, | | | | | | | |
| 2427 | Total Manuf'g and Distribution Exp. | | | | | | | |

### GROSS EARNINGS

| | | | | | |
|---|---|---|---|---|---|
| 2430 | Gas, | Cu. ft. | | | |
| 2431 | | Cu. ft. | | | |
| 2432 | | Cu. ft. | | | |
| 2433 | Total Earnings, | Cu. ft. | | | |
| 2434 | Expenses as above, | | | | |
| 2435 | Taxes, | | | | |
| 2436 | Depreciation on plant % | | | | |
| 2440 | Total Expenses, | | | | |
| 2441 | Net Earnings Pintsch Dep't, | | | | |
| 2442 | % Credit Income, Acc't No. 202 | | | | |
| 2443 | % Credit Pintsch Comp. Co. | | | | |

| | | | | |
|---|---|---|---|---|
| 2444 | Gas on hand 1st of Month, | Cu. ft. | Gas Sold | Cu. ft. |
| 2445 | Gas made, | Cu. ft. | Gas on hand last of month | Cu. ft. |
| 2446 | | Cu. ft. | Gas lost | Cu. ft. |
| 2447 | Total Gas to Account for, | Cu. ft. | Total Gas Accounted for | Cu. ft. |

| | | This Year | % | Last Year, | % |
|---|---|---|---|---|---|
| 2450 | % Gas Lost to Gas Made, | " " | " | " " | " |
| 2451 | % Gas Lost to Gas Sold, | " " | | " " | |
| 2452 | Kind of Oil Used, | " " | | " " | |
| 2453 | Amount Gas Made per Gallon Oil, | " " | C. F. | " " | C. F. |
| 2454 | Amount Oil Used per 1000 C. F. Made, | " " | Gals. | " " | Gals. |
| 2455 | Amount Oil Used per 1000 C. F. Sold, | " " | " | " " | " |
| 2456 | Number Retorts in Use, | " " | | " " | |
| 2457 | | " " | | " " | |
| 2458 | Kind of Fuel Used, | " " | | " " | |
| 2459 | Amount Fuel Used, Lbs. | Furnaces | Boilers | Furnaces | Boilers |
| 2460 | Amount Fuel Used, Lbs. per M. ft. Made, | | | | |
| 2461 | Amount Fuel Used, Lbs. per M. ft. Sold, | | | | |
| 2462 | | | | | |
| 2463 | | | | | |
| 2464 | | | | | |
| 2465 | | | | | |

## APPROVALS AND RECORD

| | |
|---|---|
| AUDITED AND VOUCHED FOR BY SECRETARY | |
| APPROVED BY DEPARTMENT SUPERINTENDENT | |
| APPROVED BY MANAGER (OR ACTING MGR.) | |
| DATE REPORT WAS MAILED BY COMPANY | |

DATE RECEIVED AT N. Y. OFFICE

CHECKED BY — REVIEWED BY

DATE OF REVIEWING LETTER — DATE OF CO.'S LETTER OF REPLY

### THIS REPORT HAS BEEN SEEN BY

| OFFICE DEPT. | CORPORATION DEPT. | EXECUTIVE DEPT. | GEN. MGR'S OFFICE | ENGINEERING DEPT. | AUDITING DEPT. | STATISTICAL DEPT. | NEW BUSINESS DEPT. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Lincoln Gas & Electric Light Co.

Manufacturing and Expense Reports

OF

# GAS DEPARTMENT

FOR 12 MONTHS ENDING DECEMBER 31 1909

# General Rules for Reporting

1. The Company's name should be stamped on report covers, and on the first page, and the name of the City or Plant at the head of every other page in the report.

2. Date of reports should be stamped at the top of every page.

3. Decreases should be in red.

4. Never use copying ink.

5. Special or unusual entries, corrections of back errors, changes in cumulative figures, discrepancies between annual and monthly reports, should invariably be explained.

6. Carry per unit costs four decimal places.

7. Items which do not apply to your Company's business, and cannot be filled in, should be checked, excepting large sections such as lines 1200-22, which should be ruled out.

8. Zeros should be filled in; don't leave blank lines.

9. Where statistical information asked for is not given, state reasons for omitting.

10. Figure "per meter" data on meters at close of month, less company and sub-meters.

11. Figure "per commmer" data on consumers at close of month.

12. Show residuals, lines 1004 to 1007, **"per ton of coal carbonized."**

13. Line 1425 should show the sum total of lines 905 and 906 on previous month's report, plus line 907 on current month's report.

14. Each copy of the report sent to the New York Office should be signed by the Secretary, Department Superintendent and by the General Manager or Acting General Manager.

15. The Manager or Acting Manager should inclose with every report to the New York Office a letter in duplicate reviewing the report and calling attention to all items of interest or of marked change.

REPORT FOR Year Ending December 31 1909

## GROSS EARNINGS

| | FROM SALE OF GAS | AMOUNTS This Year | AMOUNTS Last Year | Increase or Decrease | Receipts per M. Sold This Year | Receipts per M. Sold Last Year |
|---|---|---|---|---|---|---|
| 900 | Illuminating Purposes, | | | | | |
| 901 | Domestic Fuel " | | | | | |
| 902 | Industrial Fuel " | | | | | |
| 903 | Power " | | | | | |
| 904 | Street Lamp " | | | | | |
| 905 | Total from Gas Sales, | 244 798 78 | 233 857 75 | 10 941 03 | 1.1983 | 1.1970 |
| 906 | Meter charge on Minimum Bills, | 711 00 | 704 14 | 6 86 | .0035 | .0036 |
| 907 | Forfeited Discount, | 26 114 96 | 27 85 62 | 1 70 66 | .0128 | .0142 |
| 908 | Total Earnings from Gas, | 248 124 74 | 237 947 51 | 10 777 23 | 1.2146 | 1.2148 |
| 909 | Bad Debts, | 3 000 00 | 3 000 00 | | .0146 | .0154 |
| 910 | Gross Earnings Gas Dep't, | 245 124 74 | 234 947 51 | 10 777 23 | 1.2000 | 1.1994 |
| 911 | Operating Expenses (Total) (917) | 134 708 24 | 137 090 35 | 3 382 11 | .6594 | .7016 |
| 912 | Net Earnings Gas Dept. | 110 416 50 | 97 257 16 | 13 159 34 | .5406 | .4978 |

## SUMMARY OF OPERATING EXPENSES

| | | Plant | Output | Consumers | Meters | TOTAL COST This Year | TOTAL COST Last Year |
|---|---|---|---|---|---|---|---|
| | Flood | 300 00 | | | | 300 00 | 100 00 |
| 913 | Manufacturing (1200) | 9 166 99 | 63 065 63 | | | 72 232 62 | 80 734 46 |
| 914 | Distribution (1300) | 6 017 62 | | 4 380 17 | 5 152 58 | 15 550 37 | 15 879 99 |
| 915 | Collection (1400) | | | 7 145 83 | 2 759 24 | 10 105 07 | 9 993 11 |
| 916 | General (1500) | 36 520 18 | | | | 36 520 18 | 30 442 79 |
| 917 | Totals | 52 004 79 | 63 065 63 | 11 526 00 | 8 111 82 | 134 708 24 | 137 090 35 |

## SUMMARY OF OPERATING EXPENSES. PER UNIT

| | | Per M. Sold: Plant | Output | Consumers | Meters | Total This Year | Total Last Year | Per Consumer: Consumers Charges | Meter Charges | Total C. & M | Per Meter: Consumer Charges | Meter Charges | Total C. & M. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Flood | .0018 | | | | .0018 | .0006 | | | | | | |
| 913a | Manufacturing (1200) | .0349 | 3087 | | | 3.436 | 4127 | | | | | | |
| 914a | Distribution (1300) | .0235 | | .0214 | .0252 | .0761 | .0812 | 6216 | 7311 | 13527 | 6988 | 7154 | 13542 |
| 915a | Collection (1400) | | | .0350 | .0145 | .0495 | .0568 | 1.0143 | 4197 | 1.4340 | 1.0420 | 4216 | 1.4636 |
| 916a | General (1500) | .1422 | | | | .1422 | .1558 | | | | | | |
| 917a | Totals | .2547 | .3087 | .0564 | .0397 | .6595 | .7016 | 1.6359 | 1.1510 | 2.7869 | 1.6808 | 1.1470 | 2.8278 |

## SUMMARY OF GAS SALES. (POPULATION THIS YEAR 48000 LAST YEAR 47500)

| | | Total Sales (Cu. Ft.) This Year | Total Sales (Cu. Ft.) Last Year | No. of Meters. This Year | No. of Meters. Last Year | Average Sale per Meter This Year | Average Sale per Meter Last Year | Avg. Sale per Capita This Year | Avg. Sale per Capita Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 918 | Illuminating Gas, | | | | | | | | |
| 919 | Dom. Fuel Gas, | | | | | | | | |
| 920 | Ind. Fuel Gas, | | | | | | | | |
| 921 | Power Gas, | | | | | | | | |
| 922 | Total Fuel Gas, | 204 284 955 | 195 391 800 | | | | | | |
| 923 | Total Private Sales, | 204 284 955 | 195 391 800 | 6857.6 | 6547 | 29780 | 29830 | 4256 | 4112 |
| 924 | Street Lamps, | | | No. Lamps | | Av'g per Lamp | | | |
| 925 | Total Sales, | 204 284 955 | 195 391 800 | | | | | | |

## CONSUMERS Avg Cons 6835 Avg Meter 6857.6

| | | No. Using: Ill'tg Gas Only | Fuel Gas Only | Both | Total No. Consumers | Total Using: Ill'tg Gas | Fuel Gas |
|---|---|---|---|---|---|---|---|
| 926 | First of Month, Yr | | | 6630 | | | |
| 927 | New during Month, Yr | | | 4006 | | | |
| 928 | Total, | | | 10 636 | | | |
| 929 | Off during Month, Yr | | | 3589 | | | |
| 930 | Close of Month, Yr | | | 7047 | | | |
| 931 | First of Year, | | | 6630 | | | |
| 932 | Gain or Loss, | | | 417 | | | |

## CONSUMER DATA

| | | This Year | Last Year | | This Year | Last Year |
|---|---|---|---|---|---|---|
| 941 | Ill'tg Sales per Ill'tg Consumer, | | | Inhabitants per Ill'tg Consumer | | |
| 942 | Dom. F. " " Dom. F. " | | | " " Dom. Fuel " | | |
| 943 | Indust'l " " Ind. " | | | " " Ind. Fuel " | | |
| 944 | Power " " Power " | | | " " Power " | | |
| 945 | Average Sales per Consumer, | 28 780 | 30 352 | " " Consumer | 6812 | 7164 |

1955

## MANUFACTURING DEPARTMENT. COAL GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1000 | Coal Carbonized 1975.41 Tons Yough @ | | 11264.75 | .5705 | 11264.75 | 32427.01 | .5705 | .5829 |
| 1001 | Enricher " @ | | | | | | | |
| 1002 | Bench Fuel 2.102 % 1975.41 Yough @ | | 1109.80 | .0562 | 1109.30 | 3479.84 | .0562 | .0625 |
| 1003 | Total Cost C. G. Mfg. Mat'l 1158.62 Tons Coke | | 12374.05 | .6267 | 12374.05 | 35916.85 | .6267 | .6454 |
| 1004 | Coke Residual 128 m ton Run @ | | 6594.44 | .3340 | 6594.44 | 16947.69 | .3340 | .2938 |
| 1005 | Tar " 197.5 Gals @ | | 375.08 | .0200 | 375.08 | 788.36 | .0200 | .0177 |
| 1006 | Ammonia " @ | | | | | | | |
| 1007 | Carbon " @ | | | | | | | |
| 1008 | Total Residuals | | 6989.52 | .3540 | 6989.52 | 17336.05 | .3540 | .3115 |
| 1009 | Net Cost C. G. Mfg. Material | | 5384.53 | .2727 | 5384.53 | 18580.80 | .2727 | .3340 |
| 1010 | Retort House Labor | 20000 | 1275.44 | .0646 | 1475.44 | 4167.13 | .0747 | .0749 |
| 1011 | Bench Repairs | | 817.21 | .0414 | 817.21 | 2425.77 | .0414 | .0436 |
| 1012 | Retort House Expense | | 63.68 | .0032 | 63.68 | 195.37 | .0032 | .0035 |
| 1013 | Total Cost Generating Coal Gas | 20000 | 7540.86 | .3819 | 7740.86 | 26369.09 | .3920 | .4740 |
| 1014 | Steam | | 365.36 | .0185 | 365.36 | 1456.76 | .0185 | .0262 |
| 1015 | Purifying C. G. Labor, Exp. & Repairs | | 135.85 | .0069 | 135.85 | 210.87 | .0069 | .0038 |
| 1016 | " Material | | 50.00 | .0025 | 50.00 | 200.47 | .0025 | .0036 |
| 1017 | General Works, Bldgs., Repairs (C. G.) | 2.91 | | | 2.91 | 85.76 | .0001 | .0015 |
| 1018 | " Apparatus " (C. G.) | 97.54 | | | 97.54 | 321.67 | .0049 | .0060 |
| 1019 | Sundry Labor (C. G.) | 255.33 | | | 255.33 | 806.71 | .0129 | .0145 |
| 1020 | Works Expense and Supplies (C. G.) | 278.55 | | | 278.55 | 746.27 | .0141 | .0134 |
| 1021 | General Supervision (C. G.) | 234.64 | | | 234.64 | 800.99 | .0119 | .0144 |
| 1022 | District Holder Station (C. G.) | | | | | | | |
| 1023 | Total Purification and Storage | 868.97 | 551.21 | .0279 | 1420.18 | 4642.60 | .0719 | .0834 |
| 1024 | Total Cost Coal Gas in Holder | 1068.97 | 8092.07 | .4098 | 9161.04 | 31011.69 | .4637 | .5574 |

| | COAL GAS STATISTICS | This Year. | Last Year |
|---|---|---|---|
| 1029 | Coal Gas Made | 19747.110 Cu. ft. | 55647.100 Cu. ft. |
| 1030 | Kind of Coal used | Yough. | Yough. |
| 1031 | Coal Carbonized | 1975.41 Tons | 5565.38 Tons |
| 1032 | Yield per lb. Coal | 5.0 Cu. ft. | 5.0 Cu. ft. |
| 1033 | Cost of Coal per ton delivered (with freight @ $ per ton shipped) | $ 5.567 | $ 5.714 |
| 1034 | Average number retorts in use | 15.15 | 14.5 |
| 1035 | Average charge per retort | 350 Lbs. | 350 Lbs. |
| 1036 | Average make per retort Per 24 hrs. | 10500 Cu. ft. | 10530 Cu. ft. |
| 1037 | Average make per man charged acc't No. 1010 Per M Hrs. | 28275 Cu. ft. | 24080 Cu. ft. |
| 1038 | Coke made per ton Coal Carbonized | 1300 Lbs. | 1275 Lbs. |
| 1039 | Coke used for Bench Fuel per ton Coal Carbonized | - Lbs. | - Lbs. |
| 1040 | Coal used for Bench Fuel " " | 364 Lbs. | 314 Lbs. |
| 1041 | Receipts for Coke per ton sold | $ 5.938 | $ 6.362 |
| 1042 | " " " per ton Coal Carbonized | $ 7.858 | $ 7.11 |
| 1043 | Tar made per ton Coal Carbonized | 10 Gals. | 8.88 Gals. |
| 1044 | Receipts for Tar per " | .377¢ | 366¢ |
| 1045 | " " " per lb. sold | .0397¢ | .0372¢ |
| 1046 | Ammonia made per ton Coal Carbonized | - Lbs. | - Lbs. |
| 1047 | Receipts for Ammonia " | - ¢ | - ¢ |
| 1048 | " " " per lb. sold | - ¢ | - ¢ |
| 1049 | Carbon sold | - Tons | - Tons |
| 1050 | Price received for Carbon per ton | $ - | $ - |
| 1051 | Gas Purified per bu. per change | - Cu. ft. | - Cu. ft. |
| 1052 | Spent Oxide sold Tons @ $ per ton | - | - |
| 1053 | Illuminating Power Max. | 16.5 C. P. | 17.5 C. P. |
| 1054 | Illuminating Power Min. | 15.5 C. P. | 15.8 C. P. |
| 1055 | Illuminating Power Avg. | 16.2 C. P. | 16.6 C. P. |
| 1056 | Heat Units (B. T. U.) Max. | 711.5 B. T. U. | 719.6 B. T. U. |
| 1057 | Heat Units (B. T. U.) Min. | 639.4 B. T. U. | 646.2 B. T. U. |
| 1058 | Heat Units (B. T. U.) Avg. | 670.8 B. T. U. | 684.2 B. T. U. |
| 1059 | | | |
| 1060 | | | |
| 1061 | | | |



POOR COPY

## MANUFACTURING DEPARTMENT. WATER GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| | Blow Mil Gas 1436.73 Down | | | | | | | |
| 1100 | Steam for Generating Water Gas | | 2245 00 | .0112 | 2245 00 | 3577 33 | .0112 | .0121 |
| 1101 | Generator Fuel, 4780.7 Tons @ | | 26665 24 | .1333 | 26665 24 | 16742 07 | .1333 | .1027 |
| 1102 | Enricher, 734148 @ 119473 | | 22186 12 | .1109 | 22186 12 | 22713 06 | .1109 | .1446 |
| 1103 | Total W. G. Making Material, | | 51076 36 | .2554 | 51076 36 | 43032 16 | .2554 | .2664 |
| 1104 | Water Gas Tar Residual Acc't., | | 2399 66 | .0119 | 2399 66 | 1938 12 | .0119 | .0120 |
| | Net Cost W. G. Mfg. Material, | | 48676 70 | .2435 | 48676 70 | 41094 04 | .2435 | .2544 |
| 1106 | Gas Making Labor, | | 4082 41 | .0204 | 4082 41 | 4608 71 | .0204 | .0285 |
| 1107 | Repairs to W. G. Gen. Apparatus, | | 1487 94 | .0074 | 1487 94 | 1151 24 | .0074 | .0071 |
| 1108 | W. G. Generating House Expense, | | 153 37 | .0008 | 153 37 | 107 74 | .0008 | .0007 |
| 1109 | Total Cost Generating W. G., | | 54420 42 | .2721 | 54420 42 | 46960 93 | .2721 | .2907 |
| 1110 | Steam, | | 4507 04 | .0225 | 4307 04 | 2482 07 | .0223 | .0155 |
| 1111 | Purifying W. G. Labor, Exp. and Rep., | | 375 86 | .0019 | 375 86 | 574 26 | .0019 | .0036 |
| 1112 | Purifying W. G. Material, | | 550 00 | .0028 | 550 00 | 503 34 | .0028 | .0031 |
| 1113 | General Works Repairs, Buildings, | 140 84 | | | 140 84 | 106 53 | .0007 | .0007 |
| 1114 | General Apparatus Repairs, | 744 46 | | | 744 46 | 669 01 | .0047 | .0041 |
| 1115 | Sundry Labor, | 2156 75 | | | 2156 75 | 2079 02 | .0108 | .0129 |
| 1116 | Works Expense and Supplies, | 2157 76 | | | 2157 76 | 2109 35 | .0108 | .0130 |
| 1117 | General Supervision, | 2698 21 | | | 2698 21 | 2366 13 | .0135 | .0146 |
| 1118 | District Holder Station, | | | | | | | |
| 1119 | Total Cost Purification and Storage, | 8098 02 | 5434 90 | .0272 | 13532 92 | 10828 71 | .0677 | .0670 |
| 1120 | Total Cost Water Gas in Holder, | 8098 02 | 57855 32 | .2993 | 67753 34 | 57789 64 | .3398 | .3577 |

### WATER GAS STATISTICS

| | | This Year. | Last Year. |
|---|---|---|---|
| 1130 | Water Gas Made, | 200.082.640 Cu. ft. | 161.516.450 Cu. ft. |
| 1131 | Enricher Used, | 734.148 Gals. | 608.176 Gals. |
| 1132 | Enricher Used per M., | .367 Gals. | .3764 Gals. |
| 1133 | Candles per Gal. Enricher, | ✓ | 5.39 |
| 1134 | Boiler Fuel per M., | ✓ Lbs. | ✓ Lbs. |
| 1135 | Generator Fuel per M., | 42.8 Lbs. | 41.6 Lbs. |
| 1136 | Number of Runs, | 34817 | 37725 |
| 1137 | Average Make per Run, | 5850 Cu. ft. | 4280 Cu. ft. |
| 1138 | Average Make per Gas Maker per 24 Hours, | 137.000 Cu. ft. | 99690 Cu. ft. |
| 1139 | Gas Purified per Bu. Material per Charge | ✓ Cu. ft. | ✓ Cu. ft. |
| 1140 | | | |
| 1141 | Tar Made per M. Cu. Ft. Gas, | .6 Gals. | .6 Gals. |
| 1142 | Tar Made per M. Gal. Oil Used, | 163.3 Gals. | 159.36 Gals. |
| 1143 | | | |
| 1144 | | | |
| 1145 | Illuminating Power Water Gas — Max. | 20.7 C. P. | 21.5 C. P. |
| | Min | 19. C. P. | 18.7 C. P. |
| 1147 | Avg. | 19.8 C. P. | 20.3 C. P. |
| 1148 | Heat Units, (B. T. U.) — Max. | 666.6 B. T. U. | 677.3 B. T. U. |
| 1149 | Min. | 611.8 B. T. U. | 596.8 B. T. U. |
| 1150 | Avg. | 637 B. T. U. | 637.2 B. T. U. |
| 1151 | | | |
| 1152 | | | |
| 1153 | | | |
| 1154 | **MIXED GAS STATISTICS** | | |
| 1155 | Illuminating Power — Max. | 18.7 C. P. | 19.3 C. P. |
| 1156 | Min. | 18. C. P. | 17.7 C. P. |
| 1157 | Avg. | 18.3 C. P. | 18.5 C. P. |
| 1158 | Heat Units (B. T. U.) — Max. | 655.4 B. T. U. | 663.2 B. T. U. |
| 1159 | Min. | 613.3 B. T. U. | 617.9 B. T. U. |
| 1160 | Avg. | 645.4 B. T. U. | 644.1 B. T. U. |
| 1161 | Sulphur Contents, — Max. | | |
| 1162 | Avg. | | |
| 1163 | Oxygen Contents, — Max. | | |
| 1164 | Avg. | | |
| 1165 | | | |

1068

## MANUFACTURING DEPARTMENT. PURCHASED GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1200 | Crude Gas Purchased, | | | | | | | |
| 1201 | Power for Pumping, | | | | | | | |
| 1202 | Enricher, | | | | | | | |
| 1203 | | | | | | | | |
| 1204 | | | | | | | | |
| 1205 | Total Cost Materials, | | | | | | | |
| 1206 | Tar, | | | | | | | |
| 1207 | Ammonia, | | | | | | | |
| 1208 | Total Residuals, | | | | | | | |
| 1209 | Net Cost Materials, | | | | | | | |
| 1210 | Steam, | | | | | | | |
| 1211 | Purifying Pur. Gas, Labor, Exp. & Rep., | | | | | | | |
| 1212 | " " " Material, | | | | | | | |
| 1213 | General Works Rep. Bldgs., | | | | | | | |
| 1214 | General Apparatus Repairs, | | | | | | | |
| 1215 | Sundry Labor, | | | | | | | |
| 1216 | Works Expense and Supplies, | | | | | | | |
| 1217 | General Supervision, | | | | | | | |
| 1218 | District Holder Station, | | | | | | | |
| 1219 | | | | | | | | |
| 1220 | | | | | | | | |
| 1221 | Total Purification and Storage, | | | | | | | |
| 1222 | Total Cost Purchased Gas in Holder, | | | | | | | |
| 1223 | | | | | | | | |
| 1224 | | | | | | | | |
| 1225 | | | | | | | | |
| 1226 | | | | | | | | |
| 1227 | | | | | | | | |
| 1228 | | | | | | | | |
| 1229 | | | | | | | | |

## MANUFACTURING DEPARTMENT. MIXED GAS

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1250 | Total Cost Manuf'g Coal Gas, | 1068 | 97 | 807 | 207 | .4098 | 916 | 104 | 3101 | 169 | .4639 | .5874 |
| 1251 | " " " Water Gas, | 809 | 802 | 59 | 855 | 32 | .3373 | 679 | 534 | 57 | 785 | 74 | .3378 | .2577 |
| 1252 | " " " Coal & Water Gas, | 916 | 699 | 67 | 747 | 39 | .3091 | 771 | 114 | 88 | 797 | 43 | .3498 | .4089 |
| 1253 | " " " Gas Purchased, | | | | | | | | | | | | | | | |
| 1254 | " " All Gas Manufacturing Dept. | 916 | 699 | 67 | 947 | 39 | .3071 | 771 | 114 | 88 | 797 | 43 | .3498 | .4089 |
| 1255 | Output Cost Gas Lost and Unacc'd for | | | | 46 | 720 | 6 | .0212 | 46 | 720 | 6 | 7 | 784 | 31 | .0212 | .0258 |
| 1256 | " " " Used by Co., | | | | | 216 | 86 | .0010 | | 216 | 86 | | 138 | 71 | .0010 | .0012 |
| 1257 | Total Deductions from Manuf'g Costs, | | | | 488 | 872 | .0222 | 488 | 892 | 7 | 923 | 02 | .0222 | .0365 |
| 1258 | Net Cost in Holder of Gas Charged Stock Acc't. | 916 | 699 | 63 | 058 | 47 | .2869 | 722 | 254 | 6 | 80 | 874 | 41 | .3276 | .3724 |
| 1259 | Difference Stock on Hand First and Last of Mo. Yr. | | | | | 716 | .0000 | | 716 | | | 139 | 75 | .0000 | .0007 |
| 1260 | Net Cost in Holder of Gas Sold, | 916 | 699 | 63 | 065 | 631 | .3088 | 722 | 322 | 62 | 80 | 734 | 46 | .3276 | .4132 |

## GAS ACCOUNT. CUBIC FEET

| | | This Year | Last Year | Increase | Decrease | Per Cent. of Totals |
|---|---|---|---|---|---|---|
| 1280 | Gas on Hand First of Month/Year, | 1 650 250 | 213 700 | 436 550 | | |
| 1281 | Coal Gas Made during Month/Year, | 19 747 110 | 55 647 100 | | 35 899 990 | .178 |
| 1282 | Water " " " " | 200 082 640 | 161 516 450 | 38 566 190 | | 9.100 |
| 1283 | Gas Purchased Havelock | 10 000 | | 10 000 | | .002 |
| 1284 | Total Gas Made and Purch'd, | 219 839 750 | 217 163 550 | 2 676 200 | | 100% |
| 1285 | Total Gas to Account for, | 220 490 000 | 217 377 250 | 3 112 750 | | 100% |
| 1286 | Gas on Hand at Close of Month/Year, | 727 700 | 650 250 | 77 450 | | .0038 |
| 1287 | Gas Delivered to Mains, | 219 762 300 | 216 727 000 | 3 035 300 | | 100% |
| 1288 | Gas Sold, | 204 283 555 | 195 371 800 | 8 891 755 | | 92.94 |
| 1289 | Gas Used by Co., | 681 900 | 372 900 | 309 000 | | .0033 |
| 1290 | Total Gas Sold and Used, | 204 965 455 | 195 744 100 | 9 201 355 | | 93.27 |
| 1291 | Gas unaccounted for, | 14 796 845 | 20 962 900 | | 6 166 055 | 6.73 |

## DISTRIBUTION DEPARTMENT EXPENSE

| | | Charge Plant Amount | Charge Plant Per M Sold | Charge Consumers Amount | Charge Consumers Per Cons. | Charge Meters Amount | Charge Meters Per Meter | Total Cost This Year | Total Cost Last Year | Total Cost per M. Sold This Yr. | Total Cost per M. Sold Last Yr. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | Street Main Maint'n'c, | 788 26 | .0037 | | | | | 788 26 | 795 75 | .0037 | .0041 |
| 1301 | Service " | | | 517 32 | .0737 | | | 517 32 | 277 52 | .0025 | .0015 |
| 1302 | Street Dep't Expense, | 557 30 | .0027 | 1114 68 | .1582 | | | 1671 98 | 1410 59 | .0082 | .0073 |
| 1310 | Pumping Gas, | | | | | | | | | | |
| 1303 | Meter Maintenance, | | | | | 2764 41 | .4324 | 2764 41 | 1723 02 | .0145 | .0088 |
| 1304 | Meter Dep't Expense, | | | | | 1294 05 | .1887 | 1294 05 | 1165 72 | .0063 | .0060 |
| 1305 | Setting & Rem. Meters, | | | 1411 00 | .0634 | 1941 12 | .1304 | 1941 12 | 1339 72 | .0066 | .0068 |
| 1306 | Gratuitous Work, | | | 2299 17 | .3262 | | | 2299 17 | 1376 36 | .0113 | .0070 |
| 1307 | Total above Items, | 1345 56 | .0066 | 4380 17 | .6215 | 5153 58 | .7515 | 10878 31 | 8075 68 | .0533 | .0414 |
| 1308 | Gas Lost & Unacct. for | 4672 06 | .0228 | | | | | 4672 06 | 7784 31 | .0228 | .0398 |
| 1309 | Total Distrib'n Ex. | 6017 62 | .0294 | 4380 17 | .6215 | 5153 58 | .7515 | 15550 37 | 15879 99 | .0761 | .0812 |

## DISTRIBUTION DEPARTMENT DATA

### METER ACCOUNT

| | | | Equivalents No. | No. | No. | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | | Owned by Co. first of | | | | 2931 | 4163 | 48 | 49 | 9 | 14 | 4 | - | 6 | 2 | - | - | - | 7226 |
| 1321 | | Bought during 12 Mo. | | | | | 554 | 10 | 16 | 2 | | | | | | | | | 582 |
| 1322 | | Total, | | | | 2931 | 4717 | 58 | 65 | 11 | 14 | 4 | - | 6 | 2 | - | - | - | 7808 |
| 1323 | | Condemned & Dest'd, | | | | 54 | | | 1 | | | | | | | | | | 55 |
| 1324 | | Owned this Date, | | | | 2877 | 4717 | 58 | 64 | 11 | 14 | 4 | - | 6 | 2 | - | - | - | 7753 |
| 1325 | IN USE THIS DATE | Illuminating, | | | | 2350 | 4667 | 45 | 57 | 9 | 13 | 3 | - | 6 | 2 | - | - | - | 7152 |
| 1326 | | Domestic Fuel, | | | | | | | | | | | | | | | | | |
| 1327 | | Industrial " | | | | | | | | | | | | | | | | | |
| 1328 | | Power, | | | | | | | | | | | | | | | | | |
| 1329 | | Sub-Meters, | | | | | | | | | | | | | | | | | |
| 1330 | | Company, | | | | 6 | - | 1 | | | | | | | | | | | 9 |
| 1331 | | Total, | | | | 2356 | 4667 | 46 | 57 | 9 | 13 | 3 | - | 6 | 2 | - | - | - | 7161 |
| 1332 | IN STOCK | Shop, | | | | 521 | 48 | 2 | 5 | 2 | 1 | 1 | | | | | | | 580 |
| 1333 | | Locked, | | | | | | | | | | | | | | | | | |
| 1334 | | Total, | | | | | | | | | | | | | | | | | |
| 1335 | | Total Owned, | | | | 2877 | 4717 | 58 | 64 | 11 | 14 | 4 | | 6 | 2 | | | | 7753 |
| 1336 | | Increase or Decrease, | | | | | | | | | | | | | | | | | |
| 1337 | | Meters in use first of Year, | | | | | | | | | | | | | | | | | |

### METERS

| | | Per Mile Main This Yr. | Per Mile Main Last Yr. | Per 1000 Popul'n This Yr. | Per 1000 Popul'n Last Yr. | No. Set This Yr. | No. Set Last Yr. | No. Removed This Yr. | No. Removed Last Yr. | | No. | % of Total No. | Cost Each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1340 | Illuminating, | | | | | | | | | Meters Tested "Regular Test" | 4747 | 6126 | .0427 |
| 1341 | Domestic Fuel, | | | | | | | | | " " "Routine Test" | | | |
| 1342 | Industrial " | | | | | | | | | " Repaired, | 1403 | 1807 | .5273 |
| 1343 | Power Gas, | | | | | | | | | " Set, | 5477 | 7070 | .1268 |
| 1344 | Total Meters, | 97.8 | 102.3 | 147.3 | 142.4 | 6377 | 4319 | 5147 | 3740 | " Removed, | 5147 | 6638 | .1037 |
| 1345 | No. Consumers, | 76.3 | 77.7 | 114.8 | 107.6 | | | | | " Transferred, | | | |
| 1346 | No. Service Pipes, | 78.2 | 75.9 | 114.8 | 104.8 | | | | | No. Leaks of Meters, | 339 | 0436 | 5272 |

| | | | | | |
|---|---|---|---|---|---|
| 1350 | Cost meter Maintenance per Meter passing through Shop, | 1731 | | | |
| 1351 | " " " " in Use, | 3823 | | | |
| 1352 | No. Leaks at Connections, | | | | |
| 1353 | | | | | |
| 1354 | | | | | |
| 1356 | Service Maintenance per Complete Service in Use, | | | | |
| 1357 | " Repairs per Service handled | 2609 | | | |
| 1358 | No. Services Repaired, | 3 ; | Cost each, | ; | |
| 1359 | No. Services Renewed, | 6 ; | " " | ; | |
| 1360 | No. Services Changed, | 38 ; | " " | ; | |
| 1361 | No. Services Cleaned, | ; | " " | ; | |
| 1362 | No. Leaks at Services, | ; | " " | ; | |
| 1363 | No Leaks in Broken Mains, | 1 ; | " " | ; | |
| 1364 | No. Leaks Account Defective Main Joints, | 1 ; | " " | ; | |
| 1365 | | | | | |
| 1366 | | | | | |
| 1367 | Leakage per Mile Actual Main This Year | 212 221 | Cu. ft.; | Last Year, 320477 | Cu. ft. |
| 1368 | " " 8-inch " " " | 206714 | " ; | " " 302370 | " |

1050

14 REPORT FOR Year Ending December 31 1907

## COLLECTION DEPARTMENT

| | | Charge Consumers | | Charge Meters | | Total Cost | | Total per M. Sold | |
|---|---|---|---|---|---|---|---|---|---|
| | | Amount | Per Cons. | Amount | Per Meter | This Year | Last Year | This Year | Last Year |
| 1400 | Reading Meters, | 696 59 | 0788 | 348 25 | 0508 | 1044 84 | 914 30 | .0251 | .0247 |
| 1401 | Collection Clerical Salaries, | 3663 72 | .3198 | 1821 82 | .2671 | 5498 54 | 6315 51 | .0367 | .0333 |
| 1402 | Collection Office Expense, | 1060 34 | .1209 | 530 11 | .0774 | 1590 45 | 966 96 | .0078 | .0069 |
| 1403 | Rent of Collection Office, | 498 24 | .0567 | 249 06 | .0363 | 747 30 | 660 96 | .0037 | .0034 |
| 1404 | Delivering Bills, | 216 27 | .0247 | | | 216 27 | 218 86 | .0011 | .0011 |
| 1405 | Outside Collections, | 1010 67 | .1434 | | | 1010 67 | 856 62 | .0049 | .0044 |
| 1406 | Total Collect'n Expenses, | 7145 83 | 1.0143 | 2759 24 | .4026 | 10 105 07 | 9939 11 | .0495 | .0508 |

## COLLECTION DEPARTMENT DATA

### READING METERS

| | | First Reading | | | | Stragglers and Retakes | | | Total No. | Total Exp. (1400) per Meter | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total Hours | Av Time Each | No. Mar. pr. Hr. | Cost Each | No. | Hours | Cost Ea. | | This Year | Last Year |
| 1410 | Meters, | 2993.11 | 0.4110 | 2.432 | 0104 | 9111 | 470.15 | 0312 | 73181 | | |
| 1411 | Meter Readers, | | | | | | | | | | |

### CLERICAL SALARIES

| | | No. Clerks | Ave. Pay Each | Amount | Cost per Meter | | Cost per Consumer | |
|---|---|---|---|---|---|---|---|---|
| | | | | | This Year | Last Year | This Year | Last Year |
| 1415 | Total Acc't No. 1401, | 8166 | 448 60 | 3663 72 | .5046 | | .5198 | |

### DELIVERING BILLS

| | | No. Bills | Labor | Expense | Total Cost | Tot. per Bill |
|---|---|---|---|---|---|---|
| 1420 | By Mail, | 1140 | | 22 80 | 22 80 | .0200 |
| 1421 | By Co.'s Employees, | 75717 | 215 97 | | 215 97 | .0029 |
| 1422 | Called for at Office, | 1200 | | | | |
| 1423 | Totals, | 78057 | 215 97 | 22 80 | 238 77 | .0031 |

### COLLECTIONS

| | | Gas Bills | | | Per Cent. of | | Cost of Collection | | |
|---|---|---|---|---|---|---|---|---|---|
| | | No. | | Amount | Total No. | Total Amt. | Amount | Per Bill | Per Cent. |
| 1425 | Total Private Gas Bills, (Line 908 previous month) | | | 358 143 54 | | | | | |
| | COLLECTIONS | | | | | | | | |
| 1426 | At Office by Mail, | 9436 | 15 | 381 57 | 466 | 625 | 631 60 | .1838 | |
| 1427 | At Office by Tellers, | 6788 | 209 | 8198 | 9000 | 8220 | 1609 46 | .1361 | |
| 1428 | Bills Deposited in Banks, | 1882 | | 9097 46 | 2.47 | 3.67 | 372 91 | .1982 | |
| 1429 | Total at Office, | 7320 | 234 | 27876 | 9704 | 9514 | 9613 97 | .1313 | |
| 1430 | By Co.'s Salaried Collectors, | 2332 | | 11976 77 | 2.96 | 4.86 | 497 10 | .2200 | |
| 1431 | By Co.'s Pay Stations, | | | | | | | | |
| 1432 | By Express Co.'s, | | | | | | | | |
| 1433 | | | | | | | | | |
| 1434 | Total Outside Collections, | 2332 | | 11976 77 | 2.96 | 4.86 | 497 10 | .2200 | |
| 1435 | Total Collections, | 75437 | 246 | 275 67 | 100.00 | 100.00 | 10 105 07 | .1340 | |
| 1436 | Balance Outstanding Close of Month, | | | | | | | | |

### ARREARS FOR CURRENT MONTH

| | Arrears | Amount Charged to Arrears Each Date | Collected During Mo. on Each Month's Arrears. | Previous Collections Reported | Total Collections on Each | Balance Outstand'g on Each at Close of Month | Amount of Each Considered Collectible | |
|---|---|---|---|---|---|---|---|---|
| 1441 | Jan. 31, 1907, Balance Arrears Dec. | 6827 85 | 2588 | 281977 | 284565 | 3982 40 | | |
| 1442 | Feb. 28, 1907, Arrears for Jan'y, | 1415 42 | 64 | 11660 1 | 11666 5 | 248 77 | | |
| 1443 | March 31, 1907, Arrears for Feb'y, | 1417 35 | 195 | 10096 0 | 10115 5 | 405 80 | | |
| 1444 | April 30, 1907, Arrears for March, | 1320 75 | 173 | 10624 6 | 10628 7 | 258 68 | | |
| 1445 | May 31, 1907, Arrears for April, | 1171 91 | 378 | 8486 6 | 8524 4 | 319 87 | | |
| 1446 | June 30, 1907, Arrears for May, | 996 17 | 2349 | 7369 5 | 7609 | 233 73 | | |
| 1447 | July 31, 1907, Arrears for June, | 1053 11 | 2036 | 8576 4 | 8800 | 173 11 | | |
| 1448 | Aug. 31, 1907, Arrears for July, | 1112 10 | 1486 | 7885 8 | 8034 4 | 302 86 | | |
| 1449 | Sept. 30, 1907, Arrears for Aug., | 910 22 | 1785 | 6258 0 | 6431 5 | 266 57 | | |
| 1450 | Oct. 31, 1907, Arrears for Sept., | 1101 07 | 6405 | 6746 | 7281 | 362 26 | | |
| 1451 | Nov. 30, 1907, Arrears for Oct., | 1420 46 | 821 57 | | 821 57 | 571 89 | | |
| 1452 | Dec. 31, 1907, Arrears for Nov., | 1350 45 | | | | 1350 45 | | |
| 1453 | Totals, | 20076 86 | 9963 6 | 10589 41 | 11516 77 | 8611 09 | | |

| | | This Year | Last Year |
|---|---|---|---|
| 1460 | | | |
| 1461 | | | |
| 1462 | Gross Earnings Gas Dept., 12 months ending last month (13A) | | |
| 1463 | Total Arrears up to end of this month (1453) | | |
| 1464 | Per cent. of Arrears (1463) to Gross Earnings (1462) | | |

## EXECUTIVE DEPARTMENT, GENERAL EXPENSES

| | | PLANT | Totals This Year | Totals Last Year | Per M. Sold This Yr. | Per M. Sold Last Yr |
|---|---|---|---|---|---|---|
| 1500 | Executive Salaries, | 6113 06 | 6113 06 | 5001 41 | .0299 | .0256 |
| 1501 | General Clerical Salaries, | 748 00 | 748 00 | 513 00 | .0039 | .0026 |
| 1502 | General Office Expense, | 978 43 | 978 43 | 663 38 | .0048 | .0034 |
| 1503 | Incidental Expense, | 3715 44 | 3715 44 | 2679 81 | .0182 | .0137 |
| 1504 | Rent of Executive Offices, | 1101 12 | 1101 12 | 724 94 | .0054 | .0037 |
| 1505 | Legal Expenses, | 1858 53 | 1858 53 | 1746 33 | .0091 | .0092 |
| 1506 | Total Above Items, | 14514 58 | 14514 58 | 11378 87 | .0711 | .0582 |
| 1507 | Promoting New Business, | 14019 36 | 14019 36 | 11634 96 | .0686 | .0596 |
| 1508 | Taxes, | 7986 24 | 7986 24 | 7428 96 | .0391 | .0380 |
| 1509 | Total General Expenses, | 36520 18 | 36520 18 | 30446 79 | .1788 | .1558 |

## ANALYSIS OF SPECIAL EXPENSE ACCOUNTS NOS. 1819, 1820, 1821, 1822. NEW BUSINESS

| | | Domestic Fuel Total | Domestic Fuel Per Consumer | Illuminating Total | Illuminating Per Consumer | Industrial Fuel Total | Industrial Fuel Per Consumer | Power Total | Power Per Consumer | Totals Amounts | Totals Per Consumer |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1520 | a. Advertising, Newspaper, etc. | 2954 96 | | 510 05 | | | | | | 3464 01 | .4916 |
| 1521 | b. Circulars and Distr'n, | | | | | | | | | | |
| 1522 | c. Bonuses and Commissions, | | | | | | | | | | |
| 1523 | d. Exhibition Expenses, | 480 00 | | | | | | | | 480 00 | .0681 |
| 1524 | e. Salaries, Wages and Miscins. Expenses | 4610 03 | | 510 90 | | | | | | 5120 93 | .7266 |
| 1525 | Totals | 8044 99 | | 1020 95 | | | | | | 9065 94 | 1.2863 |
| 1526 | Cost of Appliances sold, | 4846 78 | | 5179 83 | | | | | | 10026 61 | 2.8410 |
| 1527 | Appliance Expense, | 1029 76 | | 842 33 | | 10 21 | | | | 1882 30 | .2672 |
| 1528 | Total cost Appliances, | 9730 54 | | 6022 16 | | 10 21 | | | | 15762 91 | 3.1082 |
| 1529 | Received for Appliances, | 7132 01 | | 6806 21 | | | | | | 13938 22 | 3.2770 |
| 1530 | f. Loss on Appliances, | 2598 53 | | | | 10 21 | | | | 2608 69 | .2872 |
| 1531 | f. Profit on Appliances, | | | 784 05 | | | | | | | |
| 1532 | Piping — Material | 207581 | | 47937 | | 125 | | | | 2576 43 | .3656 |
| 1533 | and — Labor | 188267 | | 35864 | | 5942 | | | | 23300 73 | 3.3074 |
| 1534 | Con- — Miscins. Exp. | 913 45 | | 243 57 | | | | | | 1157 02 | .1642 |
| 1535 | nec- — Totals | 4191 93 | | 1081 58 | | 6067 | | | | 6034 18 | .8562 |
| 1536 | tions — Charged Consumers | 2717 41 | | 214 29 | | | | | | 2128 70 | .4429 |
| 1537 | g. — Net Cost | 1474 52 | | 870 29 | | 6067 | | | | 3905 48 | .4133 |
| | Total cost items a to g | 12818 44 | | 11077 79 | | 7088 | | | | 33996 11 | 1.9860 |

## APPLIANCES INTRODUCED AND CONNECTED

### DOMESTIC FUEL

| | Class | No. | Rs. Conn. | Per Unit Items | |
|---|---|---|---|---|---|
| 1550 | Ranges (new) | 558 | | Feet Pipe per App'l | 2446 |
| 1551 | " (old) | 1479 | | Cost Pipe & Fit'gs per Ap. | .7720 |
| 1552 | Hot Plates, | 582 | | Cost Labor connecting Ap. | .7124 |
| 1553 | Water Heaters, | 102 | | Total Cost connecting Ap. | 1.8510 |
| 1554 | Heaters and Grates, | 42 | | Total Cost connecting per foot pipe | .1950 |
| 1555 | Miscl. | 79 | | Pipe fe | 25018 |
| 1556 | | | | | |
| 1557 | | | | | |

### ILLUMINATING

| Class | No. | No. Conn. | Per Unit Items |
|---|---|---|---|
| Houses piped by Co | | | Avg. rooms per house |
| Houses piped by contract | | | Cost Pipe & Fit'gs per House |
| | | | Cost Labor per House |
| Gas Arcs | | | Cost Pipe and Labor per House |
| Miscl. | | | Cost Pipe and Labor per foot Pipe |

### INDUSTRIAL FUEL

| | | | | Per Unit Items | |
|---|---|---|---|---|---|
| 1560 | | | | Feet Pipe per App'l | |
| 1561 | | | | Cost Pipe & Fit'gs per Ap. | |
| 1562 | | | | Total Cost connecting Ap. | |
| 1563 | | | | Cost Labor connecting Ap. | |
| 1564 | | | | Total Cost connecting per foot pipe | |
| 1565 | | | | | |
| 1566 | | | | | |
| 1567 | | | | | |

### POWER

| | | | Per Unit Items |
|---|---|---|---|
| Below 5 H. P. | | | Feet Pipe per Engine |
| 5 to 9 H. P. | | | Cost Pipe & Fit'gs per Engine |
| 10 to 14 H. P. | | | Cost Labor on connecting per Engine |
| 15 to 24 H. P. | | | Total Connection per Engine |
| 25 to 49 H. P. | | | Total Connection per foot pipe |
| 50 H. P. & Upwards | | | |

1570
1571
1572
1573
1574

REPORT FOR Year Ending December 31 1907

## DETAILS OF GAS SALES

| | | Rate | THIS YEAR Cu. Ft. | THIS YEAR Amount | LAST YEAR Cu. Ft. | LAST YEAR Amount | Inc. or Dec. Cu. Ft. | % Inc. or Dec. |
|---|---|---|---|---|---|---|---|---|
| 1600 | | | | | | | | |
| 1601 | | | | | | | | |
| 1602 | Illuminating Gas | | | | | | | |
| 1603 | | | | | | | | |
| 1604 | | | | | | | | |
| 1605 | Gross Sales, | | 204 717 155 | 245 872 73 | 195 827 200 | 235 101 73 | 8889 955 | 5 1/4 |
| 1606 | Less Rebates and Allowances | | 433 200 | 1 073 95 | 435 400 | 1 243 98 | 2200 | 631 |
| 1607 | Net Sales | | 204 283 955 | 244 798 78 | 195 391 800 | 233 857 75 | 8872 155 | 455 |
| 1608 | | | | | | | | |
| 1609 | Domestic | | | | | | | |
| 1610 | Fuel | | | | | | | |
| 1611 | Gas | | | | | | | |
| 1612 | | | | | | | | |
| 1613 | Gross Sales, | | | | | | | |
| 1614 | Less Rebates and Allowances | | | | | | | |
| 1615 | Net Sales | | | | | | | |
| 1616 | | | | | | | | |
| 1617 | Industrial | | | | | | | |
| 1618 | Fuel | | | | | | | |
| 1619 | Gas | | | | | | | |
| 1620 | | | | | | | | |
| 1621 | Gross Sales | | | | | | | |
| 1622 | Less Rebates and Allowances | | | | | | | |
| 1623 | Net Sales | | | | | | | |
| 1624 | | | | | | | | |
| 1625 | Gas | | | | | | | |
| 1626 | for | | | | | | | |
| 1627 | Power | | | | | | | |
| 1628 | | | | | | | | |
| 1629 | Gross Sales | | | | | | | |
| 1630 | Less Rebates and Allowances | | | | | | | |
| 1631 | Net Sales | | | | | | | |
| 1632 | Total Sales | | 204 283 955 | 244 798 78 | 195 391 800 | 233 857 75 | 8872 155 | 455 |

## STREET LAMPS

| | No. of Lamps | GROSS EARNINGS | | | Amount | Amount per Lamp | Hours Burning | Gas per Hr. | Total Gas Consumed |
|---|---|---|---|---|---|---|---|---|---|
| 1633 | | Open Flame Burners | @ | per year | | | | | |
| 1634 | | do | @ | " | | | | | |
| 1635 | | do | @ | " | | | | | |
| 1636 | | Incandescent Burners | @ | " | | | | | |
| 1637 | | do | @ | " | | | | | |
| 1638 | | do | @ | " | | | | | |
| 1639 | | | | | | | | | |
| 1640 | | Totals | | | | | | | |

### EXPENSES

| | | | Remarks |
|---|---|---|---|
| 1641 | Lighting and Extinguishing | | |
| 1642 | Repairing | | |
| 1643 | Cleaning | | |
| 1644 | Thawing | | |
| 1645 | Rental | | |
| 1646 | Inspecting and Testing | | |
| 1647 | | | |
| 1648 | | | |
| 1649 | | | |
| 1650 | | | |
| 1651 | | | |
| 1652 | | | |
| 1653 | Total Expense | | |
| 1654 | Net Earnings | | per M. ft. Gas |

## LOW PRESSURE STREET MAINS (FEET)

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1700 | 2 | 233 358 | | | 34 533 | 267 891 | | | | | 267 891 |
| 1701 | 3 | | | | | | | | | | |
| 1702 | 4 | 84012 | | | 80 | 84092 | | | | | 84092 |
| 1703 | 6 | 13777 | | | 240 | 14037 | | | | | 14037 |
| 1704 | 8 | 4822 | | | | 4822 | | | | | 4822 |
| 1705 | 10 | 9100 | | | | 9100 | | | | | 9100 |
| 1706 | 12 | 3950 | | | | 3950 | | | | | 3950 |
| 1707 | 16 | 1300 | | | | 1300 | | | | | 1300 |
| 1708 | 20 | 1400 | | | | 1400 | | | | | 1400 |
| 1709 | 24 | | | | | | | | | | |
| 1710 | 30 | | | | | | | | | | |
| 1711 | 36 | | | | | | | | | | |
| 1712 | FEET Totals | 351 141 | | | 34853 | 386 594 | | | | | 386 594 |
| 1713 | Miles, | 66.50 | | | | 73.20 | | | | | 73.20 |
| 1713a | Miles on 8-inch Basis | | | | | | | | | | |

## BOOSTER MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1714 | | | | | | | | | | | |
| 1715 | | | | | | | | | | | |
| 1716 | | | | | | | | | | | |
| 1717 | | | | | | | | | | | |
| 1718 | | | | | | | | | | | |
| 1719 | Totals, | | | | | | | | | | |

## PUMPING MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1720 | | | | | | | | | | | |
| 1721 | | | | | | | | | | | |
| 1722 | | | | | | | | | | | |
| 1723 | | | | | | | | | | | |
| 1724 | | | | | | | | | | | |
| 1725 | Totals, | | | | | | | | | | |

## COST OF STREET MAINS. (ALL KINDS)

| | | COST MAINS LAID THIS MONTH | | | | | | COST MAINS LAID THIS YEAR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AMOUNT | | | PER FOOT | | | AMOUNT | | | PER FOOT | | |
| | Size | Labor | Material | Total | Labor | Mat'l | Total | Labor | Material | Total | Labor | Mat'l | Total |
| 1726 | 2 | | | | | | | 533 50 | 3567 79 | 4898 29 | 097 | 103 | 200 |
| 1727 | 3 | | | | | | | | | | | | |
| 1728 | 4 | | | | | | | 4700 | 3678 | 8378 | 581 | 453 | 1.04 |
| 1729 | 6 | | | | | | | 5600 | 15693 | 21298 | 233 | .653 | .886 |
| 1730 | 8 | | | | | | | | | | | | |
| 1731 | 10 | | | | | | | | | | | | |
| 1732 | 12 | | | | | | | | | | | | |
| 1733 | 16 | | | | | | | | | | | | |
| 1734 | 20 | | | | | | | | | | | | |
| 1735 | 24 | | | | | | | | | | | | |
| 1736 | 30 | | | | | | | | | | | | |
| 1737 | 36 | | | | | | | | | | | | |
| 1738 | Totals, | | | | | | | 3433 50 | 3761 00 | 7194 50 | 099 | 108 | 207 |

| | | THIS MONTH | THIS YEAR | RECAPITULATION | |
|---|---|---|---|---|---|
| 1739 | Cost Low Pressure Mains laid | $ . . | $ 7.194 50 | Miles Low Pressure Main | 73.20 |
| 1740 | " Booster " " | $ . . | $ . . | " Booster Main | |
| 1741 | " Pumping " " | $ . . | $ . . | " Pumping Main | |
| 1742 | Total cost Mains laid | $ . . | $ 7.194 50 | Total Main Mileage | 73.20 |
| 1743 | Deduct value of Mains taken up | $ . . | $ . . | | |
| 1744 | Net cost of Mains | $ . . | $ 7.194 50 | | |

| | | | |
|---|---|---|---|
| | Total, | 126 27[illegible] | 207262 48 |



## SERVICE PIPES LAID

| | | No. Laid This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Year | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1745 | Main to Meter (Old Main) | | | 327 | 5172 | 5501 | | 5501 |
| 1746 | " " (New Main) | | | 252 | 899 | 1151 | | 1151 |
| 1747 | Curb to Meter (Extension) | | | 35 | 308 | 343 | | 343 |
| 1748 | Total complete services, | | | 616 | 6379 | 6995 | | 6995 |
| 1749 | Main to Curb (acc't paving) | | | 27 | 170 | 197 | | 197 |
| 1750 | Total No. services | | | 643 | 6549 | 7192 | | 7192 |

## COST OF SERVICES

| | | Gross Cost | Charged Consumers | Net Cost | GROSS COST Per Service | GROSS COST Per Foot | NET COST Per Service | NET COST Per Foot |
|---|---|---|---|---|---|---|---|---|
| 1751 | Labor, | 277780 | | | | | | |
| 1752 | Material, | 270777 | | | | | | |
| 1753 | Total this month, | | | | | | | |
| 1754 | Previously reported, | | | | | | | |
| 1755 | Total this year, | 6707 77 | 7523 18 | 815 41 | 10 60 | 1 87 | 1 120 | 0 17 |
| 1756 | Cost last year, | 5864 87 | 3057 95 | 2806 92 | 13 18 | 1 86 | 6 33 | 0 92 |

| | | THIS MONTH | | THIS YEAR | |
|---|---|---|---|---|---|
| 1757 | Pipe used for complete services, | | feet. | 39320 | feet. |
| 1758 | " " " service extensions, | | feet. | 3271 | feet. |
| 1759 | " " " total complete services, | | feet. | 41571 | feet. |
| 1760 | " " " services to curb, | | feet. | 472 | feet. |
| 1761 | Total, | | feet. | 42043 | feet. |

## APPLIANCES

| | | DOMESTIC FUEL APPLIANCES Ranges | Hot Pl. | W. H. | Heaters and Grates | Miscls | Total | IND. APPLIANCES No. | GAS ENGINES No. | H. P. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1762 | First of Month, Yr. | 7536 | 1111 | 752 | 197 | 310 | 10106 | | | |
| 1763 | New during Month, Yr. | 1897 | 382 | 98 | 42 | 79 | 2498 | | | |
| 1764 | Total, | 9433 | 1493 | 1050 | 239 | 389 | 12604 | | | |
| 1765 | Off during Month Yr. | 535 | 30 | 4 | 3 | 6 | 638 | | | |
| 1766 | Close of Month, Yr. | 8898 | 1463 | 1046 | 236 | 383 | 11966 | | | |
| 1767 | First of Year, | 7536 | 1111 | 752 | 197 | 310 | 10106 | | | |
| 1768 | Gain or Loss, | 1302 | 352 | 94 | 39 | 73 | 1860 | | | |

## STREET LAMPS

| | | No. Installed This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Yr. | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1769 | Lamp Services, | | | | | | | |
| 1770 | Boulevard Posts, | | | | | | | |
| 1771 | Common Posts, | | | | | | | |
| 1772 | | | | | | | | |
| 1773 | Total, | | | | | | | |

## PLANT DATA

| | | MAXIMUM CAPACITY 24 hrs. | MAXIMUM CAPACITY 1 hr. | Max. Make 24 hrs. This Mo | % of Make to Cap. 24 hours | Max. Make 24 hrs, To Date | % of Make to Cap. 24 hours | Least Reserve Capacity |
|---|---|---|---|---|---|---|---|---|
| 1775 | Coal Gas Benches, | 380,000 | 19830 | | | 187000 | 49.7 | 191,000 |
| 1776 | Water Gas Machines, | 1200,000 | 50000 | | | 837000 | 69.8 | 363,000 |
| 1777 | Total, | 1580,000 | 65830 | | | 845000 | 53.4 | 735,000 |
| 1778 | | | | | | | | |
| 1779 | | | | | | | | |
| 1780 | | | | | | | | |
| 1781 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| 1782 | Storage Capacity | 150,000 | Purifying Capacity Cu. Ft. Material | 7200 |
| 1783 | Max. Send out 24 hrs. | 78 3,000 | Cross Section Sq. Ft. (Basis Single flow boxes) | |
| 1784 | " " 1 hr. | " | | |
| 1785 | % Storage to send out 24 hrs. | 958 | | |
| 1786 | " " " " 1 hr. | " | | |
| 1787 | " " " 24 hr. capacity | 474 | | |
| 1788 | | | | |



POOR COPY

REPORT FOR Year Ending December 31 1909

## SPECIAL EXPENSE ACCOUNT

| No | ACCOUNT | Total Expense | CHARGED TO No. | Account | Amount | Bal. Special Accounts Close Month Debit | Credit |
|---|---|---|---|---|---|---|---|
| 1800 | Coal Stock Expense, | 137 90 | 500 | Coal Stock, | 137 90 | | |
| 1801 | Coke Stock Expense, | 374 80 | 502 | Coke Stock, | 374 80 | | |
| 1802 | Tar Stock Expense, | | 503 | Tar Stock, | | | |
| 1803 | Ammonia Stock Expense, | | 504 | Ammonia Stock, | | | |
| 1804 | Pur. Dept. and St. Room, | 2830 86 | See Details next page | | | | |
| 1805 | Barn Expense, | 3693 63 | | | | | |
| 1806 | Preliminary Expense, | | | | | | |
| 1806A | Depreciation | 43956 95 | See Page 23 | | 43956 95 | | |
| 1806B | Occupation Tax | 7353 74 | See Page 23 | | 7353 74 | | |
| 1807 | Lamps Discontinued, | | 1815b | St. Lamp Mntc., | | | |
| 1808 | Mains Abandoned, | | 1300 | St. Main Mntc., | | | |
| 1809 | Steam, | 7769 42 | See Details next page | | | | |
| | | | 1304b | Meter Dept. Exp., | | | |
| 1810 | Rent, | 4821 43 | 1403 | Coll. Off. Rent | See Details next page | | |
| | | | 1504 | Exc. Off. Rent, | | | |
| | | | 1805 | Barn Exp., | | | |
| 1811 | Contingent Bench Repairs, | | 1011 | Bench Repairs, | | | |
| | | | 1017 | Bldgs. Rep. C. G. | 11 | | |
| 1812 | Gen. W'ks Bldgs. Repairs, | 79 02 | 1113 | " " W. G. | 78 91 | | |
| | | | 1213 | " " P. G. | | | |
| | | | 1018 | App. Rep. C. G. | 49 20 | | |
| 1813 | General Apparatus Repairs, | 859 85 | 1114 | " " W. G. | 804 15 | | |
| | | | 1214 | " " P. G. | | | |
| | | | 1019 | Sund. Lab. C. G. | 115 74 | | |
| 1814 | Sundry Labor, | 1391 55 | 1115 | " " W. G. | 1275 81 | | |
| | | | 1215 | " " P. G. | | | |
| | | | 1020 | Tel. Tl. & Sgl. C. G. | 278 55 | | |
| 1815 | Works Expense and Supplies, | 2436 31 | 1116 | " " W. G. | 2157 76 | | |
| | | | 1216 | " " P. G. | | | |
| | | | 1021 | Gen. Sup., C. G. | 234 64 | | |
| 1816 | General Supervision, | 2932 85 | 1117 | " " W. G. | 2698 21 | | |
| | | | 1217 | " " P. G. | | | |
| | | | 1022 | Dis. H. Sta. C. G. | | | |
| 1817 | Dist. Holder Station, | | 1118 | " " W. G. | | | |
| | | | 1218 | " " P. G. | | | |
| | | | 1507 | Prom. N. Bus., | | | |
| 1819 | Domestic Fuel App'ces., | 12 803 67 | 308 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | 14019 36 | | |
| 1820 | Bl'tg. Pipes and Fixtures, | 1144 81 | 309 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | | | |
| 1821 | Industrial Gas App'ces., | 70 88 | 310 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | | | |
| 1822 | Gas Engines and Piping, | | 311 | Const., | | | |
| | | | 1508 | Taxes, Gas | 7786 24 | | |
| 1823 | Taxes Accrued, | 11979 24 | | " Elec | 3993 00 | | |
| | | | 209 | Interest, Gas | 44 671 86 | | |
| 1824 | Interest Accrued, | 67 037 14 | | " Elec | 22 345 88 | | |
| | | | 909 | Bad Debts, Gas | 3000 97 | | |
| 1825 | Bad Debts, | 4750 00 | 909 | Bad Debts, Elec | 1750 00 | | |
| 1850A | Purifying Material | 163 87 | 1028 B | | 3103 | | |
| | | | 1111 B | | 1311 | | |
| | | | 1116 B | | 9775 | | |
| 1840 | Special Offset | 1104 17 | 1402 A | | 44167 | | |
| | | | 1202 A | | 16560 | | |
| | | | 3214 | | 220 89 | | |
| | | | 3226 | | 5523 | | |
| | | | 1214 H | | 16562 | | |
| | | | 3221 H | | 5522 | | |
| | Total, | 136 878 02 | | | 107262 68 | | |

1065

SERVICE PIPES LAID

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## STEAM ACCOUNT No. 1809

| | DEBITS | | | | | CREDITS | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (a) Fuel Electric | | | 4750 00 | | Charged to | | | |
| 1900 | Tons, | @ | | | 1014 | Coal Gas Steam, | | 362 36 | |
| 1901 | Tons, | @ | | | 1100 | Water Gas Generator, | | 2245 00 | |
| 1902 | Tons, | @ | | | 1110 | " Pur. and St. | | 4509 04 | |
| 1903 | Total Fuel, | | | | 1201 | Pumping Purchased Gas, | | | |
| | (b) Water Electricity | | | 1318 76 | 1210 | Purification and St. Gas, | | | |
| 1904 | Gals. City Water, | @ | | | 1800a | Coal Stock Expense, | | | |
| 1905 | Gals. Pumped by Co. | Cost | | | 1803a | Ammonia Stock Expense, | | | |
| 1906 | Total Water, | | | | 1815 | Works Expense, | | 809 99 | |
| | (c) Labor Water | | | 1900 64 | 1817 | District Holder Station, | | | |
| 1907 | Firemen, | @ | | | 1801B | | | 23 99 | |
| 1908 | Helpers, | @ | | | 1815B | | | 4 22 | |
| 1909 | | @ | | | 1111B | | | 11 80 | |
| | Total Labor, | | | | | | | | |
| 1910 | (d) Repairs, | | | | | | | | |
| 1911 | Labor, | | | | | | | | |
| 1912 | Material, | | | | | | | | |
| 1913 | Total Repairs, | | | | | | | | |
| 1914 | Total Cost, | a-b-c-d | | | | | | | |
| 1915 | Less Steam Sold, | | | | | | | | |
| 1916 | Net Cost Steam, | | | 7969 40 | | Total Credits, | | 7969 40 | |
| 1917 | Basis of Steam Charges, | | | | | | | | |
| 1918 | | | | | | | | | |
| 1919 | | | | | | | | | |
| 1920 | | | | | | | | | |

## BARN EXPENSE ACCOUNT No. 1805 (12.5 Horses)

| | | Total | Per Horse | | | | |
|---|---|---|---|---|---|---|---|
| 1925a | Wages, | 517 82 | 41 43 | 1805A | Charged to | | 184 67 |
| 1926 | Rent, | 60 00 | 4 80 | B | | | 184 65 |
| 1927 | Hay, | 435 31 | 34 83 | 1306 | | | 184 68 |
| 1928 | Oats, | 835 33 | 66 83 | 3006 | | | 369 34 |
| 1929 | Oil, Meal and Bran, | | | 3204 | | | 184 66 |
| 1930 | Bedding, | 6 90 | 55 | 3265 | | | 147 73 |
| 1931 | Fuel, Light and Water, | 11 38 | 91 | 3271 | | | 36 91 |
| 1932 | Med. Attendance and Medicines, | 12 90 | 1 03 | 3272 | | | 184 68 |
| 1933 | Barn Repairs, | 3 60 | 29 | 3008 | | | 73 84 |
| 1934 | Horse Shoeing, | 245 50 | 9 64 | 301 | | | 110 83 |
| 1935 | Insurance on Horses, | 221 95 | 17 76 | 302 | | | 184 67 |
| 1936 | Board for Horses, | 669 00 | 53 52 | 351 | | | 331 62 |
| 1936a | Total, (a) | 2019 69 | 241 57 | 1801C | | | 369 33 |
| 1937b | Harness Repairs, | 130 80 | 10 46 | 1802 | | | 34 C |
| 1938 | Wagon Repairs, | 321 41 | 25 71 | 1819 | | | 738 90 |
| 1939 | Insurance on Wagons and Harness, | | | 3231f | | | 221 70 |
| 1940 | Misc. | 221 73 | 17 74 | 1815 | | | 73 83 |
| 1941 | | | | 1820g | | | 184 68 |
| 1942 | Total, (b) | 673 94 | 53 91 | | | | |
| 1943 | Total Barn Expense, | 3693 63 | 275 50 | | | | 3693 63 |

## RENT ACCOUNTS

| | | | | | |
|---|---|---|---|---|---|
| 1950 | Rental paid for Office, | 2405 00 | | Charged to | |
| 1951 | Supt. | 480 00 | 1403 | Rent of Coll. Office, | 480 00 |
| 1952 | " for Meter Shop, | 480 00 | 1504 | Rent of General Office, | 933 81 |
| 1953 | Dem Hall | 480 00 | 1304 | Meter Dep. Expense, | 480 00 |
| 1954 | Mrs. for Barn, | 592 04 | 3264 3293 | | 108 00 |
| 1955 | Janitor | 249 39 | ~~3305~~ | Barn Expense, | 36 00 |
| 1956 | Rental Credited Rents Receivable, | 480 00 | 1804 | | 595 69 |
| 1957 | For | | 1812 | | 480 00 |
| 1958 | For | | 1812 3213 | | 420 00 |
| 1959 | | | 3271 | | 120 00 |
| 1960 | | | 3227 3305 | | 420 00 |
| 1960 | Total, | 4066 43 | | | 4066 43 |



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STEAM ACCOUNT No. 1809

# PAY ROLL DATA Year Ending December 31 1909 ~~MONTH OF~~

| | Manufacturing Expenses | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| 2000 | Coal Buggy | 1000b | 22100 | 61701 | .0112 | .0111 |
| 2001 | Retort House Labor | | | | | |
| 2002 | a Foreman | 1010a | 97447 | | .0493 | |
| 2003 | b Stoking | 1010a | | 356850 | | .0642 |
| 2004 | c Furnace men | 1010a | 223124 | 65740 | .0113 | .0118 |
| 2005 | d Doctor | 1010a | | 8232 | | .0015 |
| 2006 | e Scurfing Retorts | 1010a | 3096 | 3120 | .0016 | .0005 |
| 2007 | f Cleaning Flues | 1010a | 412 | 2032 | .0002 | .0004 |
| 2008 | g Hydraulic Main Men | 1010a | 12685 | 51755 | .0064 | .0093 |
| 2009 | h Wheeling Retort ashes | 1010a | 10700 | 23750 | .0055 | .0043 |
| 2010 | Bench Repairs | 1011a | 31837 | 8132 | .0016 | .0015 |
| 2011 | Retort House Expense | 1012 | 47176 | 12735 | .0024 | .0023 |
| 2012 | Purifying Coal Gas | 1015a | | | | |
| 2013 | Gen'l Bldg. Repairs | 1017a | 80 | 2408 | .0000 | .0004 |
| 2014 | Gen'l Apparatus Rep. | 1018a | 2450 | 6559 | .0012 | .0012 |
| 2015 | Sundry Labor | 1019a | 13757 | 41637 | .0071 | .0076 |
| 2016 | Experimenting C. G. | 1020 | | | | |
| 2017 | Gen'l Supervision | 1021 | | | | |
| 2018 | | | | | | |
| 2019 | | | | | | |
| 2020 | Total | | 173346 | 645740 | .0977 | .11601 |
| 2021 | Mfg. Exp. W. Gas | | | | | |
| 2022 | Unloading Oil Cars | 1102 | | | | |
| 2023 | Gas Making Labor | 1106 | | | | |
| 2024 | a Making Gas | 1106 | 167675 | 199908 | .0083 | .0150 |
| 2025 | b Charging W. G. | 1106 | 139797 | 167260 | .0070 | .0126 |
| 2026 | c Clinkering W. G. | 1106 | 35421 | 90482 | .0018 | .0068 |
| 2027 | Rep. App. up to Seal | 1107a | 67516 | 42394 | .0034 | .0032 |
| 2028 | W. G. Gen. House Exp. | 1108a | 5748 | 5528 | .0003 | .0004 |
| 2029 | Purifying W. G. | 1111 | 200 | | | |
| 2030 | Rep. Buildings | 1113 | 1152 | 120 | .0000 | .0000 |
| 2031 | Rep. App. beyond Seal | 1114a | 2487 | 4062 | .0002 | .0003 |
| 2032 | Sundry Labor | 1115 | 88091 | 96327 | .0044 | .0073 |
| 2033 | Experimenting W. G. | 1116 | | | | |
| 2034 | Gen'l Supervision | 1117 | | | | |
| 2035 | | | | | | |
| 2036 | | | | | | |
| 2037 | Total | | 542092 | 605681 | .0274 | .0456 |

| | Purchased Gas | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| | Power for Pumping | 1201 | | | | |
| | Purifying Labor | 1211 | | | | |
| | Gen'l Bldg. Repairs | 1213 | | | | |
| | Gen'l App. " | 1214 | | | | |
| | Sundry Labor | 1215 | | | | |
| | Gen'l Supervision | 1217 | | | | |
| | Total | | | | | |
| | Pintsch Gas | | | | | |
| | Retort House Labor | 2408 | | | | |
| | Bench Repairs | 2409 | | | | |
| | Retort House Exp. | 2410 | | | | |
| | Purifying Labor | 2412 | | | | |
| | Gen'l Bldg. Repairs | 2413 | | | | |
| | Sundry Labor | 2414 | | | | |
| | Car Fillers | 2420 | | | | |
| | Pipe Line Repairs | 2421 | | | | |
| | Total | | | | | |
| | Summary Mfg. | | | | | |
| | Coal Gas | 2020 | | | | |
| | Water Gas | 2057 | | | | |
| | Purchased Gas | 2007 | | | | |
| | Pintsch Gas | 2020 | | | | |
| | Total | | | | | |

| | Distribution | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M Sold ThisYr. | Per M Sold LastYr. |
|---|---|---|---|---|---|---|
| | Street Main Maint. | | | | | |
| | a Test and Rep. Leaks | 1300a | 66761 | 67138 | .0033 | .0034 |
| | b Rep or Replacing | 1300a | | | | |
| | c Maint. Governors | 1300g | 140 | 6032 | .0000 | .0003 |
| | Service Maintenance | | | | | |
| | a Thawing Services | 1301a | 13086 | 80 | .0006 | .0000 |
| | b Cleaning | 1301c | 2492 | 1407 | .0001 | .0001 |
| | c Rep. or Renewing | 1301d | 21187 | 10178 | .0010 | .0005 |
| | d Changing or Extend. | 1301f | 5387 | 11765 | .0003 | .0006 |
| | Street Dept. Exp. | | | | | |
| | a Rep. St. Dept. Tools | 1302a | 4246 | 1182 | .0003 | .0001 |
| | b Pumping Drips | 1302c | 21239 | 8623 | .0010 | .0004 |
| | c Taking St. Pressure | 1302e | 6446 | 4801 | .0003 | .0003 |
| | d Gen'l Supervision | 1302f | 97520 | 100286 | .0049 | .0051 |
| | Meter Maintenance | | | | | |
| | a Rep. Old Meters | 1303a | 89695 | 107331 | .0044 | .0056 |
| | b Test " " | 1303c | 23186 | 19300 | .0012 | .0010 |
| | c Rep. Old Connections | 1303d | 5052 | 2974 | .0003 | .0002 |
| | d Making New " | 1303g | 699 | 278 | .0000 | .0001 |
| | e Shop Foremen | 1303h | 51165 | 9090 | .0025 | .0005 |
| | f Changing Meters | 1303l | 4716 | 997 | .0003 | .0001 |
| | g Governor Expense | 1303k | 16515 | 796 | .0008 | .0000 |
| | Meter Dept. Exp. | | | | | |
| | a Meter Clerks | 1304a | 140739 | 33664 | .0020 | .0017 |
| | b Foremen | 1304a | 193 | 4040 | .0000 | .0002 |
| | c Rep. Shop Tools | 1304c | 130 | 329 | .0000 | .0000 |
| | Setting Meters | 1305a | 94729 | 72442 | .0046 | .0047 |
| | Removing Meters | 1305b | 49775 | 44571 | .0024 | .0023 |
| | S. & R. Supervision | 1305c | 1037 | 1753 | .0001 | .0001 |
| | Gratuitous Work | 1305d | 625 | | .0000 | |
| | a Gen'l Complaints | 1306a | 76434 | 78130 | .0047 | .0040 |
| | b Rep. Cons. Property | 1306c | 1169 | 8676 | .0001 | .0004 |
| | c Investigating, etc. | 1306f | 20 | 9204 | .0000 | .0005 |
| | d Inspecting | 1306f | 11053 | 64144 | .0001 | .0003 |
| | | 1306f | 15309 | | .0007 | |
| | Total | | 735316 | 633537 | .0360 | .0324 |

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# PAY ROLL DATA Year Ending ~~MONTH OF~~ December 31, 1909

| | Collection Expense | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| 2038 | Reading Meters | | | | | |
| 2039 | a First Reading | 1400a | 709 85 | 766 98 | 0034 | 0037 |
| 2040 | b Retakes | 1400a | 252 27 | 43 23 | 0012 | 0003 |
| 2041 | Clerical Salaries | 1401 | 5495 54 | 6306 61 | 0267 | 0323 |
| 2042 | Addressing Machine | 1402c | 276 80 | 263 06 | 0015 | 0013 |
| 2043 | Del. Receipted Bills | 1402e | 179 15 | | 0009 | |
| 2044 | Delivering Bills | 1404 | 188 21 | 194 11 | 0009 | 0010 |
| 2045 | Outside Collection | 1405 | 764 29 | 823 29 | 0047 | 0042 |
| 2046 | | | | | | |
| 2047 | Total | | 8081 31 | 8412 88 | 0395 | 0430 |
| 2048 | | | | | | |
| 2049 | Gen'l Exp. | | | | | |
| 2050 | Executive Salaries | 1500 | 3020 00 | 1781 41 | | 0091 |
| 2051 | Clerical Salaries | 1501 | 748 00 | 513 00 | | 0026 |
| 2052 | Legal Expense | 1505 | 67 88 534 | 47 | | 0000 |
| 2053 | Total | | 3835 06 | 2274 88 | | 0117 |
| 2054 | | | | | | |
| 2055 | Stock Accounts | | | | | |
| 2056 | Making New Oxide | 505 | 126 50 | 94 89 | 0006 | 0005 |
| 2057 | Main Stock | 506 | 49 46 | | 0003 | |
| 2058 | Steel Pipe Stock | 507 | | | | |
| 2059 | Fittings " | 508 | | | | |
| 2060 | Service " | 509 | | | | |
| 2061 | Appliance " | 512 | | | | |
| 2062 | Miscellaneous | 513 | | | | |
| 2063 | | | | | | |
| 2064 | Total | | 175 96 | 94 89 | 0009 | 0005 |
| 2065 | | | | | | |
| 2066 | Coal Stock Exp. | | | | | |
| 2067 | Unloading Coal | 1800a | 137 67 | 946 67 | | |
| 2068 | Weighing Coal | 1800a | | | | |
| 2069 | Piling-Trimming-Shed | 1800a | | | | |
| 2070 | Rep. Shed-Conveyors | 1800c | | | | |
| 2071 | COKE STOCK EXP. | | | | | |
| 2072 | Coke Buggy | 1801a | 217 01 | 596 68 | | |
| 2073 | Work on Pile | 1801a | | | | |
| 2074 | Hauling Ret. to Yard | 1801b | 264 10 | 213 18 | | |
| 2075 | Marketing | 1801b | 334 27 | 441 26 | | |
| 2076 | Rep. Apparatus | 1801d | 1 00 | | | |
| 2077 | Forward | | 1 176 15 | 2197 84 | | |

| Special Expense Accounts | Acct. No. | Total Wages This Year | Total Wages Last Year | ThisYr. | LastYr. |
|---|---|---|---|---|---|
| Tar Stock Exp. Bro. Eng. | | 1170 15 | | Per Gall. | |
| a Distilling | 1802a | 141 00 | 154 86 | | |
| b Tar Plant Rep. | 1802b | 24 01 | 18 65 | | |
| Ammonia Stock Exp. Mess. G E Co. | | 862 | | Per Lb. | |
| a Concentrating, etc. | 1803a | | | | |
| b Apparatus Rep. | 1803b | | | | |
| Purchasing Dept. Gen Gas Lt. Co | | 12 23 | | Per M. Mfg. | |
| a Pur. Agt. & Clerks | 1804a | 463 70 | 656 38 | — | — |
| b Handling Stock | 1804b | 1300 81 | 1181 44 | — | — |
| Barn Expense | 1805 A G | 484 81 396 41 | 862 23 | — | — |
| Prelimin. Exp. New W'k. | 1806 | | | | |
| Steam O. A. G. Co. | 1807 1808 1809 | 64 60 202 57 | 61 50 | | |
| a ~~Firemen-Helpers~~ Floor | ~~1809c~~ 1795 | 2720 | 605 97 | | |
| b Hauling Ashes | 1809c | | 30 00 | | |
| c Sundry Labor | 1809c 1797 | 2791 | | | |
| d Haul'g Coal to Boilers | 1809a | | | | |
| e Boiler Repairs | 1809d | | | | |
| f Boiler Changes | 1809c | | | — | — |
| Rent—Janitors, etc. | 1810 | 572 04 | 567 14 | | |
| Gen'l Works Bldg. Rep. | 1812c | 43 91 | 10 76 | 0002 | 0005 |
| " App. Repairs | 1813c | 227 93 | 444 94 | 0013 | 0022 |
| Sundry Labor | 1814 | 1387 93 | 1505 57 | 0068 | 0074 |
| Bench Repairs | 1811 | | | | |
| Works Expense | 1815 | | 31 70 | | 0002 |
| General Supervision | 1810 | 70 | | | |
| a Chemist | 1816a | 2931 69 | | 0144 | |
| b Clerical Salaries | 1816b | | 1038 95 | | 0005 |
| c Gen'l Supervision | 1816c | | 1998 92 | | 0099 |
| Dist. Holder Sta. | 1817 | | | | |
| New Bus. Expense | Genies | 976 | | Per M. Sold | |
| a Advertising Men | | 512 42 | 4766 5 | 0025 | 0024 |
| b Demonstrator-Ass'ts | F | 637 | 1602 | 0000 | 0001 |
| c Solicitors | G | 2137 99 | 1916 44 | 0105 | 0098 |
| d Clerks | H | 2685 24 | 2461 20 | 0180 | 0126 |
| e App'l Connections | E | 5115 39 | 4184 78 | 0250 | 0214 |
| | 1845 | 1387 | 4794 | 0001 | 0002 |
| | 1846 | 12099 | 548 89 | 0059 | 0028 |
| | 1850 | 1602 | 706 44 | 0008 | 0036 |
| Total | | 24123 8 | 21 812 41 | | |

| Construction | | Total Wages This Year | Total Wages Last Year | Per M. ThisYr. | Per M. LastYr. |
|---|---|---|---|---|---|
| Gas Works | 300 | | 2210 63 | — | — |
| Mains | 301 | 3967 90 | 1313 24 | — | — |
| Services | 302 | 3794 13 | 2750 05 | — | — |
| Meters | 303 | 17 20 | 17 35 | — | — |
| Street Lamps | 304 | 14 04 | | — | — |
| Tar Plant | 308 | | | — | — |
| Pintsch Plant | 309 | | | — | — |
| | G. Accts | 1208 60 | | | |
| | H. | 8243 | | | |
| Total | | 9444 50 | 6411 85 | — | — |

| Summary | | | | | |
|---|---|---|---|---|---|
| Manufacturing | 2037 | 7624 28 | 2314 31 | | |
| Distribution | 2037 | 7362 16 | 6335 31 | | |
| Collection Exp. | 2047 | 8081 31 | 8412 88 | | |
| General Exp. | 2053 | 3835 06 | 2274 88 | | |
| Stock Accounts | 2064 | 175 96 | 94 89 | — | — |
| Special Expenses | 2077 | 22 412 38 | 21 812 41 | — | — |
| Construction | 2052 | 9444 50 | 6411 57 | — | — |
| Total | | 58 795 95 | 57 876 15 | | |

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## PAY ROLL DATA

| | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day |
|---|---|---|---|---|---|---|---|---|
| 2070 | **Mfg. Dept.** | | | | **Office and General** | | | |
| 2071 | Foremen, | | | | Cashiers, | | | |
| 2072 | Stokers, | | | | Ass't Cashiers, | | | |
| 2073 | " Helpers. | | | | Bookkeepers Gen., | | | |
| 2074 | | | | | " Cons., | | | |
| 2075 | Water Gas Makers, | | | | " Petty Led., | | | |
| 2076 | " " " Helpers, | | | | | | | |
| 2077 | | | | | Clerks.—New Bus. Dept., | | | |
| 2078 | Furnace Men, | | | | Application " | | | |
| 2079 | Coke Men, | | | | Contract " | | | |
| 2080 | Coal Men, | | | | Appl. Sales " | | | |
| 2081 | | | | | Tabulating " | | | |
| 2082 | Hydraulic Main, | | | | Collection " | | | |
| 2083 | Patchers, | | | | Auditing " | | | |
| 2084 | | | | | Filing " | | | |
| 2085 | Purifying | | | | Pay Roll " | | | |
| 2086 | | | | | Distribution " | | | |
| 2087 | Laborers, | | | | Purchasing " | | | |
| 2088 | | | | | Store-room " | | | |
| 2089 | Engineers, | | | | Coke & Tar " | | | |
| 2090 | Works Mechanics, | | | | | | | |
| 2091 | Carpenters, | | | | | | | |
| 2092 | | | | | | | | |
| 2093 | Chemists, | | | | Representatives, | | | |
| 2094 | | | | | Ass't Representatives, | | | |
| 2095 | Works Clerks, | | | | | | | |
| 2096 | | | | | Floor Salesmen, | | | |
| 2097 | **Street Dept.** | | | | Collectors, | | | |
| 2098 | S. & M. Gang Foremen, | | | | | | | |
| 2099 | " " " Laborers, | | | | Stenographers, | | | |
| 2100 | | | | | Office Boys, | | | |
| 2101 | **Fitting Dept.** | | | | | | | |
| 2102 | Fitters, | | | | Meter Readers, | | | |
| 2103 | " Helpers, | | | | Troublemen, | | | |
| 2104 | | | | | | | | |
| 2105 | Meter Dept. Foremen, | | | | Branch Office, | | | |
| 2106 | " " Repairers, | | | | | | | |
| 2107 | " " Clerks, | | | | **Special Men** | | | |
| 2108 | | | | | | | | |
| 2109 | Arc Repairers, | | | | | | | |
| 2110 | " Lighters, | | | | | | | |
| 2111 | | | | | | | | |
| 2112 | | | | | | | | |
| 2113 | **Engineering Dept.** | | | | **Dept. Heads & Supts.** | | | |
| 2114 | | | | | | | | |
| 2115 | | | | | | | | |
| 2116 | | | | | | | | |
| 2117 | | | | | | | | |
| 2118 | | | | | | | | |
| 2119 | | | | | | | | |
| 2120 | **Pintsch Dept.** | | | | | | | |
| 2121 | Page 19 Item 186a Depreciation @ 5% on Valuation $879139.18 | | | | | | | |
| 2122 | carried in suspense pending determination of exact amount by | | | | | | | |
| 2123 | Court in Dallas Gas Suit $43956.95 | | | | | | | |
| 2124 | | | | | | | | |
| 2125 | | | | | | | | |
| 2126 | **Tar Dept.** | | | | | | | |
| 2127 | Page 19 Item 186b computation tax of 3% on Gross receipts $245124.74 | | | | | | | |
| 2128 | @ $1.20 per M carried in suspense pending determination of | | | | | | | |
| 2129 | exact amount, if any by Court $7353.74 | | | | | | | |
| 2130 | | | | | | | | |
| 2131 | | | | | | | | |
| 2132 | | | | | | | | |
| 2133 | Total, | | | | Total, | | | |



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## REPAIR AND MAINTENANCE ACCOUNT

| | | | This Year | | | | Last Year | |
|---|---|---|---|---|---|---|---|---|
| | | | Labor | Material | Total | Per M. Mfd. | Total | Per M. Mfd. |
| 2175 | Coal Shed and Apparatus | (1900c) | | | | | | |
| 2176 | Coke Yard " | (1801d) | | | | | 41 76 | .0002 |
| 2177 | Tar Dep't " | (1802b) | | | | | | |
| 2178 | Ammonia " | (1803b) | | | | | 1317 05 | .060 |
| 2179 | Drawing and Charging Machinery, | (1010b) | | | | | 297 40 | .013 |
| 2180 | Retort House Conveyors, | (1010c) | | 780 00 | 780 00 | .0036 | 2276 25 | .104 |
| 2181 | Bench Renewals, | (1011b) | | | | | | |
| 2182 | Miscellaneous Bench Repairs, | (1011a) | 31 27 | 584 | 97 21 | .0002 | 115 28 | .0005 |
| 2183 | Water Gas Generating Apparatus, | (1107) | 690 80 | 175 67 | 1486 47 | .0068 | 1130 59 | .052 |
| 2184 | Boiler Repairs | (1800d) | | | | | | |
| 2185 | General Works Repairs, Building | (1017, 1113, 1804, 1005) | 14 32 | 127 02 | 143 34 | .0006 | 188 70 | .0009 |
| 2186 | " " " Apparatus | (1114, 2014) | 57 89 | 982 53 | 1041 72 | .0047 | 1004 08 | .046 |
| 2187 | | | | | | | | |
| 2188 | | | 795 88 | 2699 08 | 3488 76 | .0160 Per M. Mfd | 6391 31 | .292 Per M. Sold |
| 2189 | Total Mfg. Dept. | | 709 91 | 78 35 | 788 26 | .0037 | 861 87 | .0040 |
| 2190 | Mains | (1300) | 422 75 | 123 71 | 546 46 | .0027 | 294 72 | .0015 |
| 2191 | Services | (1301) | 1897 92 | 1072 54 | 2970 46 | .0145 | 1902 72 | .0097 |
| 2192 | Meters | (1303) | | | | | | |
| 2193 | Lamps | (1818) | 3030 78 | 1274 60 | 4305 38 | .0211 | 3059 31 | .0156 |
| 2194 | Total Dist'n and Lamp Dept. | | 3826 66 | 3967 68 | 7794 34 | .0386 | 9450 62 | .0484 |
| 2195 | Total All Dep'ts. | | | | | | | |

## GAS USED BY COMPANY

| | WHERE USED | Cu. Ft. | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2200 | Gas Works | 8000 | 1815 | .3141 | 2 49 | |
| 2201 | Exhaust | 8000 | 3008 | | 2 49 | |
| 2202 | Box Shop | 108 900 | 1304B | | 34 17 | |
| 2203 | Office | 551 400 | 1840 | | 175 96 | |
| 2204 | Exhaust Meter Shop | 5600 | 3264a 3273 | | 1 73 | |
| 2205 | | | | | | |
| 2206 | | | | | | |
| 2207 | | | | | | |
| 2208 | | | | | | |
| 2209 | | | | | | |
| 2210 | | | | | | |
| 2211 | | | | | | |
| 2212 | | | | | | |
| 2213 | | | | | | |
| 2214 | Totals | 681 900 | | | 216 86 | |

## COKE USED BY COMPANY

| | WHERE USED | Weight | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2215 | Bench Fuel | | 1002 | | | |
| 2216 | Boiler Fuel | | 1809 | | | |
| 2217 | Pintsch Bench Fuel | | 2401 | | | |
| 2218 | Generator Fuel Dennis Coke | 3343345 | 1101 | | 2007118 | |
| 2219 | Street Department Mill | 80516 | 1300 | | 572560 | |
| 2220 | Meter Shop | | 1304b | | | |
| 2221 | Breeze | 2500 | | | 43 75 | |
| 2222 | | | | | | |
| 2223 | | | | | | |
| 2224 | | | | | | |
| 2225 | | | | | | |
| 2226 | | | | | | |
| 2227 | Totals | 417361 | | | 258148 | |



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## CLERICAL SALARIES DATA

| | No Clerks | Total Salaries | Charged To | Amount |
|---|---|---|---|---|
| 2081 GAS WORKS | 1 | 400.14 | 1816 WORKS SUPERVISION | 400.14 |
| 2082 COLLECTION OFFICE | 8 | 5,495.44 | 1401 COLLECTION CLERICAL SAL | 5495.44 |
| 2083 GENERAL OFFICE | 1 | 736.00 | 1501 GENERAL OFFICE | 736.00 |
| 2083 PURCHASING DEPT | 1 | 518.70 | 1804 A PURCHASING DEPT | 518.70 |
| 2084 APPLIANCE DEPT | 1 | 740.00 | APPLIANCE DEPT | 740.00 |
| 2085 NEW BUS DEPT | 1 | 720.00 | 1507 FROM NEW BUSINESS | 120.00 |
| TOTAL | | 8,610.38 | | 8610.38 |

## COAL USED BY COMPANY

| | | Tons | Cost | WHERE USED | Acct. No. | Tons | Cost |
|---|---|---|---|---|---|---|---|
| 2228 | Used during ~~month~~ (2244) Year | 20 77.01 | 11574 71 | Coal Carbonized | 1000 | 1275 111 | 10778 01 |
| 2229 | Year | 2527 | 671 34 | Boiler Fuel | 1800 | 155 52 | 587 21 |
| 2230 | | | | Bench Fuel Year | 1002 | 147 35 | 373 16 |
| 2231 | | | | Street Department | 1200 | | |
| 2232 | | | | 3000 A | | 58 00 | 277 35 |
| 2233 | | | | 1300 B | | 1 50 | 8 32 |
| 2234 | Total | 2338 28 | 12249 05 | | Total | 2338 28 | 12249 05 |

## TAR SOLD AND USED

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2235 | Sold and Used (2344) LG | 28 510 | 570 20 | Sold | 1802 | 3181 5 | 636 30 |
| 2236 | WG | 77 420 | 1548 40 | Used in Pitch Plant | | | |
| 2237 | | | | Used for Gas Making | | | |
| 2238 | | | | 3000 A Elec Dep | | 14 115 | 1182 30 |
| 2239 | Total | 105 930 | 2118 60 | | Total | 105 930 | 2118 60 |

## OIL USED BY COMPANY

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2240 | Used during Year ~~Month~~ (2376) | 1944 8 | 22186 12 | Enricher | 1102 | 734 148 | 22186 12 |
| 2241 | | | | Pintsch | 2400 | | |
| 2242 | | | | | | | |
| 2243 | | | | | | | |
| 2244 | | | | | | | |
| 2245 | Total | 734 148 | 22186 12 | | Total | 734 148 | 22186 12 |

## COAL STOCK

| | | BITUMINOUS GAS COAL | | | Bench Fuel | | | STEAM COAL | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tons | Cost | Per Ton | Tons | Cost | Per Ton | Tons | Cost | Per Ton |
| 2300 | First of ~~Month~~ Year | 1018 99 | 5706 34 | 560 | 8 72 | 2206 | 2.53 | | | |
| 2301 | Rec'd during ~~Mo.~~ Yr | 1846 75 | 10112 84 | 5476 | 250 56 | 632 24 | 2523 | | | |
| 2302 | Coal Stock Exp. | | 119 86 | | | 20 14 | | | | |
| 2303 | Total Cost | 2865 74 | 15937 04 | 5562 | 259 27 | 674 34 | 2601 | | | |
| 2304 | Used during ~~Mo.~~ Yr | 2126 01 | 11835 42 | 5567 | 259 27 | 674 34 | 2601 | | | |
| 2305 | Close of ~~Mo.~~ Yr | 739 73 | 4103 62 | 5547 | | | | | | |

| | | | |
|---|---|---|---|
| 2307 | Coal Stock Expense | (1800a) | $ . |
| 2308 | do | (1800b) | . |
| 2309 | do | (1800c) | . |
| 2311 | | | . |
| 2312 | Total Expense | (to line 2302) | $ . |

## COKE STOCK

## BREEZE STOCK

| | | Total Tons | Total Cost | Av. Per Ton | Total Tons | Total Cost | Av. Per Ton |
|---|---|---|---|---|---|---|---|
| 2320 | Stock first of ~~month~~ YEAR | 127 16 | 595 54 | 1.50 | 550 | | |
| 2321 | Received or made during ~~month~~ Yr | 5114 52 | 30 693 82 | . | 6012 | | |
| 2322 | Coke Expense as below | | 563 14 | . | | | |
| 2323 | Total Cost | 5241 68 | 31 852 50 | . | | | |
| 2323a | Coke used under Benches | | | | | | |
| 2323b | Used elsewhere than under Benches | | | | | | |
| 2324 | Total Coke used during ~~Month~~ YEAR | 4280 70 | 26 609 53 | 1.50 | 6216 | | |
| 2325 | Sold during ~~month~~ YEAR | 560 73 | 2577 87 | . | 5682 | | |
| 2326 | Total Sold and Used | 4841 43 | 29 187 40 | . | 6169 | | |
| 2327 | Stock close of ~~month~~ YEAR | 400 25 | 2665 10 | . | 739 | | |

| | | | | | |
|---|---|---|---|---|---|
| 2328 | Coke Stock Expense | Coke (1801a) | $ . | Breeze (1801e) | $ |
| 2329 | do | (1801b) | . | (1801f) | . |
| 2330 | do | (1801c) | . | (1801g) | . |
| 2331 | do | (1801d) | . | (1801h) | . |
| 2332 | do | | . | | . |
| 2333 | Total Expense | (to line 2322) | | | |

## TAR STOCK

| | | Coal Gas Tar | | | Water Gas Tar | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2340 | Stock first of ~~month~~ YEAR | 26541 | 470 82 | 02 | 77109 | 1542 19 | 02 |
| 2341 | Made and bought during ~~month~~ YEAR | 19754 | 395 08 | . | 119983 | 2399 66 | . |
| 2342 | Tar Expense as below | | | | | | . |
| 2343 | Total Cost | 46295 | 865 90 | . | 197092 | 3941 85 | |
| 2344 | Sold and used during ~~month~~ YEAR | 28510 | 570 20 | . | 77420 | 1548 40 | . |
| 2345 | Stock close of ~~month~~ YEAR | 17785 | 315 70 | . | 119672 | 2393 45 | |
| 2347 | Tar Stock Expense (1802a) | | | $ . | | | $ . |
| 2348 | do (1802b) | | | . | | | . |
| 2349 | do (1802c) | | | . | | | . |
| 2350 | | | | . | | | . |
| 2351 | | | | . | | | . |
| 2352 | Total Expense (to line 2342) | | | $ | | | |

## AMMONIA STOCK

| | | Pounds | Cost | Per Lb. |
|---|---|---|---|---|
| 2360 | Stock first of month | | | |
| 2361 | Made during month | | | |
| 2362 | Ammonia Expense as below | | | |
| 2363 | Total Cost | | | |
| 2364 | Sold during month | | | |
| 2365 | Stock close of month | | | |
| 2367 | Ammonia Expense (1803a) | | $ . | $ . |
| 2368 | do (1803b) | | . | . |
| 2369 | do (1803c) | | . | . |
| 2370 | Total Expense (to line 2362) | | $ | |

## OIL STOCK

| | | GAS OIL | | | PINTSCH OIL | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2372 | Stock first of ~~month~~ YR | 19288 | 655 79 | 034 | | | |
| 2373 | Received during ~~month~~ YR | 784,174 | 23 512 71 | 030 | | | |
| 2374 | Oil Expense | | | | | | |
| 2375 | Total Cost | 803462 | 24 168 50 | 030 | | | |
| 2376 | Used during ~~month~~ YR SOLD TO FREMONT | 784,148 | 23 186 12 | 030 | | | |
| | | 8076 | 231 55 | 028 | | | |
| 2377 | Stock close of ~~month~~ YR | 61318 | 1750 83 | 028 | | | |

REPORT FOR

## PINTSCH DEPARTMENT

| | MANUFACTURING | Plant | Output | Output per M | TOTAL This Year | TOTAL Last Year | Total per M. This Yr. | Total per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 2400 | Oil, Gals., @ | | | | | | | |
| 2401 | Bench Fuel, Tons, @ | | | | | | | |
| 2402 | " @ | | | | | | | |
| 2403 | Total Cost Material, | | | | | | | |
| 2404 | Tar | | | | | | | |
| 2405 | Hydrocarbon Oil, | | | | | | | |
| 2406 | Total Residuals, | | | | | | | |
| 2407 | Net Cost Materials, | | | | | | | |
| 2408 | Retort House Labor, | | | | | | | |
| 2409 | Bench Repairs, | | | | | | | |
| 2410 | Retort House Expense, | | | | | | | |
| 2411 | Steam, | | | | | | | |
| 2412 | Purification, | | | | | | | |
| 2413 | Works Repairs, | | | | | | | |
| 2414 | Sundry Labor, | | | | | | | |
| 2415 | Works Expense and Supplies, | | | | | | | |
| 2416 | Total Manufacturing, | | | | | | | |
| | DISTRIBUTION | | Receiver Expense | Receiver per M. | | | | |
| 2420 | Car Fillers, | | | | | | | |
| 2421 | Pipe Line Repairs, | | | | | | | |
| 2422 | Hose, | | | | | | | |
| 2423 | Sundries, | | | | | | | |
| 2424 | Total, | | | | | | | |
| 2425 | Gas Lost, | | | | | | | |
| 2426 | Total Distribution, | | | | | | | |
| 2427 | Total Manuf'g and Distribution Exp. | | | | | | | |

### GROSS EARNINGS

| | | | | | |
|---|---|---|---|---|---|
| 2430 | Gas, . . . | Cu. ft. | | | |
| 2431 | . . | Cu. ft. | | | |
| 2432 | . . | Cu. ft. | | | |
| 2433 | Total Earnings, . . | Cu. ft. | | | |
| 2434 | Expenses as above, | | | | |
| 2435 | Taxes, | | | | |
| 2436 | Depreciation on plant % | | | | |
| 2440 | Total Expenses, | | | | |
| 244 | Net Earnings Pintsch Dep't, | | | | |
| 2442 | % Credit Income, Acc't No. 202 | | | | |
| 2443 | % Credit Pintsch Comp. Co. | | | | |

| | | | | |
|---|---|---|---|---|
| 2 | Gas on hand 1st of Month, . . | Cu. ft. | Gas Sold . . | Cu. ft. |
| 2445 | Gas made, . . | Cu. ft. | Gas on hand last of month . . | Cu. ft. |
| 2446 | . . | Cu. ft. | Gas lost . . | Cu. ft. |
| 2447 | Total Gas to Account for, . . | Cu. ft. | Total Gas Accounted for . . | Cu. ft. |

| | | This Year | % | Last Year, | % |
|---|---|---|---|---|---|
| 2450 | % Gas Lost to Gas Made, | " " | " | " " | " |
| 2451 | % Gas Lost to Gas Sold, | " " | | " " | |
| 2452 | Kind of Oil Used, | " " | C. F. | " " | C. F. |
| 2453 | Amount Gas Made per Gallon Oil, | " " | Gals. | " " | Gals. |
| 2454 | Amount Oil Used per 1000 C. F. Made, | " " | " | " " | |
| 2455 | Amount Oil Used per 1000 C. F. Sold, | " " | | " " | |
| 2456 | Number Retorts in Use, | " " | | " " | |
| 2457 | | " " | | " " | |
| 2458 | Kind of Fuel Used, | " " | | " " | |
| 2459 | Amount Fuel Used, Lbs. | Furnaces | Boilers | Furnaces | Boilers |
| 2460 | Amount Fuel Used, Lbs. per M. ft. Made, | | | | |
| 2461 | Amount Fuel Used, Lbs. per M. ft. Sold, | | | | |
| 2462 | | | | | |
| 2463 | | | | | |
| 2464 | | | | | |
| 2465 | | | | | |

## APPROVALS AND RECORD

| | |
|---|---|
| AUDITED AND VOUCHED FOR BY SECRETARY | |
| APPROVED BY DEPARTMENT SUPERINTENDENT | |
| APPROVED BY MANAGER (OR ACTING MGR.) | |
| DATE REPORT WAS MAILED BY COMPANY | |

DATE RECEIVED AT N. Y. OFFICE

CHECKED BY REVIEWED BY

DATE OF REVIEWING LETTER DATE OF CO.'S LETTER OF REPLY

**THIS REPORT HAS BEEN SEEN BY**

| OFFICE DEPT. | CORPORATION DEPT. | EXECUTIVE DEPT. | GEN. MGR'S OFFICE | ENGINEERING DEPT. | AUDITING DEPT. | STATISTICAL DEPT. | NEW BUSINESS DEPT. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Lincoln Gas & Electric Light Co.

**Manufacturing and Expense Reports**

OF

# GAS DEPARTMENT

FOR 12 MONTHS ENDING DEC 31 1910

# General Rules for Reporting

1. The Company's name should be stamped on report covers, and on the first page, and the name of the City or Plant at the head of every other page in the report.

2. Date of reports should be stamped at the top of every page.

3. Decreases should be in red.

4. Never use copying ink.

5. Special or unusual entries, corrections of back errors, changes in cumulative figures, discrepancies between annual and monthly reports, should invariably be explained.

6. Carry per unit costs four decimal places.

7. Items which do not apply to your Company's business, and cannot be filled in, should be checked, excepting large sections such as lines 1200-22, which should be ruled out.

8. Zeros should be filled in: don't leave blank lines.

9. Where statistical information asked for is not given, state reasons for omitting.

10. Figure "per meter" data on meters at close of month, less company and sub-meters.

11. Figure "per consumer" data on consumers at close of month.

12. Show residuals, lines 1004 to 1007, **"per ton of coal carbonized."**

13. Line 1425 should show the sum total of lines 905 and 906 on previous month's report, plus line 907 on current month's report.

14. Each copy of the report sent to the New York Office should be signed by the Secretary, Department Superintendent and by the General Manager or Acting General Manager.

15. The Manager or Acting Manager should inclose with every report to the New York Office a letter in duplicate reviewing the report and calling attention to all items of interest or of marked change.

REPORT FOR Year Ending December 31 910

## GROSS EARNINGS

| | FROM SALE OF GAS | AMOUNTS This Year | AMOUNTS Last Year | Increase or Decrease | Receipts per M. Sold This Year | Receipts per M. Sold Last Year |
|---|---|---|---|---|---|---|
| 900 | Illuminating Purposes, | | | | | |
| 901 | Domestic Fuel " | | | | | |
| 902 | Industrial Fuel " | | | | | |
| 903 | Power " | | | | | |
| 904 | Street Lamp " | | | | | |
| 905 | Total from Gas Sales, | 251 748 06 | 244 798 78 | 6949 28 | 1.1978 | 1.1983 |
| 906 | Meter charge on Minimum Bills, | 765 12 | 7110 00 | 54 12 | .0026 | .0035 |
| 907 | Forfeited Discount, | 2429 19 | 2611 96 | 182 77 | .0116 | .0128 |
| 908 | Total Earnings from Gas, | 254 942 37 | 248 124 74 | 6817 63 | 1.2130 | 1.2146 |
| 909 | Bad Debts, | 3 000 00 | 2 000 00 | | .0141 | .0146 |
| 910 | Gross Earnings Gas Dep't, | 251 942 37 | 248 124 74 | 6817 63 | 1.1989 | 1.2000 |
| 911 | Operating Expenses (Total) (917) | 143 670 45 | 134 708 24 | 8962 21 | .6827 | .6594 |
| 912 | Net Earnings Gas Dept. | 108 271 92 | 110 416 50 | 2144 58 | .5162 | .5406 |

## SUMMARY OF OPERATING EXPENSES

| | | Plant | Output | Consumers | Meters | TOTAL COST This Year | TOTAL COST Last Year |
|---|---|---|---|---|---|---|---|
| | Floor | 300 00 | | | | 300 00 | 300 00 |
| 913 | Manufacturing (1200) | 11 684 81 | 55 512 77 | | | 67 197 80 | 72 232 62 |
| 914 | Distribution (1300) | 6 614 66 | | 2511 75 | 7288 52 | 18 414 93 | 15 550 37 |
| 915 | Collection (1400) | | | 1228 78 | 9856 71 | 11 414 49 | 10 105 07 |
| 916 | General (1500) | 46 343 23 | | | | 46 343 23 | 36 520 18 |
| 917 | Totals | 64 742 70 | 55 512 77 | 10 740 53 | 12 474 23 | 143 670 45 | 134 708 24 |

## SUMMARY OF OPERATING EXPENSES. PER UNIT

| | | Per M. Sold: Plant | Output | Consumers | Meters | Total This Year | Total Last Year | Per Consumer: Consumers Charges | Meter Charges | Total C. & M. | Per Meter: Consumers Charges | Meter Charges | Total C. & M. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Floor | .0270 | | | | .0014 | .0018 | | | | | | |
| 913a | Manufacturing (1200) | .0456 | .2641 | | | .3197 | .2836 | | | | | | |
| 914a | Distribution (1300) | .0215 | | .0117 | .0342 | .0674 | .0761 | .0231 | .1334 | .1565 | .0357 | .1817 | .2174 |
| 915a | Collection (1400) | | | .0979 | .0151 | .0430 | .0456 | .1085 | .0420 | .1505 | .1078 | .0418 | .1496 |
| 916a | General (1500) | .2246 | | | | .2246 | .1718 | | | | | | |
| 917a | Totals | .2971 | .2641 | .0511 | .0593 | .6836 | .6575 | .1496 | .1644 | .3140 | .1407 | .1635 | .3042 |

## SUMMARY OF GAS SALES. (POPULATION THIS YEAR 44000 LAST YEAR 43000)

| | | Total Sales (Cu. Ft.) This Year | Total Sales (Cu. Ft.) Last Year | No. of Meters. This Year | No. of Meters. Last Year | Average Sale per Meter This Year | Average Sale per Meter Last Year | Avg. Sale per Capita This Year | Avg. Sale per Capita Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 918 | Illuminating Gas, | | | | | | | | |
| 919 | Dom. Fuel Gas, | | | | | | | | |
| 920 | Ind. Fuel Gas, | | | | | | | | |
| 921 | Power Gas, | | | | | | | | |
| 922 | Total Fuel Gas, | 210 169 010 | 204 214 785 | | | | | | |
| 923 | Total Private Sales | 210 169 010 | 204 214 785 | 7389 | 6876 | 26 820 | 29 76. | 477.8 | 472.6 |
| 924 | Street Lamps, | | | No. Lamps | | Av'g per Lamp | | | |
| 925 | Total Sales, | 210 169 010 | 204 214 785 | | | | | | |

## CONSUMERS Avg Cons 7317 Avg Meters 7389

| | | No. Using: Ill'tg Gas Only | Fuel Gas Only | Both | Total No. Consumers | Total Using: Ill'tg Gas | Fuel Gas |
|---|---|---|---|---|---|---|---|
| 926 | First of Month, Year | | | | 7447 | | |
| 927 | New during Month, Year | | | | 4215 | | |
| 928 | Total, | | | | 11362 | | |
| 929 | Off during Month, Year | | | | 3775 | | |
| 930 | Close of Month, Year | | | | 7587 | | |
| 931 | First of Year, | | | | 7447 | | |
| 932 | Gain or Loss, | | | | 540 | | |

## CONSUMER DATA

| | | This Year | Last Year | | This Year | Last Year |
|---|---|---|---|---|---|---|
| 941 | Ill'tg Sales per Ill'tg Consumer, | | | Inhabitants per Ill'tg Consumer | | |
| 942 | Dom. F. " " Dom. F., " | | | " " Dom. Fuel " | | |
| 943 | Indust'l " " Ind. " | | | " " Ind. Fuel " | | |
| 944 | Power " " Power " | | | " " Power " | | |
| 945 | Average Sales per Consumer, | 28 730 | 28 580 | " " Consumer | 6 914 | 6 812 |

REPORT FOR Year Ending December 31 1910

## MANUFACTURING DEPARTMENT. COAL GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1000 | Coal Carbonized @ | | | | | 11264 75 | | 5708 |
| 1001 | Enricher @ | | | | | 1109 30 | | 0562 |
| 1002 | Bench Fuel @ | | | | | 12374 05 | | 6267 |
| 1003 | Total Cost C. G. Mfg. Mat'l | | | | | 6574 44 | | 3240 |
| 1004 | Coke Residual @ | | | | | 395 08 | | 0200 |
| 1005 | Tar " @ | | | | | | | |
| 1006 | Ammonia " @ | | | | | | | |
| 1007 | Carbon " @ | | | | | 6789 52 | | 3440 |
| 1008 | Total Residuals | | | | | 5284 53 | | 2727 |
| 1009 | Net Cost C. G. Mfg. Material | | | | | 1475 44 | | 0747 |
| 1010 | Retort House Labor | | | | | 817 21 | | 0414 |
| 1011 | Bench Repairs | | | | | 63 68 | | 0032 |
| 1012 | Retort House Expense | | | | | 7740 86 | | 3920 |
| 1013 | Total Cost Generating Coal Gas | | | | | 365 36 | | 0185 |
| 1014 | Steam | | | | | 135 85 | | 0069 |
| 1015 | Purifying C. G. Labor, Exp. & Repairs | | | | | 50 04 | | 0025 |
| 1016 | " Material | | | | | 2 91 | | 0001 |
| 1017 | General Works, Bldgs., Repairs (C. G.) | | | | | 97 54 | | 0049 |
| 1018 | " Apparatus " (C. G.) | | | | | 255 33 | | 0129 |
| 1019 | Sundry Labor (C. G.) | | | | | 278 55 | | 0141 |
| 1020 | Works Expense and Supplies (C. G.) | | | | | 234 64 | | 0119 |
| 1021 | General Supervision (C. G.) | | | | | | | |
| 1022 | District Holder Station (C. G.) | | | | | 1420 18 | | 0719 |
| 1023 | Total Purification and Storage | | | | | 9161 04 | | 4637 |
| 1024 | Total Cost Coal Gas in Holder | | | | | | | |

### COAL GAS STATISTICS

| | | This Year. | Last Year |
|---|---|---|---|
| 1029 | Coal Gas Made | Cu. ft. 19747,110 | Cu. ft. |
| 1030 | Kind of Coal used | Youghiogheny | |
| 1031 | Coal Carbonized | Tons 1975.41 | Tons |
| 1032 | Yield per lb. Coal | Cu. ft. 5.0 | Cu. ft. |
| 1033 | Cost of Coal per ton delivered (with freight @ $ per ton shipped) | $ | $ 5.567 |
| 1034 | Average number retorts in use | | 15.15 |
| 1035 | Average charge per retort | Lbs. 350 | Lbs. |
| 1036 | Average make per retort Per 24 hrs. | Cu. ft. 10500 | Cu. ft. |
| 1037 | Average make per man charged acc't No. 1010 Per 24 Hrs. | Cu. ft. 28275 | Cu. ft. |
| 1038 | Coke made per ton Coal Carbonized | Lbs. 1300 | Lbs. |
| 1039 | Coke used for Bench Fuel per ton Coal Carbonized | Lbs. | Lbs. |
| 1040 | Coal used for Bench Fuel " | Lbs. 964 | Lbs. |
| 1041 | Receipts for Coke per ton sold | $ | $ 5938 |
| 1042 | " " " per ton Coal Carbonized | $ | $ 2150 |
| 1043 | Tar made per ton Coal Carbonized | Gals. | 10 Gals. |
| 1044 | Receipts for Tar per " | ¢ | .397 ¢ |
| 1045 | " " " per lb. sold | ¢ | .0397 ¢ |
| 1046 | Ammonia made per ton Coal Carbonized | Lbs. | Lbs. |
| 1047 | Receipts for Ammonia " | ¢ | ¢ |
| 1048 | " " " per lb. sold | ¢ | ¢ |
| 1049 | Carbon sold | Tons | Tons |
| 1050 | Price received for Carbon per ton | $ | $ |
| 1051 | Gas Purified per bu. per change | Cu. ft. | Cu. ft. |
| 1052 | Spent Oxide sold Tons @ $ per ton | | |
| 1053 | Illuminating Power Max. | C. P. | 165 C. P. |
| 1054 | Illuminating Power Min. | C. P. | 155 C. P. |
| 1055 | Illuminating Power Avg. | C. P. | 162 C. P. |
| 1056 | Heat Units (B. T. U.) Max. | B. T. U. | 7146 B. T. U. |
| 1057 | Heat Units (B. T. U.) Min. | B. T. U. | 6294 B. T. U. |
| 1058 | Heat Units (B. T. U.) Avg. | B. T. U. | 670 B. T. U. |
| 1059 | | | |
| 1060 | | | |
| 1061 | | | |

REPORT FOR Year Ending December 31, 1910

## MANUFACTURING DEPARTMENT. WATER GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1100 | Steam for Generating Water Gas | | 3020 00 | 0132 | 3020 00 | 2245 00 | 0132 | 0112 |
| 1101 | Generator Fuel, 24134 Tons Coal. 1085 Bbl. | | 26281 76 | 1158 | 26281 76 | 26665 24 | 1158 | 1333 |
| 1102 | Enricher, 191727 Gal. | | 2296089 | 1010 | 2296089 | 2218612 | 1010 | 1107 |
| 1103 | Total W. G. Making Material, | | 52262 65 | 2298 | 52262 65 | 51096 36 | 2298 | 2554 |
| 1104 | Water Gas Tar Residual Acc't., 185215 Gal. | | 2727 71 | 0120 | 2727 71 | 2399 66 | 0120 | 0119 |
| 1105 | Net Cost W. G. Mfg. Material, | | 49534 94 | 2178 | 49534 94 | 48696 70 | 2178 | 2435 |
| 1106 | Gas Making Labor, | | 3956 04 | 0174 | 3956 04 | 4082 41 | 0174 | 0204 |
| 1107 | Repairs to W. G. Gen. Apparatus, | | 807 53 | 0036 | 807 53 | 1487 94 | 0036 | 0074 |
| 1108 | W. G. Generating House Expense, | | 111 67 | 0005 | 111 67 | 153 37 | 0005 | 0008 |
| 1109 | Total Cost Generating W. G., | | 54412 18 | 2393 | 54412 18 | 54420 42 | 2393 | 2721 |
| 1110 | Steam, | | 4514 47 | 0199 | 4514 47 | 4507 04 | 0199 | 0225 |
| 1111 | Purifying W. G. Labor, Exp. and Rep., | | 412 82 | 0018 | 412 82 | 375 86 | 0018 | 0019 |
| 1112 | Purifying W. G. Material, | | 575 00 | 0025 | 575 00 | 580 00 | 0025 | 0029 |
| 1113 | General Works Repairs, Buildings, | 235 75 | | | 235 75 | 140 84 | 0010 | 0007 |
| 1114 | General Apparatus Repairs, | 1719 90 | | | 1719 90 | 944 46 | 0076 | 0047 |
| 1115 | Sundry Labor, | 3050 66 | | | 3050 66 | 2156 75 | 0134 | 0108 |
| 1116 | Works Expense and Supplies, | 3372 80 | | | 3372 80 | 2157 76 | 0149 | 0108 |
| 1117 | General Supervision, | 3260 41 | | | 3260 41 | 2698 21 | 0143 | 0135 |
| 1118 | District Holder Station, | 25 29 | | | 25 29 | | 0001 | |
| 1119 | Total Cost Purification and Storage, | 11681 81 | 5502 29 | 0242 | 17184 10 | 13532 92 | 0755 | 0677 |
| 1120 | Total Cost Water Gas in Holder, | 11681 81 | 57914 47 | 2635 | 71597 28 | 67953 34 | 3148 | 3398 |

### WATER GAS STATISTICS

| | | This Year. | Last Year. |
|---|---|---|---|
| 1130 | Water Gas Made, | 227·437·573 Cu. ft. | 200·082·640 Cu. ft. |
| 1131 | Enricher Used, | 131.725 Gals. | 734.148 Gals. |
| 1132 | Enricher Used per M., | 3.66 Gals. | 3.67 Gals. |
| 1133 | Candles per Gal. Enricher, | | |
| 1134 | Boiler Fuel per M., | Lbs. | Lbs. |
| 1135 | Generator Fuel per M., | 91.4 Lbs. | 42.8 Lbs. |
| 1136 | Number of Runs, | 39284 | 34217 |
| 1137 | Average Make per Run, | 5842 Cu. ft. | 5850 Cu. ft. |
| 1138 | Average Make per Gas Maker per 24 Hours, | 1·077·712 Cu. ft. | 137·000 Cu. ft. |
| 1139 | Gas Purified per Bu. Material per Change, | Cu. ft. | Cu. ft. |
| 1140 | | | |
| 1141 | Tar Made per M. Cu. Ft. Gas, | .6 Gals. | .6 Gals. |
| 1142 | Tar Made per M. Gal. Oil Used, | ·163·9 Gals. | ·163·3 Gals. |
| 1143 | | | |
| 1144 | | | |
| 1145 | Illuminating Power Water Gas Max. | C. P. | 20.7 C. P. |
| 1146 | Illuminating Power Water Gas Min | C. P. | 19.0 C. P. |
| 1147 | Illuminating Power Water Gas Avg. | C. P. | 19.8 C. P. |
| 1148 | Heat Units, (B. T. U.) Max. | 6700 B.T.U. | 666.6 B.T.U. |
| 1149 | Heat Units, (B. T. U.) Min. | 6080 B.T.U. | 611.8 B.T.U. |
| 1150 | Heat Units, (B. T. U.) Avg. | 6373 B.T.U. | 637.0 B.T.U. |
| 1151 | | | |
| 1152 | | | |
| 1153 | | | |
| 1154 | **MIXED GAS STATISTICS** | | |
| 1155 | Illuminating Power, Max. | C.P. | 18.7 C.P. |
| 1156 | Illuminating Power, Min. | C.P. | 18.0 C.P. |
| 1157 | Illuminating Power, Avg. | C.P. | 18.3 C.P. |
| 1158 | Heat Units, (B. T. U.) Max. | B.T.U. | 656.4 B.T.U. |
| 1159 | Heat Units, (B. T. U.) Min. | B.T.U. | 613.3 B.T.U. |
| 1160 | Heat Units, (B. T. U.) Avg. | B.T.U. | 645.4 B.T.U. |
| 1161 | Sulphur Contents, Max. | | |
| 1162 | Sulphur Contents, Avg. | | |
| 1163 | Oxygen Contents, Max. | | |
| 1164 | Oxygen Contents, Avg. | | |
| 1165 | | | |

12 REPORT FOR Year Ending December 31 1910

## MANUFACTURING DEPARTMENT. PURCHASED GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1200 | Crude Gas Purchased, | | | | | | | |
| 1201 | Power for Pumping, | | | | | | | |
| 1202 | Enricher, | | | | | | | |
| 1203 | | | | | | | | |
| 1204 | | | | | | | | |
| 1205 | Total Cost Materials, | | | | | | | |
| 1206 | Tar, | | | | | | | |
| 1207 | Ammonia, | | | | | | | |
| 1208 | Total Residuals, | | | | | | | |
| 1209 | Net Cost Materials, | | | | | | | |
| 1210 | Steam, | | | | | | | |
| 1211 | Purifying Pur. Gas, Labor, Exp. & Rep., | | | | | | | |
| 1212 | " " " Material, | | | | | | | |
| 1213 | General Works Rep. Bldgs., | | | | | | | |
| 1214 | General Apparatus Repairs, | | | | | | | |
| 1215 | Sundry Labor, | | | | | | | |
| 1216 | Works Expense and Supplies, | | | | | | | |
| 1217 | General Supervision, | | | | | | | |
| 1218 | District Holder Station, | | | | | | | |
| 1219 | | | | | | | | |
| 1220 | | | | | | | | |
| 1221 | Total Purification and Storage, | | | | | | | |
| 1222 | Total Cost Purchased Gas in Holder, | | | | | | | |
| 1223 | | | | | | | | |
| 1224 | | | | | | | | |
| 1225 | | | | | | | | |
| 1226 | | | | | | | | |
| 1227 | | | | | | | | |
| 1228 | | | | | | | | |
| 1229 | | | | | | | | |

## MANUFACTURING DEPARTMENT. MIXED GAS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1250 | Total Cost Manuf'g Coal Gas, | | | | 9,161.44 | | .4627 | |
| 1251 | " " " Water Gas, | 11,684,81 | 59,914.47 | .3148 | 71,599.28 | 67,753.84 | .3148 | .3378 |
| 1252 | " " " Coal & Water Gas, | 11,684,81 | 59,914.47 | .3148 | 71,599.28 | 77,114.28 | .3148 | .3478 |
| 1253 | " " " Gas Purchased, | | | | | | | |
| 1254 | " " All Gas Manufacturing Dept. | 11,684,81 | 59,914.47 | .3148 | 71,599.28 | 77,114.28 | .3148 | .3478 |
| 1255 | Output Cost Gas Lost and Unacc'd for | | 4,206.81 | .0185 | 4,206.81 | 4,672.06 | .0185 | .0213 |
| 1256 | " " " Used by Co. | | 143.34 | .0006 | 143.34 | 216.86 | .0006 | .0010 |
| 1257 | Total Deductions from Manuf'g Costs, | | 4,350.15 | .0191 | 4,350.15 | 4,888.92 | .0191 | .0223 |
| 1258 | Net Cost in Holder of Gas Charged Stock Acc't. | 11,684,81 | 55,564.32 | .2757 | 67,249.13 | 72,225.46 | .2757 | .3276 |
| 1259 | Difference Stock on Hand First and Last of Mo., | | 51.33 | .0002 | 51.33 | 7.16 | .0002 | .0000 |
| 1260 | Net Cost in Holder of Gas Sold, | 11,684,81 | 55,512.99 | .2755 | 67,197.80 | 72,232.62 | .2755 | .3537 |

## GAS ACCOUNT. CUBIC FEET

| | | This Year | Last Year | Increase | Decrease | Per Cent. of Totals |
|---|---|---|---|---|---|---|
| 1280 | Gas on Hand First of Yr. ~~Month~~, | 727,700 | 650,250 | 77,450 | | |
| 1281 | Coal Gas Made during Yr. ~~Month~~, | | 19,747,110 | | 19,747,110 | |
| 1282 | Water " " " " | 227,439,573 | 209,082,640 | 27,356,933 | | |
| 1283 | Gas Purchased " " | | 10,000,000 | | 10,000,000 | |
| 1284 | Total Gas Made and Purch'd, | 227,439,573 | 217,839,750 | 7,599,843 | | 100% |
| 1285 | Total Gas to Account for, | 228,167,273 | 220,490,000 | 7,677,293 | | 100% |
| 1286 | Gas on Hand at Close of Yr. ~~Month~~, | 830,000 | 727,700 | 102,300 | | |
| 1287 | Gas Delivered to Mains, | 227,337,273 | 219,762,300 | 7,574,993 | | 100% |
| 1288 | Gas Sold, | 210,169,010 | 204,283,555 | 5,885,455 | | 92.45 |
| 1289 | Gas Used by Co., | 545,600 | 681,900 | | 136,300 | .24 |
| 1290 | Total Gas Sold and Used, | 210,714,610 | 204,965,455 | 5,749,155 | | 92.69 |
| 1291 | Gas unaccounted for, | 16,622,683 | 14,796,845 | 1,825,838 | | 7.31 |

## DISTRIBUTION DEPARTMENT EXPENSE

| | | Charge Plant Amount | Per M sold | Charge Consumers Amount | Per Cons. | Charge Meters Amount | Per Meter | Total Cost This Year | Last Year | Total Cost per M. Sold This Yr. | Last Yr. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | Street Main Maint'n'c | 1727 15 | .0082 | | | | | 1727 15 | 788 26 | .0082 | .0037 |
| 1301 | Service " | | | 4240 5 | .0056 | | | 4240 5 | 517 32 | .0020 | .0025 |
| 1302 | Street Dep't Expense, | 680 70 | .0033 | 1361 51 | .0179 | | | 2042 21 | 1671 98 | .0097 | .0082 |
| 1310 | Pumping Gas, | | | | | | | | | | |
| 1303 | Meter Maintenance, | | | | | 3625 99 | .0475 | 3625 99 | 2764 41 | .0173 | .0145 |
| 1304 | Meter Dep't Expense, | | | | | 1551 43 | .0203 | 1551 43 | 1294 05 | .0074 | .0063 |
| 1305 | Setting & Rem. Meters, | | | 726 19 | .0096 | 1452 48 | .0190 | 2178 67 | 1341 12 | .0104 | .0066 |
| 1306 | Gratuitous Work, | | | | | 2658 62 | .0347 | 2658 62 | 2277 17 | .0126 | .0113 |
| 1307 | Total above Items, | 2407 85 | .0116 | 2511 75 | .0331 | 7288 52 | .1217 | 14208 12 | 10878 31 | .0676 | .0533 |
| 1308 | Gas Lost & Unacct. for | 4206 81 | .0200 | | | | | 4206 81 | 4672 06 | .0200 | .0228 |
| 1309 | Total Distrib'n Ex. | 6614 66 | .0315 | 2511 75 | .0331 | 7288 52 | .1217 | 18414 93 | 15550 37 | .0876 | .0761 |

## DISTRIBUTION DEPARTMENT DATA

### METER ACCOUNT

| | | | EQUITABLE NO. | NO. | NO. | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | | Owned by Co. ~~Dec 31st~~ Year | | | | 2877 | 4717 | 58 | 64 | 11 | 14 | 4 | 1 | 6 | 2 | | | | 7753 |
| 1321 | | Bought during Yr. ~~Dec~~ | | | | 41 | 325 | 25 | 12 | | | | | | | | | | 403 |
| 1322 | | Total, | | | | 2918 | 5042 | 83 | 76 | 11 | 14 | 4 | 1 | 6 | 2 | | | | 8156 |
| 1323 | | Condemned & Dest'd, | | | | 23 | 2 | | | | | | | | | | | | 25 |
| 1324 | | Owned this Date, | | | | 2895 | 5040 | 83 | 76 | 11 | 14 | 4 | | 6 | 2 | | | | 8131 |
| 1325 | IN USE THIS DATE | Illuminating, | | | | 2479 | 4771 | 72 | 71 | 9 | 12 | 2 | | 6 | 2 | | | | 7624 |
| 1326 | | Domestic Fuel, | | | | | | | | | | | | | | | | | |
| 1327 | | Industrial " | | | | | | | | | | | | | | | | | |
| 1328 | | Power, | | | | | | | | | | | | | | | | | |
| 1329 | | Sub-Meters, | | | | | | | | | | | | | | | | | |
| 1330 | | Company, | | | | 4 | 2 | 2 | | | | | | | | | | | 8 |
| 1331 | | Total, | | | | 2483 | 4773 | 74 | 71 | 9 | 12 | 2 | | 6 | 2 | | | | 7632 |
| 1332 | IN STOCK | Shop, | | | | 412 | 67 | 9 | 5 | 2 | 2 | 2 | | | | | | | 499 |
| 1333 | | Locked, | | | | | | | | | | | | | | | | | |
| 1334 | | Total, | | | | | | | | | | | | | | | | | |
| 1335 | | Total Owned, | | | | 2895 | 5040 | 83 | 76 | 11 | 14 | 4 | | 6 | 2 | | | | 8131 |
| 1336 | | Increase or Decrease, | | | | | | | | | | | | | | | | | |
| 1337 | | Meters in use End of Year, | | | | | | | | | | | | | | | | | |

### METERS

| | | Per Mile Main This Yr. | Per Mile Main Last Yr. | Per 100 Popul'n This Yr. | Per 100 Popul'n Last Yr. | No. Set This Yr. | No. Set Last Yr. | No. Removed This Yr. | No. Removed Last Yr. | | No. | % Total No. | Cost Each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1340 | Illuminating, | | | | | | | | | Meters Tested "Regular Test | 6073 | 77.64 | .0577 |
| 1341 | Domestic Fuel, | | | | | | | | | " " "Routine Test" | 1 | | |
| 1342 | Industrial " | | | | | | | | | " Repaired, | 2604 | 3418 | .0478 |
| 1343 | Power Gas, | | | | | | | | | " Set. | 6379 | 83.60 | .2075 |
| 1344 | Total Meters, | | 97.8 | | 1492 | 4372 | 5497 | 3837 | 5147 | " Removed, | 137 | 76.52 | .1454 |
| 1345 | No. Consumers, | | 96.3 | | 1461 | | | | | " Transferred, | | | |
| 1346 | No. Service Pipes, | | 98.2 | | 1498 | | | | | No. Leaks of Meters, | 415 | 5.44 | .0478 |

| | | | | | |
|---|---|---|---|---|---|
| 1350 | Cost meter Maintenance per Meter passing through Shop, | .1231 | | | |
| 1351 | " " " " in Use, | .4751 | | | |
| 1352 | No. Leaks at Connections, | | | | |
| 1353 | | | | | |
| 1354 | | | | | |
| 1356 | Service Maintenance per Complete Service in Use, | ~ | | | |
| 1357 | " Repairs per Service handled | | | | |
| 1358 | No. Services Repaired, | | ; Cost each, | | ; |
| 1359 | No. Services Renewed, | | ; " " | | ; |
| 1360 | No. Services Changed, | 42 | ; " " | | ; |
| 1361 | No. Services Cleaned, | | ; " " | | ; |
| 1362 | No. Leaks at Services, | | ; " " | | ; |
| 1363 | No. Leaks in Broken Mains, | ~ | ; " " | | ; |
| 1364 | No. Leaks Account Defective Main Joints, | 1 | ; " " | | ; |
| 1365 | | | | | |
| 1366 | | | | | |
| 1367 | Leakage per Mile Actual Main This Year | 209377 | Cu. ft.; | Last Year, | 212221 Cu. ft. |
| 1368 | " " 5-inch " " " | 146385 | " ; | " " | 206714 |

REPORT FOR Year Ending December 31 1910

## COLLECTION DEPARTMENT

| | | Charge Consumers | | Charge Meters | | Total Cost | | Total per M. Sold | |
|---|---|---|---|---|---|---|---|---|---|
| | | Amount | Per Cent. | Amount | Per Meter | This Year | Last Year | This Year | Last Year |
| 1400 | Reading Meters, | $ 27 42 | 0.07 | 413 66 | 0.058 | $ 1241 08 | $ 1041 84 | 0.057 | 0.051 |
| 1401 | Collection Clerical Salaries, | 3847 63 | 0.507 | 1723 76 | 0.242 | 5771 37 | 5495 84 | 0.274 | 0.269 |
| 1402 | Collection Office Expense, | 1180 28 | 0.156 | 590 13 | 0.077 | 1770 41 | 1590 45 | 0.084 | 0.078 |
| 1403 | Rent of Collection Office, | 516 40 | 0.068 | 258 16 | 0.034 | 774 56 | 747 30 | 0.037 | 0.037 |
| 1404 | Delivering Bills, | 268 41 | 0.035 | | | 268 41 | 216 27 | 0.013 | 0.011 |
| 1405 | Outside Collections, | 1588 64 | 0.210 | | | 1588 64 | 1010 67 | 0.076 | 0.049 |
| 1406 | Total Collect'n Expenses, | $ 7228 78 | 1.085 | 3185 71 | 0.418 | $ 11414 49 | $ 10105 07 | 0.542 | 0.495 |

## COLLECTION DEPARTMENT DATA

### READING METERS

| | | First Reading | | | | Stragglers and Retakes | | | Total No. | Total Exp. (1400) per Meter | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total Hours | Av. Time Each | No. Mr. pr. Hr. | Cost Each | No. | Hours | Cost Ea. | | This Year | Last Year |
| 1410 | Meters, | 3007 | 0.403 | 2480 | .61331 | 7489 | 642 | 0.086 | 74537 | | |
| 1411 | Meter Readers, | | | | | | | | | | |

### CLERICAL SALARIES

| | | No. Clerks | Ave. Pay Acc. | Amount | Cost per Meter | | Cost per Consumer | |
|---|---|---|---|---|---|---|---|---|
| | | | | | This Year | Last Year | This Year | Last Year |
| 1415 | Total Acc't No. 1401, | 8.6 | 67 20 | 5771 37 | 781 | | 789 | |

### DELIVERING BILLS

| | | No. Bills | Labor | Expense | Total Cost | Tot. per Bill |
|---|---|---|---|---|---|---|
| 1420 | By Mail, | 1080 | | 216 00 | 216 00 | 0.200 |
| 1421 | By Co.'s Employees, | 77364 | 268 41 | | 268 41 | 0.034 |
| 1422 | Called for at Office, | 1135 | | | | |
| 1423 | Totals, | 81579 | 268 41 | 216 00 | 484 41 | 0.036 |

### COLLECTIONS

| | | Gas Bills | | Per Cent. of | | Cost of Collection | | |
|---|---|---|---|---|---|---|---|---|
| | | No. | Amount | Total No. | Total Amt. | Amount | Per Bill | Per Cent. |
| 1425 | Total Private Gas Bills, (Line 968 previous month) | | 267 583 17 | | | | | |
| | COLLECTIONS | | | | | | | |
| 1426 | At Office by Mail, | 3477 | 1572170 | 4.51 | 5.97 | 681 50 | .1949 | |
| 1427 | At Office by Tellers, | 69170 | 2452523 | 89.16 | 85.21 | 9726 10 | .1406 | |
| 1428 | Bills Deposited in Banks, | 2070 | 9599 94 | 2.67 | 3.64 | 415 60 | .2008 | |
| 1429 | Total at Office, | 74737 | 24784687 | 96.34 | 94.82 | 10823 20 | .1448 | |
| 1430 | By Co.'s Salaried Collectors, | 2837 | 1363479 | 3.66 | 5.18 | 571 29 | .2015 | |
| 1431 | By Co.'s Pay Stations, | | | | | | | |
| 1432 | By Express Co.'s, | | | | | | | |
| 1433 | | | | | | | | |
| 1434 | Total Outside Collections, | 2837 | 1363479 | 3.66 | 5.18 | 571 29 | 2015 | |
| 1435 | Total Collections, | 77574 | 26348166 | 100.00 | 100.00 | 11414 49 | .1478 | |
| 1436 | Balance Outstanding Close of Month, Year | | 6101 51 | | | | | |

### ARREARS FOR CURRENT MONTH

| | Arrears | Amount Charged to Arrears Each Date | Collected During Mo. on Each Month's Arrears. | Previous Collections Reported | Total Collections on Each | Amount Outstand'g on Each at Close of Month | Amount of Each Considered Collectible | |
|---|---|---|---|---|---|---|---|---|
| 1441 | Jan. 31, 19 , Balance Arrears Dec. | $ 722 76 | 1206 | 7747 37 | 7761 43 | 76 33 | | |
| 1442 | Feb. 28, 19 , Arrears for Jan'y, | 1286 56 | | 1158 41 | 1158 41 | 136 15 | | |
| 1443 | March 31, 19 , Arrears for Feb'y, | 1011 11 | | 623 26 | 623 26 | 466 52 | | |
| 1444 | April 30, 19 , Arrears for March, | 427 33 | | 374 00 | 374 00 | 333 | | |
| 1445 | May 31, 19 , Arrears for April, | 750 89 | 480 | 781 57 | 781 37 | 162 45 | | |
| 1446 | June 30, 19 , Arrears for May, | 941 77 | 1264 | 832 77 | 845 41 | 96 36 | | |
| 1447 | July 31, 19 , Arrears for June, | 1296 32 | 984 | 877 52 | 887 96 | 406 99 | | |
| 1448 | Aug. 31, 19 , Arrears for July, | 1032 05 | 533 | 772 60 | 777 93 | 224 12 | | |
| 1449 | Sept. 30, 19 , Arrears for Aug., | 975 45 | 819 | 802 86 | 810 75 | 164 70 | | |
| 1450 | Oct. 31, 19 , Arrears for Sept., | 1207 23 | 2516 | 760 21 | 776 37 | 432 86 | | |
| 1451 | Nov. 30, 19 , Arrears for Oct., | 1547 98 | 463 74 | 604 58 | 1068 32 | 477 66 | | |
| 1452 | Dec. 31, 19 , Arrears for Nov., | 2011 32 | 676 26 | | 676 26 | 1335 06 | | |
| 1453 | Totals, | $ 14782 50 | 12380 3 | 16572 76 | 16810 78 | 4667 53 | | |
| 1460 | | | | | | | | |
| 1461 | | | | | This Year | | Last Year | |
| 1462 | Gross Earnings Gas Dept., 12 months ending last month (13A) | | | | | | | |
| 1463 | Total Arrears up to end of this month (1453) | | | | | | | |
| 1464 | Per cent. of Arrears (1463) to Gross Earnings (1462) | | | | | | | |

## EXECUTIVE DEPARTMENT, GENERAL EXPENSES

| | | PLANT | Totals This Year | Totals Last Year | Per M. Sold This Yr. | Per M. Sold Last Yr. |
|---|---|---|---|---|---|---|
| 1500 | Executive Salaries, | 7806 31 | 7806 31 | 6113 06 | 0467 | 0379 |
| 1501 | General Clerical Salaries, | 804 40 | 804 40 | 748 00 | 0038 | 0037 |
| 1502 | General Office Expense, | 970 10 | 970 10 | 978 43 | 0046 | 0048 |
| 1503 | Incidental Expense, | 2878 32 | 2878 32 | 2715 44 | 0137 | 0132 |
| 1504 | Rent of Executive Offices, | 1484 45 | 1484 45 | 1101 12 | 0071 | 0054 |
| 1505 | Legal Expenses, | 5911 70 | 5911 70 | 1858 53 | 0281 | 0091 |
| 1506 | Total Above Items, | 21855 28 | 21855 28 | 14514 58 | 1040 | 0711 |
| 1507 | Promoting New Business, | 16152 75 | 16152 75 | 14619 32 | 0769 | 0686 |
| 1508 | Taxes, | 8335 20 | 8335 20 | 7986 24 | 0397 | 0391 |
| 1509 | Total General Expenses, | 46343 23 | 46343 23 | 36520 18 | 2206 | 1788 |

## ANALYSIS OF SPECIAL EXPENSE ACCOUNTS NOS. 1819, 1820, 1821, 1822. NEW BUSINESS

| | | | Domestic Fuel Total | Per Customer | Illuminating Total | Per Customer | Industrial Fuel Total | Per Customer | Power Total | Per Customer | Totals Amounts | Per Customer |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1520 | a. Advertising, Newspaper, etc. | | 2688 97 | | 400 19 | | | | | | 7087 16 | .4072 |
| 1521 | b. Circulars and Distr'n, | | | | | | | | | | | |
| 1522 | c. Bonuses and Commissions, | | | | | | | | | | | |
| 1523 | d. Exhibition Expenses, | | 485 21 | | 37 | | | | | | 485 60 | .0640 |
| 1524 | e. Salaries, Wages and Miscins. Expenses | | 4485 87 | | 504 63 | | | | | | 4760 50 | .6538 |
| 1525 | | Totals | 7630 05 | | 705 21 | | | | | | 8535 26 | 1.1250 |
| 1526 | Cost of Appliances sold, | | 4588 61 | | 1689 97 | | | | | | 16278 58 | 2.1460 |
| 1527 | Appliance Expense, | | 5747 33 | | 1871 80 | | 60 | | | | 7619 73 | 1.0040 |
| 1528 | Total cost Appliances, | | 20335 94 | | 3561 77 | | 60 | | | | 23898 31 | 3.1500 |
| 1529 | Received for Appliances, | | 16602 03 | | 2730 73 | | | | | | 17332 76 | 2.2480 |
| 1530 | f. Loss on Appliances, | | 3733 91 | | 830 84 | | 60 | | | | 4565 35 | .6020 |
| 1531 | f. Profit on Appliances, | | | | | | | | | | | |
| 1532 | Piping | Material | 2283 61 | | 450 53 | | | | | | 2734 14 | .3605 |
| 1533 | and | Labor | 1876 47 | | 183 21 | | 804 | | | | 2087 80 | .2752 |
| 1534 | Con- | Miscins. Exp. | 1015 06 | | 245 59 | | 125 | | | | 1289 70 | .1660 |
| 1535 | nec- | Totals | 5175 14 | | 877 39 | | 931 | | | | 6081 84 | .8017 |
| 1536 | tions | Charged Consumers | 2898 15 | | 131 55 | | | | | | 3029 70 | .3994 |
| 1537 | g. | Net Cost | 2276 99 | | 745 84 | | 931 | | | | 3052 14 | .4023 |
| | Total cost items a to g | | 17468 75 | | 2480 89 | | 931 | | | | 16182 76 | 2.1378 |

## APPLIANCES INTRODUCED AND CONNECTED

### DOMESTIC FUEL

| | Class | No. | H. Cap. | Per Unit Items | |
|---|---|---|---|---|---|
| 1550 | Ranges (new) | 556 | | Feet Pipe per App'l | 9.376 |
| 1551 | " (old) | 1363 | | Cost Pipe & Fit'gs per Ap. | .893 |
| 1552 | Hot Plates, | 463 | | Cost Labor connecting Ap. | .742 |
| 1553 | Water Heaters, | 62 | | Total Cost connecting Ap. | 2.032 |
| 1554 | Heaters and Grates, | 56 | | Total Cost connecting per foot pipe | .276 |
| 1555 | Miscl. | 36 | | Pipe feet | 24014 |
| 1556 | | | | | |
| 1557 | | | | | |

### ILLUMINATING

| Class | No. | H. Cap. | Per Unit Items | |
|---|---|---|---|---|
| Houses piped by Co | | | Avg. rooms per house | |
| Houses piped by contract | | | Cost Pipe & Fit'gs per House | |
| | | | Cost Labor per House | |
| | | | Cost Pipe and Labor per House | |
| Yard Area | | | Cost Pipe and Labor per foot Pipe | |
| Miscl. | | | | |

### INDUSTRIAL FUEL

| | | | | Per Unit Items | |
|---|---|---|---|---|---|
| 1560 | | | | Feet Pipe per App'l | |
| 1561 | | | | Cost Pipe & Fit'gs per Ap. | |
| 1562 | | | | Total Cost connecting Ap. | |
| 1563 | | | | Cost Labor connecting Ap. | |
| 1564 | | | | Total Cost connecting per foot pipe | |
| 1565 | | | | | |
| 1566 | | | | | |
| 1567 | | | | | |

### POWER

| | | | Per Unit Items | |
|---|---|---|---|---|
| 1570 | Below 5 H. P. | | Feet Pipe per Engine | |
| 1571 | 5 to 9 H. P. | | Cost Pipe & Fit'gs per Engine | |
| 1572 | 10 to 14 H. P. | | Cost Labor on connecting per Engine | |
| 1573 | 15 to 24 H. P. | | Total Connection per Engine | |
| 1574 | 25 to 50 H. P. | | Total Connection per foot pipe | |
| | 50 H. P. & Upwards | | | |

16 REPORT FOR Year Ending December 31 1910

## DETAILS OF GAS SALES

| | | Rate | THIS YEAR Cu. Ft. | THIS YEAR Amount | LAST YEAR Cu. Ft. | LAST YEAR Amount | Inc. or Dec. Cu. Ft. | $ Inc. or Dec. |
|---|---|---|---|---|---|---|---|---|
| 1600 | | | | | | | | |
| 1601 | | | | | | | | |
| 1602 | Illuminating Gas | | | | | | | |
| 1603 | | | | | | | | |
| 1604 | | | | | | | | |
| 1605 | Gross Sales, | | 210 752 210 | 253 212 62 | 204 717 155 | 246 872 73 | 6035 155 | 295 |
| 1606 | Less Rebates and Allowances | | 531 400 | 1524 56 | 433 200 | 1073 95 | 98 200 | 2 67 |
| 1607 | Net Sales | | 210 220 910 | 251 688 06 | 204 283 955 | 244 798 78 | 5936 955 | 292 |
| 1608 | | | | | | | | |
| 1609 | Domestic | | | | | | | |
| 1610 | Fuel | | | | | | | |
| 1611 | Gas | | | | | | | |
| 1612 | | | | | | | | |
| 1613 | Gross Sales, | | | | | | | |
| 1614 | Less Rebates and Allowances | | | | | | | |
| 1615 | Net Sales | | | | | | | |
| 1616 | | | | | | | | |
| 1617 | Industrial | | | | | | | |
| 1618 | Fuel | | | | | | | |
| 1619 | Gas | | | | | | | |
| 1620 | | | | | | | | |
| 1621 | Gross Sales | | | | | | | |
| 1622 | Less Rebates and Allowances | | | | | | | |
| 1623 | Net Sales | | | | | | | |
| 1624 | | | | | | | | |
| 1625 | Gas | | | | | | | |
| 1626 | for | | | | | | | |
| 1627 | Power | | | | | | | |
| 1628 | | | | | | | | |
| 1629 | Gross Sales | | | | | | | |
| 1630 | Less Rebates and Allowances | | | | | | | |
| 1631 | Net Sales | | | | | | | |
| 1632 | Total Sales | | 210 220 910 | 251 688 06 | 204 283 955 | 244 798 78 | 5936 55 | 291 |

## STREET LAMPS

| | No. of Lamps | GROSS EARNINGS | | | Amount | Amount per Lamp | Hours Burning | Gas per Hr. | Total Gas Consumed |
|---|---|---|---|---|---|---|---|---|---|
| 1633 | | Open Flame Burners | @ | per year | | | | | |
| 1634 | | do | @ | " | | | | | |
| 1635 | | do | @ | " | | | | | |
| 1636 | | Incandescent Burners | @ | " | | | | | |
| 1637 | | do | @ | " | | | | | |
| 1638 | | do | @ | " | | | | | |
| 1639 | | | | | | | | | |
| 1640 | | Totals | | | | | | | |

## EXPENSES

| | | Remarks |
|---|---|---|
| 1641 | Lighting and Extinguishing | |
| 1642 | Repairing | |
| 1643 | Cleaning | |
| 1644 | Thawing | |
| 1645 | Rental | |
| 1646 | Inspecting and Testing | |
| 1647 | | |
| 1648 | | |
| 1649 | | |
| 1650 | | |
| 1651 | | |
| 1652 | | |
| 1653 | Total Expense | |
| 1654 | Net Earnings | per M. ft. Gas |

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## LOW PRESSURE STREET MAINS (FEET)

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1700 | 2 | 267891 | | | 38973 | 306864 | | | | 4295 | 305569 |
| 1701 | 3 | | | | | | | | | | |
| 1702 | 4 | 84092 | | | 26788 | 110880 | | | | | 110880 |
| 1703 | 6 | 14039 | | | 2435 | 16474 | | | | | 16474 |
| 1704 | 8 | 4822 | | | | 4822 | | | | | 4822 |
| 1705 | 10 | 9100 | | | | 9100 | | | | | 9100 |
| 1706 | 12 | 3950 | | | | 3950 | | | | | 3950 |
| 1707 | 16 | 1300 | | | | 1300 | | | | | 1300 |
| 1708 | 20 | 1400 | | | | 1400 | | | | | 1400 |
| 1709 | 24 | | | | | | | | | | |
| 1710 | 30 | | | | | | | | | | |
| 1711 | 36 | | | | | | | | | | |
| 1712 | FEET Totals | 386594 | | | 68196 | 464790 | | | | 4295 | 450495 |
| 1713 | Miles | 73.2 | | | | 86.1 | | | | | 85.3 |
| 1713a | Miles on 4-inch Basis | | | | | | | | | | |

## BOOSTER MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1714 | | | | | | | | | | | |
| 1715 | | | | | | | | | | | |
| 1716 | | | | | | | | | | | |
| 1717 | | | | | | | | | | | |
| 1718 | | | | | | | | | | | |
| 1719 | Totals | | | | | | | | | | |

## PUMPING MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1720 | | | | | | | | | | | |
| 1721 | | | | | | | | | | | |
| 1722 | | | | | | | | | | | |
| 1723 | | | | | | | | | | | |
| 1724 | | | | | | | | | | | |
| 1725 | Totals | | | | | | | | | | |

## COST OF STREET MAINS. (ALL KINDS)

| | Size | COST MAINS LAID THIS MONTH — Amount: Labor | Material | Total | Per Foot: Labor | Mat'l | Total | COST MAINS LAID THIS YEAR — Amount: Labor | Material | Total | Per Foot: Labor | Mat'l | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1726 | 2 | | | | | | | 3849 90 | 3874 25 | 7724 15 | 099 | 099 | 198 |
| 1727 | 3 | | | | | | | | | | | | |
| 1728 | 4 | | | | | | | 5494 65 | 8204 06 | 13698 71 | 205 | 306 | 511 |
| 1729 | 6 | | | | | | | 462 54 | 883 75 | 1346 29 | 170 | 363 | 553 |
| 1730 | 8 | | | | | | | | | | | | |
| 1731 | 10 | | | | | | | | | | | | |
| 1732 | 12 | | | | | | | | | | | | |
| 1733 | 16 | | | | | | | | | | | | |
| 1734 | 20 | | | | | | | | | | | | |
| 1735 | 24 | | | | | | | | | | | | |
| 1736 | 30 | | | | | | | | | | | | |
| 1737 | 36 | | | | | | | | | | | | |
| 1738 | Totals | | | | | | | 9807 07 | 12762 06 | 22769 15 | 144 | 190 | 334 |

| | | THIS MONTH | THIS YEAR | RECAPITULATION | |
|---|---|---|---|---|---|
| 1739 | Cost Low Pressure Mains laid | $ . . | $ 22.769. 15 | Miles Low Pressure Main | 85.3 |
| 1740 | " Booster " " | $ . . | $ . . | " Booster Main | |
| 1741 | " Pumping " " | $ . . | $ . . | " Pumping Main | |
| 1742 | Total cost Mains laid | $ . . | $ 22.769. 15 | Total Main Mileage | 85.3 |
| 1743 | Deduct value of Mains taken up | $ . . | $ . . | | |
| 1744 | Net cost of Mains | $ . . | $ 22.769. 15 | | |

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## SERVICE PIPES LAID

| | | No. Laid This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Year | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1745 | Main to Meter (Old Main) | | | 286 | 5501 | 5787 | ✓ | 5787 |
| 1746 | " " (New Main) | | | 288 | 1151 | 1439 | ✓ | 1439 |
| 1747 | Curb to Meter (Extension) | | | 10 | 343 | 353 | ✓ | 353 |
| 1748 | Total complete services, | | | 584 | 6995 | 7579 | ✓ | 7579 |
| 1749 | Main to Curb (acc't paving) | | | 80 | 197 | 277 | ✓ | 277 |
| 1750 | Total No. services | | | 664 | 7192 | 7856 | ✓ | 7856 |

## COST OF SERVICES

| | | Gross Cost | Charged Consumers | Net Cost | GROSS COST Per Service | GROSS COST Per Foot | NET COST Per Service | NET COST Per Foot |
|---|---|---|---|---|---|---|---|---|
| 1751 | Labor, | | | | | | | |
| 1752 | Material, | | | | | | | |
| 1753 | Total this month, | | | | | | | |
| 1754 | Previously reported, | | | | | | | |
| 1755 | Total this year, | 6885.04 | 6742.14 | 167.10 | 10.38 | .177 | 2.53 | .004 |
| 1756 | Cost last year, | 6707.77 | 7523.18 | 8154.1 | 10.60 | .186 | 6.23 | .092 |

| | | THIS MONTH | | THIS YEAR | |
|---|---|---|---|---|---|
| 1757 | Pipe used for complete services, | | feet. | 36727 | feet. |
| 1758 | " " " service extensions, | | feet. | 721 | feet. |
| 1759 | " " " total complete services, | | feet. | 37448 | feet. |
| 1760 | " " " services to curb, | | feet. | 1523 | feet. |
| 1761 | Total, | | feet. | 38971 | feet. |

## APPLIANCES

| | | DOMESTIC FUEL APPLIANCES | | | | | | | IND. APPLIANCES | GAS ENGINES | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Ranges | Hot Pl. | W. H. | Heaters and Grates | Miscls | | Total | No. | No. | H. P. |
| 1762 | First of Month, Yr | 8838 | 1463 | 1046 | 236 | 383 | | 11966 | | | |
| 1763 | New during Month, Yr | 718 | 320 | 111 | 57 | 32 | | 1238 | | | |
| 1764 | Total, | 7556 | 1783 | 1157 | 293 | 415 | | 13204 | | | |
| 1765 | Off during Month, Yr | 295 | 23 | 2 | 1 | 1 | | 322 | | | |
| 1766 | Close of Month, Yr | 9261 | 1760 | 1155 | 292 | 414 | | 12882 | | | |
| 1767 | First of Year, | 8838 | 1463 | 1046 | 236 | 383 | | 11966 | | | |
| 1768 | Gain or Loss, | 423 | 297 | 109 | 56 | 31 | | 916 | | | |

## STREET LAMPS

| | | No. Installed This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Yr. | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1769 | Lamp Services, | | | | | | | |
| 1770 | Boulevard Posts, | | | | | | | |
| 1771 | Common Posts, | | | | | | | |
| 1772 | | | | | | | | |
| 1773 | Total, | | | | | | | |

## PLANT DATA

| | | MAXIMUM CAPACITY 24 hrs. | MAXIMUM CAPACITY 1 hr. | Max. Make 24 hrs. This Mo. | % of Make to Cap. 24 hours | Max. Make 24 hrs. To Date | % of Make to Cap. 24 hours | Least Reserve Capacity |
|---|---|---|---|---|---|---|---|---|
| 1775 | Coal Gas Benches, | 380,000 | 16830 | | | | | |
| 1776 | Water Gas Machines, | 1,200,000 | 50000 | | | 810,000 | | |
| 1777 | Total, | 1580,000 | 65830 | | | 810,000 | | |
| 1778 | | | | | | | | |
| 1779 | | | | | | | | |
| 1780 | | | | | | | | |
| 1781 | | | | | | | | |
| 1782 | Storage Capacity | 850,000 | | Purifying Capacity Cu. Ft. Material | | 7200 | | |
| 1783 | Max. Send out 24 hrs. | 800,500 | | Cross Section Sq. Ft. (Basis Single flow boxes) | | | | |
| 1784 | " " 1 hr. | | | | | | | |
| 1785 | % Storage to send out 24 hrs. | | | | | | | |
| 1786 | " " " " 1 hr. | | | | | | | |
| 1787 | " " " 24 hr. capacity | 47.4 | | | | | | |
| 1788 | | | | | | | | |

## SPECIAL EXPENSE ACCOUNT

| No. | ACCOUNT | Total Expense | CHARGED TO No. | CHARGED TO Account | CHARGED TO Amount | Bal. Special Accounts Close Month Debit | Bal. Special Accounts Close Month Credit |
|---|---|---|---|---|---|---|---|
| 1800 | Coal Stock Expense, | | 500 | Coal Stock, | | | |
| 1801 | Coke Stock Expense, | 315 25 | 502 | Coke Stock, | 315 25 | | |
| 1802 | Tar Stock Expense, | | 503 | Tar Stock, | | | |
| 1803 | Ammonia Stock Expense, | | 504 | Ammonia Stock, | | | |
| 1804 | Pur. Dept. and St. Room, | 2706 54 | | | | | |
| 1805 | Barn Expense, | 4293 41 | | See details next page | | | |
| 1806 | Preliminary Expense, | | | | | | |
| 1806A | Depreciation | 46 465 27 | | See Page 24 | 46 465 27 | | |
| 1806B | Occupation Tax | 7558 27 | | " " | 7558 27 | | |
| 1807 | Lamps Discontinued, | | 1818b | St. Lamp Mntc., | | | |
| 1808 | Mains Abandoned, | | 1800 | St. Main Mntc., | | | |
| 1809 | Steam, | 711 47 | | | | | |
| | | | 1304b | Meter Dept. Exp., | | | |
| 1810 | Rent, | 5283 78 | 1403 | Coll. Off. Rent, | See details next page | | |
| | | | 1504 | Exc. Off. Rent, | | | |
| | | | 1805 | Barn Exp., | | | |
| 1811 | Contingent Bench Repairs, | | 1011 | Bench Repairs, | | | |
| | | | 1017 | Bldgs. Rep. C. G. | | | |
| 1812 | Gen. W'ks Bldgs. Repairs, | 8366 | 1113 | " " W. G. | 8366 | | |
| | | | 1213 | " " P. G. | | | |
| | | | 1018 | App. Rep. C. G. | | | |
| 1813 | General Apparatus Repairs, | 15878 0 | 1114 | " " W. G. | 15878 0 | | |
| | | | 1214 | " " P. G. | | | |
| | | | 1019 | Sund. Lab. C. G. | | | |
| 1814 | Sundry Labor, | 1491 45 | 1115 | " " W. G. | 1491 45 | | |
| | | | 1215 | " " P. G. | | | |
| | | | 1020 | Wks. Ex. & Rep. C. G. | | | |
| 1815 | Works Expense and Supplies, | 3217 70 | 1116 | " " W. G. | 3217 70 | | |
| | | | 1216 | " " P. G. | | | |
| | | | 1021 | Gen. Sup., C. G. | | | |
| 1816 | General Supervision, | 3260 41 | 1117 | " " W. G. | 3260 41 | | |
| | | | 1217 | " " P. G. | | | |
| | | | 1022 | Dis. H. Sta. C. G. | | | |
| 1817 | Dist. Holder Station, | | 1118 | " " W. G. | | | |
| | | | 1218 | " " P. G. | | | |
| | | | 1507 | Prom. N. Bus., | | | |
| 1819 | Domestic Fuel App'cs., | 13658 75 | 308 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | 16 152 77 | | |
| 1820 | Ill'tg. Pipes and Fixtures, | 2489 71 | 309 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | | | |
| 1821 | Industrial Gas Appl'cs., | 991 | 310 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | | | |
| 1822 | Gas Engines and Piping, | | 311 | Const., | | | |
| | | | 1508 | Taxes, Gas | 8335 40 | | |
| 1823 | Taxes Accrued, | 12 502 90 | | Elec | 4167 50 | | |
| | | | 200 | Interest, Gas | 44 571 14 | | |
| 1824 | Interest Accrued, | 668 56 64 | | Elec | 22 285 50 | | |
| | | | 900 | Bad Debts, Gas | 3000 00 | | |
| 1825 | Bad Debts, | 4800 00 | 909 | Bad Debts, Elec | 1800 00 | | |
| 1850A | Purifying Material | 4128 2 | 1110d | | 4128 2 | | |
| 1860 | Special Offices | 1168 93 | 1402 8 | | 467 58 | | |
| | | | 1502a | | 175 94 | | |
| | | | 3214 | | 233 79 | | |
| | | | 3226 | | 58 41 | | |
| | | | 1804 | | 175 96 | | |
| | | | 3231 k | | 58 45 | | |
| | Total, | | | | | | |

1088

## STEAM ACCOUNT No. 1809

| | DEBITS | | | CREDITS | | |
|---|---|---|---|---|---|---|
| | (a) Fuel Electricity | | 5556 04 | | Charged to | |
| 1900 | Tons, | @ | | 1014 | Coal Gas Steam, | |
| 1901 | Tons, | @ | | 1100 | Water Gas Generator, | 2525 00 |
| 1902 | Tons, | @ | | 1110 | " Pur. and St. | 3763 75 |
| 1903 | Total Fuel, | | | 1291 | Pumping Purchased Gas, | |
| | (b) Water Electricity | | 810 57 | 1210 | Purification and St. Gas, | |
| 1904 | Gals. City Water. | @ | | 1800a | Coal Stock Expense, | |
| 1905 | Gals. Pumped by Co. | Cost | | 1803a | Ammonia Stock Expense, | |
| 1906 | Total Water, | | | 1815 | Works Expense, | 1222 72 |
| | (c) Labor Water | | 1344 86 | 1817 | District Holder Station, | |
| 1907 | Firemen, | @ | | | | |
| 1908 | Helpers, | @ | | | | |
| 1909 | | @ | | | | |
| | Total Labor, | | | | | |
| 1910 | (d) Repairs, | | | | | |
| 1911 | Labor, | | | | | |
| 1912 | Material, | | | | | |
| 1913 | Total Repairs, | | | | | |
| 1914 | Total Cost, | a-b-c-d | | | | |
| 1915 | Less Steam Sold, | | | | | |
| 1916 | Net Cost Steam, | | 7711 47 | | Total Credits, | 7711 47 |
| 1917 | Basis of Steam Charges, | | | | | |
| 1918 | | | | | | |
| 1919 | | | | | | |
| 1920 | | | | | | |

## BARN EXPENSE ACCOUNT No. 1805 ( 14 Horses)

| | | Total | Per Horse | | Charged to | |
|---|---|---|---|---|---|---|
| 1925a | Wages, | 282 41 | 22 88 | | | |
| 1926 | Rent, | 60 00 | 4 29 | 1302a | | 214 67 |
| 1927 | Hay, | 546 28 | 39 03 | 1302b | | 214 67 |
| 1928 | Oats, | 902 03 | 64 44 | 1306 | | 214 67 |
| 1929 | Oil, Meal and Bran, | 2 00 | 14 | 3200 | | 427 32 |
| 1930 | Bedding, | 14 88 | 1 06 | 3204a | | 214 67 |
| 1931 | Fuel, Light and Water, | 24 75 | 1 77 | 3265 | | 171 72 |
| 1932 | Med. Attendance and Medicines, | 26 15 | 1 87 | 3271 | | 42 93 |
| 1933 | Barn Repairs, | | | 3272 | | 214 67 |
| 1934 | Horse Shoeing, | 226 00 | 16 14 | 3208 | | 80 84 |
| 1935 | Insurance on Horses, | 23 80 | 1 65 | 301 | | 128 79 |
| 1936 | Board for Horses, | 563 50 | 37 56 | 302 | | 214 67 |
| 1936a | Total, (a) | 2711 80 | 173 82 | 351 | | 257 56 |
| 1937b | Harness Repairs, | 232 00 | 16 57 | 1806 | | 429 32 |
| 1938 | Wagon Repairs, | 251 75 | 17 98 | 1802a | | 42 93 |
| 1939 | Insurance on Wagons and Harness, | 308 05 | 22 01 | 1895 | | 158 79 |
| 1940 | Wagon | 747 75 | 53 42 | 3231f | | 257 59 |
| 1941 | | 42 06 | 3 01 | 1815 | | 85 90 |
| 1942 | Total, (b) | 1581 61 | 112 99 | 1206 | | 214 68 |
| 1943 | Total Barn Expense, | 4293 41 | 306 81 | | | 4293 41 |

## RENT ACCOUNTS

| | | | | | Charged to | |
|---|---|---|---|---|---|---|
| 1950 | Rental paid for Office, | 2775 00 | | | | |
| 1951 | Supt Office | 480 00 | 1403 | Rent of Coll. Office, | | 480 00 |
| 1952 | " for Meter Shop | 480 00 | 1504 | Rent of General Office, | | 1189 89 |
| 1953 | Demi Hall | 480 00 | 1504 | Meter Dep. Expense, | | 480 00 |
| 1954 | Mus for Barn, | 384 94 | 3264 | | | 10 00 |
| 1955 | Janitor | 631 32 | 3273 | | | 36 00 |
| | | | 1102 | | | 48 00 |
| 1956 | Rental Credited Rents Receivable, | 900 00 | 1819a | | | 480 00 |
| | | | 1819H | | | 420 00 |
| 1957 | For | | 3215 | | | 120 00 |
| 1958 | For | | 3221h | | | 243 00 |
| 1959 | | | 3227 | | | 297 37 |
| 1960 | Total, | 4931 26 | | | | 4931 26 |

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# PAY ROLL DATA Year Ending ~~MONTH OF~~ December 31 1910

| | Manufacturing Expenses | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| 2000 | Coal Bukky | 1000b | | 221 00 | | 0112 |
| 2001 | Retort House Labor | | | | | |
| 2002 | a Foreman | 1010a | | 27447 | | 01372 |
| 2003 | b Stoking | 1010a | | | | |
| 2004 | c Furnace men | 1010a | | 225 24 | | 0112 |
| 2005 | d Doctor | 1010a | | | | |
| 2006 | e Scurfing Retorts | 1010a | | 30 96 | | 0016 |
| 2007 | f Cleaning Flues | 1010a | | 24 12 | | 0002 |
| 2008 | g Hydraulic Main Men | 1010a | | 126 85 | | 0064 |
| 2009 | h Wheeling Retort ashes | 1010a | | 107 00 | | 0055 |
| 2010 | Bench Repairs | 1011a | | 31 37 | | 0016 |
| 2011 | Retort House Expense | 1012 | | 47 96 | | 0024 |
| 2012 | Purifying Coal Gas | 1015a | | | | |
| 2013 | Gen'l Bldg. Repairs | 1017a | | 10 | | 0000 |
| 2014 | Gen'l Apparatus Rep. | 1018a | | 24 50 | | 0012 |
| 2015 | Sundry Labor | 1019a | | 137 57 | | 0071 |
| 2016 | Experimenting C. G. | 1020 | | | | |
| 2017 | Gen'l Supervision | 1021 | | | | |
| 2018 | | | | | | |
| 2019 | | | | | | |
| 2020 | Total | | | 193366 | | 0979 |
| 2021 | Mfg. Exp. W. Gas | 1101 | 10 | | 00000 | |
| 2022 | Unloading Oil Cars | 1102 | | | | |
| 2023 | Gas Making Labor | 1106 | | | | |
| 2024 | a Making Gas | 1106 | 169097 | 167675 | 00743 | 0083 |
| 2025 | b Charging W. G. | 1106 | 1000 94 | 139797 | 00446 | 0070 |
| 2026 | c Clinkering W. G. | 1106 | 8176 | 75421 | 00280 | 0038 |
| 2027 | Rep. App. up to Seal | 1107a | 26784 | 67816 | 00138 | 0034 |
| 2028 | W. G. Gen. House Exp. | 1108a | 3926 | 5748 | 00017 | 0003 |
| 2029 | Purifying W. G. | 1111 | | 200 | | |
| 2030 | Rep. Buildings | 1113 | 7301 | 1153 | 00032 | 0006 |
| 2031 | Rep. App. beyond Seal | 1114a | 6785 | 34189 | 00181 | 0002 |
| 2032 | Sundry Labor | 1115 | 185321 | 180794 | 00686 | 00044 |
| 2033 | Experimenting W. G. | 1116 | | | | |
| 2034 | Gen'l Supervision | 1117 | | | | |
| 2035 | | | | | | |
| 2036 | | | | | | |
| 2037 | Total | | 516562 | 569772 | 02579 | 0284 |
| | | | | 76458 | | |

| | Purchased Gas | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| | Power for Pumping | 1201 | | | | |
| | Purifying Labor | 1211 | | | | |
| | Gen'l Bldg. Repairs | 1213 | | | | |
| | Gen'l App. " | 1214 | | | | |
| | Sundry Labor | 1215 | | | | |
| | Gen'l Supervision | 1217 | | | | |
| | Total | | | | | |
| | Pintsch Gas | | | | | |
| | Retort House Labor | 2408 | | | | |
| | Bench Repairs | 2409 | | | | |
| | Retort House Exp. | 2410 | | | | |
| | Purifying Labor | 2412 | | | | |
| | Gen'l Bldg. Repairs | 2413 | | | | |
| | Sundry Labor | 2414 | | | | |
| | Car Fillers | 2420 | | | | |
| | Pipe Line Repairs | 2421 | | | | |
| | Total | | | | | |
| | Summary Mfg. | | | | | |
| | Coal Gas | 2020 | | | | |
| | Water Gas | 2007 | | | | |
| | Purchased Gas | 2007 | | | | |
| | Pintsch Gas | 2020 | | | | |
| | Total | | | | | |

| | Distribution | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| | Street Main Maint. | | | | | |
| | a Test and Rep. Leaks | 1300a | 7464 | 66761 | 00467 | 00 33 |
| | b Rep or Replacing | 1300a | | | | |
| | c Maint. Governors | 1300g | | | | |
| | Service Maintenance | 1300D | | 140 | | 0000 |
| | a Thawing Services | 1301a | 6979 | 13006 | 00093 | 0006 |
| | b Cleaning | 1301c | 1485 | 24772 | 00007 | 0001 |
| | c Rep. or Renewing | 1301d | 7189 | 21187 | 00094 | 0010 |
| | d Changing or Extend | 1301f | 44 55 / 13684 | 53 87 | 00041 / 00065 | 0003 |
| | Street Dept. Exp. | 1302E | | 37 | | 0000 |
| | a Rep. St. Dept. Tools | 1302a | 2246 | 4246 | 00011 | 0002 |
| | b Pumping Drips | 1302c | 139 32 | 212 37 | 00066 | 0010 |
| | c Taking St. Pressure | 1302e | 13887 | 6446 | 00066 | 0003 |
| | d Gen'l Supervision | 1302f | 722 17 | 995 20 | 00344 | 0049 |
| | Meter Maintenance | 1303E | 2 32 | | 00001 | |
| | | 1303D | 662 11 | | 00315 | |
| | a Rep. Old Meters | 1303a | 1443 67 | 896 95 | 00177 | 0044 |
| | b Test " " | 1303B / 1303C | 204 75 / 152 97 | 25186 | 00098 / 00073 | 0012 |
| | c Rep. Old Connections | 1303d | 19 12 | 50 52 | 00009 | 0002 |
| | d Making New " | 1303f / 1303g | 3 15 / 210 91 | 699 | 00002 / 00100 | 0000 |
| | e Shop Foremen | 1303h | 472 24 | 511 65 | 00224 | 0025 |
| | f Changing Meters | 1303i | | 47 16 | | 0002 |
| | g Governor Expense | 1303k | | 165 13 | | 0008 |
| | Meter Dept. Exp. | | | | | |
| | a Meter Clerks | 1304a | 448 37 | 407 37 | 00232 | 0020 |
| | b Foremen | 1304B | 154 85 | 193 | 00074 | 0000 |
| | c Rep. Shop Tools | 1304D / 1304c | | 30 / 130 | | 0000 / 0000 |
| | Setting Meters | 1305a | 736 62 | 947 29 | 00446 | 0046 |
| | Removing Meters | 1305b | 600 68 | 497 75 | 00288 | 0024 |
| | S. & R. Supervision | 1305c | | 10 37 | | 0001 |
| | Gratuitous Work | 1305D | 7 75 | 12 44 | 00004 | 0000 |
| | | 1305E | 2 37 | 6 25 | 00001 | 0000 |
| | a Gen'l Complaints | 1306a | 1385 00 | 964 94 | 00657 | 0047 |
| | b Rep. Cons. Property | 1306B / 1306c | 22 62 / 118 24 | 1169 | 00010 / 00056 | 0001 |
| | c Investigating, etc. | 1306f | 6 98 | 20 | 00003 | 0000 |
| | d Inspecting | 1306f | | 1103 | | 0001 |
| | | 1306E | 49 74 | 153 09 | 00024 | 0007 |
| | Total | | 9747 78 | 7362 16 | 04446 | 0360 |

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# PAY ROLL DATA Year Ending MONTH OF December 31 1940

| | Collection Expense | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| 2038 | Reading Meters | | | | | |
| 2039 | a First Reading | 1400a | 967 28 | 702 85 | 00461 | 00334 |
| 2040 | b Retakes | 1400b | 187 26 | 268 97 | 00090 | 00128 |
| 2041 | Clerical Salaries | 1401 | 1771 87 | 1476 84 | 00847 | 00697 |
| 2042 | Addressing Machine | 1402c | 199 00 211 69 | 276 80 | 00095 00101 | 00131 |
| 2043 | Del. Receipted Bills | 1402e | | 177 16 | | 00083 |
| 2044 | Delivering Bills | 1404 | 168 87 | 188 26 | 00080 | 00089 |
| 2045 | Outside Collection | 1405 | 1560 00 | 764 79 | 00745 | 00361 |
| 2046 | | | | | | |
| 2047 | Total | | 7167 87 | 4821 81 | 03424 | 02296 |
| 2048 | | | | | | |
| 2049 | Gen'l Exp. | | | | | |
| 2050 | Executive Salaries | 1500 | 2567 00 | 3000 00 | 01227 | |
| 2051 | Clerical Salaries | 1501 | 800 00 768 | 768 00 | 00381 | |
| 2052 | Legal Expense | 1505 | | 69 15 | 00033 | |
| 2053 | Total | | 3435 81 | 3837 06 | 01641 | |
| 2054 | | | | | | |
| 2055 | Stock Accounts | | | | | |
| 2056 | Making New Oxide | 505 | 1497 08 | 1256 60 | 00716 | 00606 |
| 2057 | Main Stock | 506 | 694 68 | 497 96 | 00330 | 00239 |
| 2058 | Steel Pipe Stock | 507 | | | | |
| 2059 | Fittings " | 508 | | | | |
| 2060 | Service " | 509 | | | | |
| 2061 | Appliance " | 512 | | | | |
| 2062 | Miscellaneous | 513 | | | | |
| 2063 | | 563 | 38 | | 00180 | |
| 2064 | Total | | 2132 07 | 1754 56 | 01021 | 00845 |
| 2065 | | | | | | |
| 2066 | Coal Stock Exp. | | | | | |
| 2067 | Unloading Coal | 1800a | 481 52 | 1277 67 | | |
| 2068 | Weighing Coal | 1800a | | | | |
| 2069 | Piling-Trimming-Shed | 1800a | | | | |
| 2070 | Rep. Shed-Conveyors | 1800c | | | | |
| 2071 | COKE STOCK EXP. | | | | | |
| 2072 | Coke Buggy | 1801a | 2142 28 | 517 01 | | |
| 2073 | Work on Pile | 1801a | | | | |
| 2074 | Hauling Ret. to Yard | 1801b | 100 61 | 260 10 | | |
| 2075 | Marketing | 1801b | | 224 07 | | |
| 2076 | Rep. Apparatus | 1801c | | 100 | | |
| 2077 | Forward | | 4276 48 | 4270 56 | | |

| | Special Expense Accounts | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| | Tar Stock Exp. Dept. Exp. | | 4324 28 | 1450 45 | Per Gall. | |
| | a Distilling | 1802a | 1327 24 | 1140 00 | | |
| | b Tar Plant Rep. | 1802b | | 310 01 | | |
| | Ammonia Stock Exp. Mess. G E Co | | | 863 | Per Lb. | |
| | a Concentrating, etc. | 1803a | | | | |
| | b Apparatus Rep. | 1803b | | | | |
| | Purchasing Dept. Gen. Exp. Co. | | | 12 33 | Per M. Mfg. | |
| | a Pur. Agt. & Clerks | 1804a | 543 00 | 462 70 | | |
| | b Handling Stock | 1804b | 228 07 | 1000 81 | | |
| | Barn Expense | 1805 | 768 81 | 396 41 | | |
| | Prelimin. Exp. New W'k. | 1806 | | 64 50 | | |
| | Steam Gas. E. Co. | 1773 | | 203 67 | | |
| | a Firemen-Helpers | 1807a | | 27 80 | | |
| | b Hauling Ashes | 1807c | | | | |
| | c Sundry Labor | 1807c | | 37 91 | | |
| | d Haul'g Coal to Boilers | 1808a | | | | |
| | e Boiler Repairs | 1808d | | | | |
| | f Boiler Changes | 1808c | | | | |
| | Rent—Janitors, etc. | 1810 | 626 02 | 572 04 | | |
| | Gen'l Works Big. Rep. | 1812c | 21 75 | 43 71 | | 00032 |
| | " App. Repairs | 1813c | 466 27 | 271 73 | | 00192 |
| | Sundry Labor | 1814 | 1496 46 | 1287 73 | | 00960 |
| | Bench Repairs | 1811 | | | | |
| | Works Expense | 1815 | 150 | | | |
| | General Supervision | | | 00 | | |
| | a Chemist | 1816a | | 2792 67 | | 01944 |
| | b Clerical Salaries | 1816b | 2357 87 1500 | | | |
| | c Gen'l Supervision | 1816c | | | | |
| | Dist. Holder Sta. | 1817 | | | | |
| | New Bus. Expense | | 37 35 | 7 76 | Per M. Sold | |
| | a Advertising Men | A | 481 16 | 512 92 | 00310 | 00356 |
| | b Demonstrator-Ass'ts | B | 5 60 | 6 37 | 00003 | 00004 |
| | c Solicitors | C | 208 68 | 618 79 | 00370 | 00430 |
| | d Clerks | H | 3218 70 | 3684 24 | 01849 | 02560 |
| | e App'l Connections | E | 4907 45 | 5114 23 | 02956 | 03550 |
| | | 1820 | 3346 | | 00016 | |
| | | 1820 | 2280 | 1847 | 00011 | 00012 |
| | | 1820 | 6250 | 1202 79 | 00347 | 00167 |
| | | 1820A | 1418 32 | 1602 89 | 00813 | 01112 |
| | | 1821 | 176 32 | | 00082 | |
| | Total | | 23215 61 | 22410 06 | 11016 | |

| | Construction | | Total Wages This Year | Total Wages Last Year | Per M. ThisYr. | Per M. LastYr. |
|---|---|---|---|---|---|---|
| | Gas Works | 300 | | | | |
| | Mains | 301 | 3830 47 | 3867 50 | | |
| | Services | 302 | 3783 75 | 2794 73 | | |
| | Meters | 303 | 150 00 | 172 45 | | |
| | Street Lamps | 304 | | 1404 | | |
| | Tar Plant | 306 | | | | |
| | Pintsch Plant | 309 | | | | |
| | Total | | 11767 15 | 7444 50 | | |
| | Summary | | | | | |
| | Manufacturing | 2037 | 3862 62 | 7604 28 | | |
| | Distribution | 2037 | 7749 78 | 7062 16 | | |
| | Collection Exp. | 2047 | 7167 87 | 4821 81 | | |
| | General Exp. | 2053 | 4446 28 | 3885 06 | | |
| | Stock Accounts | 2064 | 2132 07 | 1754 56 | | |
| | Special Expenses | 2077 | 23215 61 | 22410 06 | | |
| | Construction | 2062 | 11767 15 | 7444 50 | | |

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## PAY ROLL DATA

| | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day |
|---|---|---|---|---|
| 2070 | **Mfg. Dept.** | | | |
| 2071 | Foremen, | 1 | 80.00 | 12 |
| 2072 | Stokers, | | | |
| 2073 | " Helpers, | | | |
| 2074 | | | | |
| 2075 | Water Gas Makers, | 1 | 3.50 | 12 |
| 2076 | " " " Helpers, | 1 | 2.75 | 12 |
| 2077 | | | | |
| 2078 | Furnace Men, | | | |
| 2079 | Coke Men, | | | |
| 2080 | Coal Men, | | | |
| 2081 | | | | |
| 2082 | Hydraulic Main, | | | |
| 2083 | Patchers, | | | |
| 2084 | | | | |
| 2085 | Purifying, | | | |
| 2086 | | | | |
| 2087 | Laborers, | 2 | 1.75 | 10 |
| 2088 | | | | |
| 2089 | Engineers, | 1 | 3.00 | 12 |
| 2090 | Works Mechanics, | 2 | 2.25 | 10 |
| 2091 | Carpenters, | | | |
| 2092 | Blacksmiths, | 1 | 2.25 | 12 |
| 2093 | Chemists, | | | |
| 2094 | | | | |
| 2095 | Works Clerks, | | | |
| 2096 | | | | |
| 2097 | **Street Dept.** | | | |
| 2098 | S. & M. Gang Foremen, | 1 | 2.00 | 10 |
| 2099 | " " " Laborers, | 10 | 2.00 | 10 |
| 2100 | | | | |
| 2101 | **Fitting Dept.** | | | |
| 2102 | Fitters, | 4 | 2.50 | 10 |
| 2103 | " Helpers, | 4 | 1.75 | 10 |
| 2104 | | | | |
| 2105 | Meter Dept. Foremen, | 2 | 75.00 | 10 |
| 2106 | " " Repairers, | 23 | 2.00 | 10 |
| 2107 | " " Clerks, | 1 | 40.00 | 9 |
| 2108 | | | | |
| 2109 | Arc Repairers, | | | |
| 2110 | " Lighters, | | | |
| 2111 | | | | |
| 2112 | | | | |
| 2113 | **Engineering Dept.** | 1 | 85.00 | 9 |
| 2114 | | | | |
| 2115 | | | | |
| 2116 | | | | |
| 2117 | | | | |
| 2118 | | | | |
| 2119 | | | | |
| 2120 | **Pintsch Dept.** | | | |
| 2121 | | | | |
| 2122 | | | | |
| 2123 | | | | |
| 2124 | | | | |
| 2125 | | | | |
| 2126 | **Tar Dept.** | | | |
| 2127 | | | | |
| 2128 | | | | |
| 2129 | | | | |
| 2130 | | | | |
| 2131 | | | | |
| 2132 | | | | |
| 2133 | | | | |
| 2134 | Total, | 38 | | |

| NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day |
|---|---|---|---|
| **Office and General** | | | |
| Cashiers, | 1 | 65.00 | 9 |
| Ass't Cashiers, | 1 | 40.00 | 9 |
| Bookkeepers Gen., | 1 | 80.00 | 9 |
| " Cons., | 3 | 65.00 | 9 |
| " Petty Led., | 1 | 75.00 | 9 |
| Asst | 1 | 60.00 | 9 |
| Clerks:—New Bus. Dept. | 2 | 60.00 | 9 |
| Application " | 1 | 70.00 | 9 |
| Contract " | 1 | 60.00 | 9 |
| Appl. Sales " | 1 | 50.00 | 9 |
| Tabulating " | | | |
| Collection " | 2 | 60.00 | 9 |
| Auditing " | | | |
| Filing " | 1 | 48.00 | 9 |
| Pay Roll " | 1 | 48.00 | 9 |
| Distribution " | | | |
| Purchasing " | 1 | 55.00 | 9 |
| Store-room " | 2 | 65.00 | 9 |
| Coke & Tar " | | | |
| | | | |
| Representatives, | 4 | 75.00 | 9 |
| Ass't Representatives, | | | |
| Floor Salesmen, | 1 | 60.00 | 9 |
| Collectors, | 3 | 50.00 | 9 |
| Stenographers, | 2 | 47.50 | 9 |
| Office Boys, | 1 | 30.00 | 9 |
| Meter Readers, | 3 | 2.00 | 9 |
| Troublemen, | | | |
| Branch Office, | | | |
| **Special Men** | | | |
| **Dept. Heads & Supts.** | | | |
| Genl. Supt | 1 | 125.00 | 9 |
| Comm. Dept. Mgr | 1 | 150.00 | 9 |
| Supt. Dist. | 1 | 100.00 | 9 |
| Total, | 45 | | |

## REPAIR AND MAINTENANCE ACCOUNT

| | | | This Year | | | | Last Year | |
|---|---|---|---|---|---|---|---|---|
| | | | Labor | Material | Total | Per M. Mfd. | Total | Per M. Mfd. |
| 2175 | Coal Shed and Apparatus | (1800c) | | | | | | |
| 2176 | Coke Yard " | (1801d) | | | | | | |
| 2177 | Tar Dep't " | (1502b) | | | | | | |
| 2178 | Ammonia " | (1803b) | | | | | | |
| 2179 | Drawing and Charging Machinery, | (1010b) | | | | | | |
| 2180 | Retort House Conveyors, | (1010c) | | | | | | |
| 2181 | Bench Renewals, | (1011b) | | | | | 780 00 | .025 |
| 2182 | Miscellaneous Bench Repairs, | (1011a) | | | | | 37 21 | .0012 |
| 2183 | Water Gas Generating Apparatus, | (1107) | 359 84 | 447 69 | 807 53 | .0026 | 1486 49 | .0068 |
| 2184 | Boiler Repairs | (1800d) | | | | | | |
| 2185 | General Works Repairs, Building | (1017, 1118, 1804) | 84 87 | 177 18 | 262 05 | .0012 | 143 34 | .0006 |
| 2186 | " " " Apparatus | (1018, 1114, 1814) | 67 85 | 1650 05 | 1719 90 | .0075 | 1041 72 | .0047 |
| 2187 | | | | | | | | |
| 2188 | | | | | | | | |
| 2189 | Total Mfg. Dept. | | 514 56 | 2276 72 | 2791 48 | .0123 Per M. Sold | 3488 96 | .0158 Per M. Sold |
| 2190 | Mains | (1900) | 787 84 | 758 73 | 1743 77 | .0083 | 788 26 | .0037 |
| 2191 | Services | (1901) | 360 70 | 86 28 | 446 98 | .0021 | 546 66 | .0025 |
| 2192 | Meters | (1908) | 2918 40 | 695 39 | 3608 79 | .0173 | 2770 46 | .0145 |
| 2193 | Lamps | (1818) | | | | | | |
| 2194 | Total Dist'n and Lamp Dept. | | 4261 94 | 1537 60 | 5799 54 | .0276 | 4305 38 | .0211 |
| 2195 | Total All Dep'ts. | | 4776 50 | 3814 32 | 8591 02 | .0408 | 7794 34 | .0386 |

## GAS USED BY COMPANY

| | WHERE USED | Cu. Ft. | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2200 | Gas Works | 7600 | 1815 | .2648 | 201 | |
| 2201 | Edge " | 7600 | 3008 | | 201 | |
| 2202 | Gas Shop | 106900 | 1304b | | 2785 | |
| 2203 | Office | 416100 | 1840 | | 10947 | |
| 2204 | Elec Meter Shop | 7600 | 3764a 3293 | | 200 | |
| 2205 | | | | | | |
| 2206 | | | | | | |
| 2207 | | | | | | |
| 2208 | | | | | | |
| 2209 | | | | | | |
| 2210 | | | | | | |
| 2211 | | | | | | |
| 2212 | | | | | | |
| 2213 | | | | | | |
| 2214 | Totals | 545800 | | | 14334 | |

## COKE USED BY COMPANY

| | WHERE USED | Weight | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2215 | Bench Fuel | | 1002 | | | |
| 2216 | Boiler Fuel | | 1809 | | | |
| 2217 | Platach Bench Fuel | | 2401 | | | |
| 2218 | Generator Fuel { Mil Coke | 356375 | 1101 | | 2674614 | |
| 2219 | Street Department { Gen. " | 4030 | 1300 | | 24216 | |
| 2220 | Meter Shop | | 1304b | | | |
| 2221 | | | | | | |
| 2222 | | | | | | |
| 2223 | | | | | | |
| 2224 | | | | | | |
| 2225 | | | | | | |
| 2226 | | | | | | |
| 2227 | Totals | 360405 | | | 26189 00 | |

## CLERICAL SALARIES DATA.

| | Wages Employed | No. Clerks | Total Salaries | | Charged To. | Amount. |
|---|---|---|---|---|---|---|
| 2145 | Gas Works | 1 | 350 00 | 1816 | Works Supervision | 350 00 |
| 2146 | St. Dept. | | | 1702F | St Dept Exp | |
| 2147 | Meter Dept. | | | 1704A | Meter " " | |
| 2148 | Collection Office | 9 | 5781 39 | 1401 | Coll. Clerical Sal | 5781 39 |
| 2149 | General " | 1 | 804 40 | 1501 | Gen Office " | 804 40 |
| 2150 | Purchasing Dept | 1 | 690 00 | 1804A | Purchasing Dept | 690 00 |
| 2151 | Appliance " | 2 | 1500 00 | 1804B | Store Room Exp | 1500 00 |
| 2152 | New Bus. " | 1 | 720 00 | 1801B | Coke Exp | 720 00 |
| 2153 | | | | 1802B | Tar Exp. | |
| 2154 | | | | 1807 | From N:B | |
| 2155 | | | | | Appl. Dept | |
| 2156 | | | | | | |
| 2157 | | | | | | |
| 2158 | | | | | | |
| 2159 | Total | 15 | 9845 79 | | Total | 9845 79 |

## COAL USED BY COMPANY

| | | Tons | Cost | WHERE USED | Acct. No. | Tons | Cost |
|---|---|---|---|---|---|---|---|
| 2228 | Used during month (2304) | 9930 | 5497 40 | Coal Carbonized | 1000 | | |
| 2229 | | | | Boiler Fuel | 1009 | 4900 | 270 43 |
| 2230 | | | | Bench Fuel Sept | 1002 | 4930 | 273 43 |
| 2231 | | | | Street Department Gas Dept. | 1200 | 100 | 5 54 |
| 2232 | | | | | | | |
| 2233 | | | | | | | |
| 2234 | Total | 9930 | 5497 40 | | Total | 9930 | 547 40 |

## TAR SOLD AND USED

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2235 | Sold and Used (2344) P.G. | 2316 | 46 32 | Sold | | 26 771 | 535 43 |
| 2236 | U.G. | 142 620 | 2852 41 | Used in Pitch Plant | | | |
| 2237 | | | | Used for Gas Making | | 118 164 | 2363 28 |
| 2238 | | | | | | | |
| 2239 | Total | 144 935 | 2898 71 | | Total | 144 935 | 2898 71 |

## OIL USED BY COMPANY

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2240 | Used during Month (2376) | 721070 | 25371 62 | Enricher | 1102 | 631 727 | 22760 89 |
| 2241 | | | | Pintsch | 2400 | 89 343 | 2430 73 |
| 2242 | | | | | | | |
| 2243 | | | | | | | |
| 2244 | | | | | | | |
| 2245 | Total | 721070 | 25371 62 | | Total | 721070 | 25371 62 |

## COAL STOCK

| | | BITUMINOUS GAS COAL | | | STEAM COAL | | |
|---|---|---|---|---|---|---|---|
| | | Tons | Cost | Per Ton | Tons | Cost | Per Ton |
| 2300 | First of Month Yr. | 729 73 | 4103 62 | | | | |
| 2301 | Rec'd during Mo. | | | | | | |
| 2302 | Coal Stock Exp. | | 18 27 | | | | |
| 2303 | Total Cost | 729 73 | 4121 89 | | | | |
| 2304 | Used during Mo. | 173 60 | 976 16 | | | | |
| 2305 | Close of Mo. Yr. | 463 94 | 2577 89 | | | | |

| | | | |
|---|---|---|---|
| 2307 | Coal Stock Expense | (1800a) | |
| 2308 | do | (1800b) | |
| 2309 | do | (1800c) | |
| 2310 | | | |
| 2311 | Total Expense | (to line 2302) | |

## COKE STOCK

## BREEZE STOCK

| | | Total Tons | Total Cost | Av. Per Ton | Total Tons | Total Cost | Av. Per Ton |
|---|---|---|---|---|---|---|---|
| 2320 | Stock first of month Year | 400 28 | 2665 09 | 667 | | | |
| 2321 | Received or made during month Yr. | 389 460 | 26 747 61 | 687 | | | |
| 2322 | Coke Expense as below | | 252 19 | | | | |
| 2323 | Total Cost | 4294 85 | 29 664 89 | 691 | | | |
| 2323a | Coke used under Benches | | | | | | |
| 2323b | Used elsewhere than under Benches | | | | | | |
| 2324 | Total Coke used during Month Yr. | 3604 05 | 26 199 00 | 727 | | | |
| 2325 | Sold during month Yr. | 331 64 | 16 51 13 | 498 | | | |
| 2326 | Total Sold and Used | 3935 69 | 27 840 13 | 708 | | | |
| 2327 | Stock close of month Yr. | 359 16 | 1824 76 | 509 | | | |

| | | | | | |
|---|---|---|---|---|---|
| 2328 | Coke Stock Expense | Coke (1801a) | | Breeze (1801e) | |
| 2329 | do | (1801b) | | (1801f) | |
| 2330 | do | (1801c) | | (1801g) | |
| 2331 | do | (1801d) | | (1801h) | |
| 2332 | do | | | | |
| 2333 | Total Expense | (to line 2322) | | | |

## TAR STOCK

| | | Coal Gas Tar | | | Water Gas Tar | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2340 | Stock first of ~~month~~ Yr | 15785 | 315 70 | 02 | 119672 | 2393 45 | 02 |
| 2341 | Made and bought during ~~month~~ Yr | | | | 136386 | 2727 71 | 02 |
| 2342 | Tar Expense as below | | | | | | |
| 2343 | Total Cost | 15785 | 315 70 | 02 | 256057 | 5121 16 | 02 |
| 2344 | Sold and used during ~~month~~ Yr | 3310 | 66 20 | 02 | 141625 | 2832 51 | 02 |
| 2345 | Stock close of ~~month~~ Yr | 12475 | 249 50 | 02 | 114432 | 2288 65 | 02 |

| | | | | |
|---|---|---|---|---|
| 2347 | Tar Stock Expense | (1802a) | $ . | $ . |
| 2348 | do | (1802b) | . | . |
| 2349 | do | (1802c) | . | . |
| 2350 | | | . | . |
| 2351 | | | . | . |
| 2352 | Total Expense | (to line 2342) | $ | |

## AMMONIA STOCK

| | | Pounds | Cost | Per Lb. |
|---|---|---|---|---|
| 2360 | Stock first of month | | | |
| 2361 | Made during month | | | |
| 2362 | Ammonia Expense as below | | | |
| 2363 | Total Cost | | | |
| 2364 | Sold during month | | | |
| 2365 | Stock close of month | | | |

| | | | | |
|---|---|---|---|---|
| 2367 | Ammonia Expense | (1803a) | $ . | $ . |
| 2368 | do | (1803b) | . | . |
| 2369 | do | (1803c) | . | . |
| 2370 | Total Expense | (to line 2362) | $ | |

## OIL STOCK

| | | GAS OIL | | | PINTSCH OIL | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2372 | Stock first of ~~month~~ Yr | 6128 | 1758 83 | .028 | | | |
| 2373 | Received during ~~month~~ Yr | 187907 | 24426 94 | .027 | | | |
| 2374 | Oil Expense | | 37 00 | | | | |
| 2375 | Total Cost | 250525 | 26208 77 | .026 | | | |
| 2376 | Used during ~~month~~ Yr | 92170 | 2393 04 | .027 | | | |
| 2377 | Stock close of ~~month~~ Yr | 32455 | 816 73 | .027 | | | |

Page 19 Item 1806a Depreciation @ 5% on valuation $929,305.49 carried in suspense pending determination of exact amount in "Dallas Gas Suit" $46,465.27

Page 19 Item 1806 B Occupation tax of 3% on Gross receipts $251,942.37 @ $1.20 per M carried in suspense pending determination of exact amount if any by suit $7558.27

## PINTSCH DEPARTMENT

| | MANUFACTURING | Plant | Output | Output per M | TOTAL This Year | TOTAL Last Year | Total per M. This Yr. | Total per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 2400 | Oil, Gals., @ | | | | | | | |
| 2401 | Bench Fuel, Tons, @ | | | | | | | |
| 2402 | " @ | | | | | | | |
| 2403 | Total Cost Material, | | | | | | | |
| 2404 | Tar | | | | | | | |
| 2405 | Hydrocarbon Oil, | | | | | | | |
| 2406 | Total Residuals, | | | | | | | |
| 2407 | Net Cost Materials, | | | | | | | |
| 2408 | Retort House Labor, | | | | | | | |
| 2409 | Bench Repairs, | | | | | | | |
| 2410 | Retort House Expense, | | | | | | | |
| 2411 | Steam, | | | | | | | |
| 2412 | Purification, | | | | | | | |
| 2413 | Works Repairs, | | | | | | | |
| 2414 | Sundry Labor, | | | | | | | |
| 2415 | Works Expense and Supplies. | | | | | | | |
| 2416 | Total Manufacturing, | | | | | | | |
| | DISTRIBUTION | | Receiver Expense | Receiver per M. | | | | |
| 2420 | Car Fillers, | | | | | | | |
| 2421 | Pipe Line Repairs, | | | | | | | |
| 2422 | Hose, | | | | | | | |
| 2423 | Sundries, | | | | | | | |
| 2424 | Total, | | | | | | | |
| 2425 | Gas Lost, | | | | | | | |
| 2426 | Total Distribution, | | | | | | | |
| 2427 | Total Manuf'g and Distribution Exp. | | | | | | | |

### GROSS EARNINGS

| | | | | | |
|---|---|---|---|---|---|
| 2430 | Gas, . . | Cu. ft. | | | |
| 2431 | . . | Cu. ft. | | | |
| 2432 | . . | Cu. ft. | | | |
| 2433 | Total Earnings, . . | Cu. ft. | | | |
| 2434 | Expenses as above, | | | | |
| 2435 | Taxes, | | | | |
| 2436 | Depreciation on plant % | | | | |
| 2440 | Total Expenses, | | | | |
| 2441 | Net Earnings Pintsch Dep't, | | | | |
| 2442 | % Credit income, Acc't No. 202 | | | | |
| 2443 | % Credit Pintsch Comp. Co. | | | | |

| | | | | |
|---|---|---|---|---|
| 2444 | Gas on hand 1st of Month, . . | Cu. ft. | Gas Sold . . | Cu. ft. |
| 2445 | Gas made, . . | Cu. ft. | Gas on hand last of month . . | Cu. ft. |
| 2446 | . . | Cu. ft. | Gas lost . . | Cu. ft. |
| 2447 | Total Gas to Account for, . . | Cu. ft. | Total Gas Accounted for . . | Cu. ft. |

| | | This Year | % | Last Year, | % |
|---|---|---|---|---|---|
| 2450 | % Gas Lost to Gas Made, | " " | " | " " | " |
| 2451 | % Gas Lost to Gas Sold, | " " | | " " | |
| 2452 | Kind of Oil Used, | " " | | " " | |
| 2453 | Amount Gas Made per Gallon Oil, | " " | C. F. | " " | C. F. |
| 2454 | Amount Oil Used per 1000 C. F. Made, | " " | Gals | " " | Gals. |
| 2455 | Amount Oil Used per 1000 C. F. Sold, | " " | " | " " | " |
| 2456 | Number Retorts in Use, | " " | | " " | |
| 2457 | | " " | | " " | |
| 2458 | Kind of Fuel Used, | " " | | " " | |
| 2459 | Amount Fuel Used, Lbs. | Furnaces | Boilers | Furnaces | Boilers |
| 2460 | Amount Fuel Used, Lbs. per M. ft. Made, | | | | |
| 2461 | Amount Fuel Used, Lbs. per M. ft. Sold, | | | | |
| 2462 | | | | | |
| 2463 | | | | | |
| 2464 | | | | | |
| 2465 | | | | | |

## APPROVALS AND RECORD

| | |
|---|---|
| AUDITED AND VOUCHED FOR BY SECRETARY | |
| APPROVED BY DEPARTMENT SUPERINTENDENT | |
| APPROVED BY MANAGER (OR ACTING MGR.) | |
| DATE REPORT WAS MAILED BY COMPANY | |

DATE RECEIVED AT N. Y. OFFICE

CHECKED BY — REVIEWED BY

DATE OF REVIEWING LETTER — DATE OF CO.'S LETTER OF REPLY

THIS REPORT HAS BEEN SEEN BY

| OFFICE DEPT. | CORPORATION DEPT. | EXECUTIVE DEPT. | GEN. MGR'S OFFICE | ENGINEERING DEPT. | AUDITING DEPT. | STATISTICAL DEPT. | NEW BUSINESS DEPT. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |



-0908

Lincoln Gas & Electric Light Co.

Manufacturing and Expense Reports

OF

# GAS DEPARTMENT

FOR 12 Months ENDING December 1911

# General Rules for Reporting

1. The Company's name should be stamped on report covers, and on the first page, and the name of the City or Plant at the head of every other page in the report.
2. Date of reports should be stamped at the top of every page.
3. Decreases should be in red.
4. Never use copying ink.
5. Special or unusual entries, corrections of back errors, changes in cumulative figures, discrepancies between annual and monthly reports, should invariably be explained.
6. Carry per unit costs four decimal places.
7. Items which do not apply to your Company's business, and cannot be filled in, should be checked, excepting large sections such as lines 1200-22, which should be ruled out.
8. Zeros should be filled in: don't leave blank lines.
9. Where statistical information asked for is not given, state reasons for omitting.
10. Figure "per meter" data on meters at close of month, less company and sub-meters.
11. Figure "per consumer" data on consumers at close of month.
12. Show residuals, lines 1004 to 1007, **"per ton of coal carbonized."**
13. Line 1425 should show the sum total of lines 905 and 906 on previous month's report, plus line 907 on current month's report.
14. Each copy of the report sent to the New York Office should be signed by the Secretary, Department Superintendent and by the General Manager or Acting General Manager.
15. The Manager or Acting Manager should inclose with every report to the New York Office a letter in duplicate reviewing the report and calling attention to all items of interest or of marked change.

REPORT FOR 12 months

## GROSS EARNINGS

| | FROM SALE OF GAS | AMOUNTS This Year | AMOUNTS Last Year | Increase or Decrease | Receipts per M. Sold This Year | Receipts per M. Sold Last Year |
|---|---|---|---|---|---|---|
| 900 | Illuminating Purposes, | | | | | |
| 901 | Domestic Fuel " | 273 752 96 | 251 748 06 | 22 004 90 | 1.2046 | 1.1978 |
| 902 | Industrial Fuel " | | | | | |
| 903 | Power " | | | | | |
| 904 | Street Lamp " | | | | | |
| 905 | Total from Gas Sales, | 273 752 96 | 251 748 06 | 22 004 90 | 1.2045 | 1.1978 |
| | Meter charge on Minimum Bills, | 925 50 | 765 12 | 160 38 | .0041 | .0036 |
| 907 | Forfeited Discount, | 2614 49 | 2429 19 | 185 30 | .0115 | .0116 |
| 908 | Total Earnings from Gas, | 277 292 95 | 254 942 37 | 22 350 58 | 1.2201 | 1.2130 |
| 909 | Bad Debts, | 3 000 00 | 3 000 00 | ✓ | .0132 | .0141 |
| 910 | Gross Earnings Gas Dep't, | 274 292 95 | 251 942 37 | 22 350 58 | 1.2069 | 1.1989 |
| 911 | Operating Expenses (Total) (917) | 158 374 11 | 143 670 45 | 14 703 66 | .6970 | .6837 |
| 912 | Net Earnings Gas Dept. | 115 918 84 | 108 271 92 | 7 646 92 | .5099 | .5150 |

## SUMMARY OF OPERATING EXPENSES

| | Flood | Plant 378 00 | Output | Consumers | Meters | TOTAL COST This Year 378 00 | TOTAL COST Last Year |
|---|---|---|---|---|---|---|---|
| 913 | Manufacturing (1200) | 16 977 55 | 53 408 78 | ✓ | ✓ | 70 386 33 | 67 197 80 |
| 914 | Distribution (1300) | 5 433 79 | ✓ | 5 870 70 | 7 680 29 | 18 984 28 | 18 414 93 |
| 915 | Collection (1400) | | ✓ | 8 860 39 | 3 464 91 | 12 325 30 | 11 414 49 |
| 916 | General (1500) | 56 300 20 | ✓ | ✓ | ✓ | 56 300 20 | 46 343 23 |
| 917 | Totals | 79 089 04 | 53 408 78 | 14 731 09 | 11 145 20 | 158 374 11 | 143 670 45 |

## SUMMARY OF OPERATING EXPENSES. PER UNIT

| | Flood | Per M. Sold: Plant | Output | Consumers | Meters | Total This Year .6017 | Total Last Year .6014 | Per Consumer: Consumers Charges | Meter Charges | Total C. & M. | Per Meter: Consumer Charges | Meter Charges | Total C. & M. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 913a | Manufacturing (1200) | .0747 | .2350 | ✓ | ✓ | .3097 | .3197 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 914a | Distribution (1300) | .0239 | ✓ | .0258 | .0338 | .0435 | .0876 | .7431 | .9722 | 1.7160 | .7258 | .9486 | 1.6745 |
| 915a | Collection (1400) | ✓ | ✓ | .0390 | .0152 | .0542 | .0543 | 1.1270 | .4385 | 1.5655 | 1.0950 | .4281 | 1.5232 |
| 916a | General (1500) | .2477 | ✓ | ✓ | ✓ | .2477 | .2206 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 917a | Totals | .3480 | .2350 | .0648 | .0490 | .6968 | .6836 | 1.8651 | 1.4107 | 2.2765 | 1.8208 | 1.3767 | 3.1977 |

## SUMMARY OF GAS SALES. (POPULATION THIS YEAR 44000, LAST YEAR 41200)

| | | Total Sales (Cu. Ft.) This Year | Total Sales (Cu. Ft.) Last Year | No. of Meters. This Year | No. of Meters. Last Year | Average Sale per Meter This Year | Average Sale per Meter Last Year | Avg. Sale per Capita This Year | Avg. Sale per Capita Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 918 | Illuminating Gas, | | | | | | | | |
| 919 | Dom. Fuel Gas, | | | | | | | | |
| 920 | Ind. Fuel Gas, | | | | | | | | |
| 921 | Power Gas, | | | | | | | | |
| 922 | Total Fuel Gas, | 227 268 100 | 210 169 010 | | | | | | |
| 923 | Total Private Sales | 227 268 100 | 210 169 010 | 8 098 | 7 389 | 28 140 | 26 820 | 5.620 | 4.778 |
| | Street Lamps, | | | No. Lamps | | Av'g per Lamp | | | |
| 925 | Total Sales, | 227 268 100 | 210 169 010 | | | | | | |

## CONSUMERS

| | | No. Using: Ill'tg Gas Only | Fuel Gas Only | Both | Total No. Consumers | Total Using: Ill'tg Gas | Fuel Gas |
|---|---|---|---|---|---|---|---|
| 926 | First of Month, 12 mos. | | | | 7 587 | | |
| 927 | New during Month, 12 mos. | | | | 4 254 | | |
| 928 | Total, | | | | 11 841 | | |
| 929 | Off during Month, 12 mos. | | | | 3 945 | | |
| 930 | Close of Month, 12 mos. | | | | 7 896 | | |
| 931 | First of Year, | | | | 7 587 | | |
| 932 | Gain or Loss, | | | | 309 | | |

## CONSUMER DATA

| | | This Year | Last Year | | This Year | Last Year |
|---|---|---|---|---|---|---|
| 941 | Ill'tg Sales per Ill'tg Consumer, | | | Inhabitants per Ill'tg Consumer | | |
| 942 | Dom. F. " " Dom. F. " | | | " " Dom. Fuel " | | |
| 943 | Indust'l " " Ind. " | | | " " Ind. Fuel " | | |
| 944 | Power " " Power " | | | " " Power " | | |
| 945 | Average Sales per Consumer, | 28 780 | 28 739 | " " Consumer | 5 571 | 6.014 |

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## MANUFACTURING DEPARTMENT. COAL GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1000 | Coal Carbonized @ | | | | | | | |
| 1001 | Enricher @ | | | | | | | |
| 1002 | Bench Fuel @ | | | | | | | |
| 1003 | Total Cost C. G. Mfg. Mat'l | | | | | | | |
| 1004 | Coke Residual @ | | | | | | | |
| 1005 | Tar " @ | | | | | | | |
| 1006 | Ammonia " @ | | | | | | | |
| 1007 | Carbon " @ | | | | | | | |
| 1008 | Total Residuals | | | | | | | |
| 1009 | Net Cost C. G. Mfg. Material | | | | | | | |
| 1010 | Retort House Labor | | | | | | | |
| 1011 | Bench Repairs | | | | | | | |
| 1012 | Retort House Expense | | | | | | | |
| 1013 | Total Cost Generating Coal Gas | | | | | | | |
| 1014 | Steam | | | | | | | |
| 1015 | Purifying C. G. Labor, Exp. & Repairs | | | | | | | |
| 1016 | " Material | | | | | | | |
| 1017 | General Works, Bldgs., Repairs (C. G.) | | | | | | | |
| 1018 | " Apparatus " (C. G.) | | | | | | | |
| 1019 | Sundry Labor (C. G.) | | | | | | | |
| 1020 | Works Expense and Supplies (C. G.) | | | | | | | |
| 1021 | General Supervision (C. G.) | | | | | | | |
| 1022 | District Holder Station (C. G.) | | | | | | | |
| 1023 | Total Purification and Storage | | | | | | | |
| 1024 | Total Cost Coal Gas in Holder | | | | | | | |

| | COAL GAS STATISTICS | This Year. | Last Year |
|---|---|---|---|
| 1029 | Coal Gas Made | Cu. ft. | Cu. ft. |
| 1030 | Kind of Coal used | | |
| 1031 | Coal Carbonized | Tons | Tons |
| 1032 | Yield per lb. Coal | Cu. ft. | Cu. ft. |
| 1033 | Cost of Coal per ton delivered (with freight @ $ per ton shipped) | $ | $ |
| 1034 | Average number retorts in use | | |
| 1035 | Average charge per retort | Lbs. | Lbs. |
| 1036 | Average make per retort Per 24 hrs. | Cu. ft. | Cu. ft. |
| 1037 | Average make per man charged acc't No. 1010 Per M Hrs. | Cu. ft. | Cu. ft. |
| 1038 | Coke made per ton Coal Carbonized | Lbs. | Lbs. |
| 1039 | Coke used for Bench Fuel per ton Coal Carbonized | Lbs. | Lbs. |
| 1040 | Coal used for Bench Fuel " " | Lbs. | Lbs. |
| 1041 | Receipts for Coke per ton sold | $ | $ |
| 1042 | " " " per ton Coal Carbonized | $ | $ |
| 1043 | Tar made per ton Coal Carbonized | Gals. | Gals. |
| 1044 | Receipts for Tar per " | ¢ | ¢ |
| 1045 | " " " per lb. sold | ¢ | ¢ |
| 1046 | Ammonia made per ton Coal Carbonized | Lbs. | Lbs. |
| 1047 | Receipts for Ammonia " | ¢ | ¢ |
| 1048 | " " " per lb. sold | ¢ | ¢ |
| 1049 | Carbon sold | Tons | Tons |
| 1050 | Price received for Carbon per ton | $ | $ |
| 1051 | Gas Purified per bu. per charge | Cu. ft. | Cu. ft. |
| 1052 | Spent Oxide sold Tons @ $ per ton | | |
| 1053 | Illuminating Power — Max. | C. P. | C. P. |
| 1054 | Illuminating Power — Min. | C. P. | C. P. |
| 1055 | Illuminating Power — Avg. | C. P. | C. P. |
| 1056 | Heat Units (B. T. U.) — Max. | B. T. U. | B. T. U. |
| 1057 | Heat Units (B. T. U.) — Min. | B. T. U. | B. T. U. |
| 1058 | Heat Units (B. T. U.) — Avg. | B. T. U. | B. T. U. |
| 1059 | | | |
| 1060 | | | |
| 1061 | | | |

## MANUFACTURING DEPARTMENT. WATER GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1100 | Steam for Generating Water Gas | | 4 297 75 | .0176 | 4 297 76 | 3 020 00 | .0176 | .0138 |
| 1101 | Generator Fuel, Tons | | 25 973 07 | .1064 | 25 973 07 | 26 281 76 | .1064 | .1155 |
| 1102 | Enricher, | | 22 336 86 | .0914 | 22 336 86 | 22 960 89 | .0914 | .1010 |
| 1103 | Total W. G. Making Material, | | 52 607 63 | .2154 | 52 607 63 | 52 262 65 | .2154 | .2298 |
| 1104 | Water Gas Tar Residual Acc't., | | 4 028 44 | .0165 | 4 028 44 | 2 727 71 | .0165 | .0120 |
| 1105 | Net Cost W. G. Mfg. Material, | | 48 579 19 | .1989 | 48 579 19 | 49 534 94 | .1989 | .2178 |
| 1106 | Gas Making Labor, | | 3 884 79 | .0159 | 3 884 79 | 3 956 04 | .0159 | .0174 |
| 1107 | Repairs to W. G. Gen. Apparatus, | | 548 28 | .0022 | 548 28 | 809 53 | .0022 | .0036 |
| 1108 | W. G. Generating House Expense, | | 167 38 | .0007 | 167 38 | 111 67 | .0007 | .0005 |
| 1109 | Total Cost Generating W. G., | | 53 179 64 | .2177 | 53 179 64 | 54 412 15 | .2177 | .2393 |
| 1110 | Steam, | | 3 357 85 | .0137 | 3 357 85 | 4 514 47 | .0137 | .0199 |
| 1111 | Purifying W. G. Labor, Exp. and Rep., | | 130 76 | .0005 | 130 76 | 417 87 | .0005 | .0018 |
| 1112 | Purifying W. G. Material, | | 600 00 | .0025 | 600 00 | 575 00 | .0025 | .0025 |
| 1113 | General Works Repairs, Buildings, | 819 27 | | | 819 27 | 235 75 | .0034 | .0010 |
| 1114 | General Apparatus Repairs, | 5 000 46 | | | 5 000 46 | 1 719 90 | .0210 | .0076 |
| 1115 | Sundry Labor, | 7 523 98 | | | 7 523 98 | 3 050 66 | .0100 | .0134 |
| 1116 | Works Expense and Supplies, | 3 640 76 | | | 3 640 76 | 3 397 80 | .0149 | .0149 |
| 1117 | General Supervision, | 3 412 76 | | | 3 412 76 | 2 760 40 | .0139 | .0143 |
| 1118 | District Holder Station, | 1 581 37 | | | 1 581 37 | 25 29 | .0064 | .0001 |
| 1119 | Total Cost Purification and Storage, | 16 977 55 | 4 089 81 | .0167 | 21 065 36 | 17 187 10 | .0862 | .0755 |
| 1120 | Total Cost Water Gas in Holder, | 16 977 55 | 57 269 45 | .2344 | 74 245 00 | 71 599 28 | .3039 | .3148 |

### WATER GAS STATISTICS

| | | This Year. | Last Year. |
|---|---|---|---|
| 1130 | Water Gas Made, | 244 251 700 Cu. ft. | 227 439 593 Cu. ft. |
| 1131 | Enricher Used, | 826 351 Gals. | 831 75 Gals. |
| 1132 | Enricher Used per M., | 3.38 Gals. | 3.66 Gals. |
| 1133 | Candles per Gal. Enricher, | | |
| 1134 | Boiler Fuel per M., | Lbs. | Lbs. |
| 1135 | Generator Fuel per M., | 29.37 Lbs. | 31.44 Lbs. |
| 1136 | Number of Runs, | | |
| 1137 | Average Make per Run, | 6 890 Cu. ft. | 5 847 Cu. ft. |
| 1138 | Average Make per Gas Maker per 24 Hours, | 1 006 360 Cu. ft. | 1 077 912 Cu. ft. |
| 1139 | Gas Purified per Bu. Material per Charge, | Cu. ft. | Cu. ft. |
| 1140 | | | |
| 1141 | Tar Made per M. Cu. Ft. Gas, | .6 Gals. | .6 Gals. |
| 1142 | Tar Made per M. Gal. Oil Used, | .177.4 Gals. | 163.9 Gals. |
| 1143 | | | |
| 1144 | | | |
| 1145 | Illuminating Power Water Gas — Max. | C. P. | C. P. |
| 1146 | Illuminating Power Water Gas — Min | C. P. | C. P. |
| 1147 | Illuminating Power Water Gas — Avg. | C. P. | C. P. |
| 1148 | Heat Units, (B. T. U.) — Max. | 657 B. T. U. | 690.0 B. T. U. |
| 1149 | Heat Units, (B. T. U.) — Min. | 622 B. T. U. | 608.0 B. T. U. |
| 1150 | Heat Units, (B. T. U.) — Avg. | 628 B. T. U. | 637.5 B. T. U. |
| 1151 | | | |
| 1152 | | | |
| 1153 | | | |
| 1154 | | | |

### MIXED GAS STATISTICS

| | | | | |
|---|---|---|---|---|
| 1155 | Illuminating Power, | Max. | C. P. | C. P. |
| 1156 | | Min. | C. P. | C. P. |
| 1157 | | Avg. | C. P. | C. P. |
| 1158 | Heat Units, (B. T. U.) | Max. | B. T. U. | B. T. U. |
| 1159 | | Min. | B. T. U. | B. T. U. |
| 1160 | | Avg. | B. T. U. | B. T. U. |
| 1161 | Sulphur Contents, | Max. | | |
| 1162 | | Avg. | | |
| 1163 | Oxygen Contents, | Max. | | |
| 1164 | | Avg | | |
| 1165 | | | | |

.12 REPORT FOR 12 months ending

## MANUFACTURING DEPARTMENT. PURCHASED GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1200 | Crude Gas Purchased, | | | | | | | |
| 1201 | Power for Pumping, | | | | | | | |
| 1202 | Enricher, | | | | | | | |
| 1203 | | | | | | | | |
| 1204 | | | | | | | | |
| 1205 | Total Cost Materials, | | | | | | | |
| 1206 | Tar, | | | | | | | |
| 1207 | Ammonia, | | | | | | | |
| 1208 | Total Residuals, | | | | | | | |
| 1209 | Net Cost Materials | | | | | | | |
| 1210 | Steam, | | | | | | | |
| 1211 | Purifying Pur. Gas, Labor, Exp. & Rep., | | | | | | | |
| 1212 | " " " Material, | | | | | | | |
| 1213 | General Works Rep. Bldgs., | | | | | | | |
| 1214 | General Apparatus Repairs, | | | | | | | |
| 1215 | Sundry Labor, | | | | | | | |
| 1216 | Works Expense and Supplies | | | | | | | |
| 1217 | General Supervision, | | | | | | | |
| 1218 | District Holder Station, | | | | | | | |
| 1219 | | | | | | | | |
| 1220 | | | | | | | | |
| 1221 | Total Purification and Storage, | | | | | | | |
| 1222 | Total Cost Purchased Gas in Holder, | | | | | | | |
| 1223 | | | | | | | | |
| 1224 | | | | | | | | |
| 1225 | | | | | | | | |
| 1226 | | | | | | | | |
| 1227 | | | | | | | | |
| 1228 | | | | | | | | |
| 1229 | | | | | | | | |

## MANUFACTURING DEPARTMENT. MIXED GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1250 | Total Cost Manuf'g Coal Gas, | | | | | | | |
| 1251 | " " " Water Gas, | 16 977 55 | 57 267 45 | .2344 | 74 245 00 | 71 599 28 | .3039 | .3148 |
| 1252 | " " " Coal & Water Gas, | 16 977 55 | 57 267 45 | .2341 | 74 245 00 | 71 599 28 | .3039 | .3148 |
| 1253 | " " " Gas Purchased, | | | | | | | |
| 1254 | " " All Gas Manufacturing Dept. | 16 977 55 | 57 267 45 | .2344 | 74 245 00 | 71 599 28 | .3039 | .3148 |
| 1255 | Output Cost Gas Lost and Unacc'd for | | 3 802 61 | .0156 | 3 802 61 | 4 206 81 | .0156 | .0185 |
| 1256 | " " " Used by Co., | | 129 09 | .0005 | 129 09 | 149 34 | .0005 | .0006 |
| 1257 | Total Deductions from Manuf'g Costs, | | 3 931 70 | .0161 | 3 921 70 | 4 350 15 | .0161 | .0191 |
| 1258 | Net Cost in Holder of Gas Charged Stock Acc't, | 16 977 55 | 53 335 75 | .2183 | 70 313 20 | 67 249 13 | .2878 | .2957 |
| 1259 | Difference Stock on Hand First and Last of Mo., | | 73 03 | .0003 | 73 03 | 51 33 | .0003 | .0002 |
| 1260 | Net Cost in Holder of Gas Sold, | 16 977 55 | 53 408 78 | .2186 | 70 386 23 | 67 197 80 | .2881 | .2955 |

## GAS ACCOUNT. CUBIC FEET

| | | This Year | Last Year | Increase | Decrease | Per Cent. of Totals |
|---|---|---|---|---|---|---|
| 1280 | Gas on Hand First of Month, | 830 000 | 727 700 | 102 300 | | |
| 1281 | Coal Gas Made during Month | | | | | |
| 1282 | Water " " " " | 244 251 700 | 227 439 593 | 16 812 107 | | |
| 1283 | Gas Purchased " " | | | | | |
| 1284 | Total Gas Made and Purch'd, | 244 251 700 | 227 439 593 | 16 812 107 | | 100% |
| 1285 | Total Gas to Account for, | 245 081 700 | 228 167 293 | 16 914 407 | | 100% |
| 1286 | Gas on Hand at Close of Month, | 676 420 | 830 000 | | 153 600 | |
| 1287 | Gas Delivered to Mains, | 244 405 300 | 227 337 293 | 17 068 007 | | 100% |
| 1288 | Gas Sold, | 227 288 100 | 210 169 010 | 17 099 090 | | 92.97% |
| 1289 | Gas Used by Co., | 556 600 | 545 600 | 11 000 | | .3 " |
| 1290 | Total Gas Sold and Used | 227 824 700 | 210 714 610 | 17 110 090 | | 93.27% |
| 1291 | Gas unaccounted for, | 16 580 600 | 16 622 683 | | 42 083 | 6.87% |

REPORT FOR 12 months, '11. 13

## DISTRIBUTION DEPARTMENT EXPENSE

| | | Charge Plant Amount | Charge Plant For M Sold | Charge Consumers Amount | Charge Consumers Per Cons. | Charge Meters Amount | Charge Meters For Meter | Total Cost This Year | Total Cost Last Year | Total Cost per M Sold This Yr. | Total Cost per M Sold Last Yr. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | Street Main Maint'n'c, | 909 75 | .0040 | | | | | 709 75 | 1 727 15 | .0040 | .0082 |
| 1301 | Service " | | | 566 74 | .0717 | | | 566 74 | 424 05 | .0025 | .0020 |
| 1302 | Street Dep't Expense, | 720 93 | .0032 | 1 441 01 | .1826 | | | 2 162 94 | 2 042 21 | .0095 | .0097 |
| 1310 | Pumping Gas, | | | | | | | ✓ | ✓ | | |
| 1303 | Meter Maintenance, | | | | | 4 180 70 | .5163 | 4 180 20 | 3 625 99 | .0184 | .0173 |
| 1304 | Meter Dep't Expense, | | | | | 1 584 38 | .1958 | 1 584 38 | 1 551 43 | .0070 | .0074 |
| 1305 | Setting & Rem. Meters, | | | 457 18 | .1217 | 1 915 71 | .2367 | 2 872 49 | 2 178 67 | .0126 | .0104 |
| 1306 | Gratuitous Work, | | | 2 904 17 | .3678 | | | 2 904 17 | 2 658 62 | .0128 | .0126 |
| 1307 | Total above Items, | 1 630 68 | .0072 | 5 870 70 | .7433 | 7 680 29 | .9488 | 15 181 67 | 14 208 13 | .0668 | .0676 |
| 1308 | Gas Lost & Unacct. for | 3 802 61 | .0167 | | | | | 3 802 61 | 4 206 81 | .0167 | .0200 |
| 1309 | Total Distrib'n Ex. | 5 433 29 | .0239 | 5 870 70 | .7433 | 7 680 29 | .9488 | 18 984 28 | 18 414 93 | .0835 | .0876 |

## DISTRIBUTION DEPARTMENT DATA

### METER ACCOUNT

| | | EQUIVALENT NO. | NO. | NO. | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | Owned by Co. first of [illegible] | | | | 2947 | 3170 | 83 | 82 | 11 | 14 | 4 | ✓ | 6 | 2 | ✓ | ✓ | ✓ | 5314 |
| 1321 | Bought during " Mo. | | | | ✓ | 100 | 6 | 3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 109 |
| 1322 | Total, | | | | 2942 | 5270 | 89 | 85 | 11 | 14 | 4 | ✓ | 6 | 2 | ✓ | ✓ | ✓ | 8423 |
| 1323 | Condemned & Dest'd, | | | | 3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 3 |
| 1324 | Owned this Date, | | | | 2939 | 5270 | 89 | 85 | 11 | 14 | 4 | ✓ | 6 | 2 | ✓ | ✓ | ✓ | 8420 |
| 1325 | IN USE THIS DATE — Illuminating, | | | | | | | | | | | | | | | | | |
| 1326 | IN USE THIS DATE — Domestic Fuel, | | | | 2898 | 5018 | 69 | 82 | 10 | 14 | 1 | ✓ | 5 | 1 | ✓ | ✓ | ✓ | 8098 |
| 1327 | IN USE THIS DATE — Industrial " | | | | | | | | | | | | | | | | | |
| 1328 | IN USE THIS DATE — Power, | | | | | | | | | | | | | | | | | |
| 1329 | IN USE THIS DATE — Sub-Meters, | | | | | | | | | | | | | | | | | |
| 1330 | IN USE THIS DATE — Company, | | | | 6 | 2 | 2 | 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 11 |
| 1331 | IN USE THIS DATE — Total, | | | | 2904 | 5020 | 71 | 83 | 10 | 14 | 1 | ✓ | 5 | 1 | ✓ | ✓ | ✓ | 8109 |
| 1332 | IN STOCK — Shop, | | | | 35 | 250 | 18 | 2 | 1 | ✓ | 3 | ✓ | 1 | 1 | ✓ | ✓ | ✓ | 311 |
| 1333 | IN STOCK — Locked, | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1334 | IN STOCK — Total, | | | | 35 | 250 | 18 | 2 | 1 | ✓ | 3 | ✓ | 1 | 1 | ✓ | ✓ | ✓ | 311 |
| 1335 | Total Owned, | | | | 2939 | 5270 | 89 | 85 | 11 | 14 | 4 | ✓ | 6 | 2 | ✓ | ✓ | ✓ | 8420 |
| 1336 | Increase or Decrease, | | | | 414 | 64 | 4 | 9 | ( | 3 | 1 | ✓ | ✓ | 1 | ✓ | ✓ | ✓ | 485 |
| 1337 | Meters in Use End of Year, | | | | 2490 | 4956 | 75 | 74 | 9 | 11 | 2 | ✓ | 5 | 1 | ✓ | ✓ | ✓ | 7624 |

### METERS

| | | Per Mile Main This Yr. | Per Mile Main Last Yr. | Per 100 Pop'l'n This Yr. | Per 100 Pop'l'n Last Yr. | No. Set This Yr. | No. Set Last Yr. | No. Removed This Yr. | No. Removed Last Yr. | | No. | % of Total No. | Cost Each |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1340 | Illuminating, | | | | | | | | | Meters Tested "Regular Test" | 3959 | 48.83 | 0639 |
| 1341 | Domestic Fuel, | | | | | | | | | " " "Routine Test" | 692 | 8.53 | 0637 |
| 1342 | Industrial " | | | | | | | | | " Repaired, | 2575 | 31.76 | .9908 |
| 1343 | Power Gas, | | | | | | | | | " Set, | 6026 | 7431 | .3418 |
| 1344 | Total Meters, | 48.0 | 89.5 | 158.8 | 181.4 | 4186 | 4392 | 3928 | 3837 | " Removed, | 5740 | 70.80 | .1385 |
| 1345 | No. Consumers, | | | | | | | | | " Transferred, | ✓ | | |
| 1346 | No. Service Pipes, | | | | | | | | | No. Leaks of Meters, | 551 | 6.79 | .9908 |

| | | | | |
|---|---|---|---|---|
| 1350 | Cost meter Maintenance per Meter passing through Shop, | | | .2137 |
| 1351 | " " " " In Use, | | | .0516 |
| 1352 | No. Leaks at Connections, | | | |
| 1353 | | | | |
| 1354 | | | | |
| 1356 | Service Maintenance per Complete Service in Use, | | | |
| 1357 | " Repairs per Service handled | | | |
| 1358 | No. Services Repaired, | 11 ; | Cost each, | 3:76 |
| 1359 | No. Services Renewed, | 32 ; | " " | 7:56 |
| 1360 | No. Services Changed, | 14 ; | " " | 2:87 |
| 1361 | No. Services Cleaned, | ✓ ; | " " | ; |
| 1362 | No. Leaks at Services, | 1 ; | " " | 2:00 |
| 1363 | No. Leaks in Broken Mains, | 9 ; | " " | 12:97 |
| 1364 | No. Leaks Account Defective Main Joints, | ; | " " | ; |
| 1365 | | | | |
| 1366 | | | | |
| 1367 | Leakage per Mile Actual Main This Year 183231 Cu. ft.; | | Last Year, 212221 | Cu. ft. |
| 1368 | " " 3-inch " " " 125363 " ; | | " " 206714 | " |

## COLLECTION DEPARTMENT

| | | Charge Consumers Amount | Charge Consumers Per Cons. | Charge Meters Amount | Charge Meters Per Meter | Total Cost This Year | Total Cost Last Year | Total per M. Sold This Year | Total per M. Sold Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 1400 | Reading Meters, | 925 87 | .1172 | 462 89 | .0572 | 1 388 76 | 1 241 08 | .0061 | .0059 |
| 1401 | Collection Clerical Salaries, | 4 346 66 | .5502 | 2 173 29 | .2687 | 6 519 95 | 5 771 39 | .0289 | .0274 |
| 1402 | Collection Office Expense, | 1 171 48 | .1481 | 585 67 | .0724 | 1 757 15 | 1 770 41 | .0077 | .0084 |
| 1403 | Rent of Collection Office, | 486 21 | .0615 | 243 06 | .0300 | 729 27 | 774 56 | .0032 | .0037 |
| 1404 | Delivering Bills, | 283 68 | .0359 | ✓ | | 283 68 | 268 41 | .0012 | .0013 |
| 1405 | Outside Collections, | 1 646 49 | .2085 | ✓ | | 1 646 49 | 1 588 64 | .0072 | .0076 |
| 1406 | Total Collect'n Expenses, | 8 860 39 | 1.1216 | 3 464 91 | .4283 | 12 325 30 | 11 414 49 | .0541 | .0[illegible] |

## COLLECTION DEPARTMENT DATA

### READING METERS

| | | First Reading Total Hours | First Reading Av. Time Each | First Reading No. Rdr. pr. Hr. | First Reading Cost Each | Stragglers and Returns No. | Stragglers and Returns Hours | Stragglers and Returns Cost Ea. | Total No. | Total Exp. (1400) per Meter This Year | Total Exp. (1400) per Meter Last Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1410 | Meters, | 4754 | .0540 | 18.51 | .0110 | 11107 | 847 | .0378 | 78966 | | |
| 1411 | Meter Readers, | | | | | | | | | | |

### CLERICAL SALARIES

| | | No. Clerks | Avr. Pay Each | Amount | Cost per Meter This Year | Cost per Meter Last Year | Cost per Consumer This Year | Cost per Consumer Last Year |
|---|---|---|---|---|---|---|---|---|
| 1415 | Total Acc't No. 1401, | 9.83 | 663 30 | 6 519 95 | .104 | | .836 | |

### DELIVERING BILLS

| | | No. Bills | Labor | Expense | Total Cost | Tot. per Bill |
|---|---|---|---|---|---|---|
| 1420 | By Mail, | 11 00 | ✓ | 22 00 | 22 00 | .2000 |
| 1421 | By Co.'s Employees, | 827 48 | 283 68 | - | 283 68 | .0034 |
| 1422 | Called for at Office, | 31 00 | ✓ | ✓ | ✓ | ✓ |
| 1423 | Totals, | 869 48 | 283 68 | 22 00 | 305 68 | .0035 |

### COLLECTIONS

| | | Gas Bills No. | Gas Bills Amount | Per Cent. of Total No. | Per Cent. of Total Amt. | Cost of Collection Amount | Cost of Collection Per Bill | Cost of Collection Per Cent. |
|---|---|---|---|---|---|---|---|---|
| 1425 | Total Private Gas Bills, (Line 908 previous month) | | 278 647 16 | | | | | |
| | COLLECTIONS | | | | | | | |
| 1426 | At Office by Mail, | 4 779 | 20 415 50 | 5.77 | 7.4[illegible] | 923 20 | .1932 | |
| 1427 | At Office by Tellers, | 73 703 | 238 956 52 | 88.27 | 83.84 | 10 339 60 | .1403 | |
| 1428 | Bills Deposited in Banks, | 2 149 | 9 304 75 | 2.58 | 3.42 | 421 60 | .1936 | |
| 1429 | Total at Office, | 80 631 | 258 676 77 | 96.62 | 94.80 | 11 684 40 | .1449 | |
| 1430 | By Co.'s Salaried Collectors, | 2 824 | 14 086 51 | 3.38 | 5.20 | 640 90 | .2270 | |
| 1431 | By Co.'s Pay Stations, | ✓ | ✓ | | | | | |
| 1432 | By Express Co.'s, | ✓ | ✓ | | | | | |
| 1433 | | | | | | | | |
| 1434 | Total Outside Collections, | 2 824 | 14 086 51 | 3.38 | 5.20 | 640 90 | .2270 | |
| 1435 | Total Collections, | 83 455 | 272 763 28 | 100.00 | 100.00 | 12 325 30 | .1477 | |
| 1436 | Balance Outstanding Close of Month | | 5 883 88 | | | | | |

### ARREARS FOR CURRENT MONTH

| | Arrears | Amount Charged to Arrears Each Date | Collected During Mo. on Each Month's Arrears, | Previous Collections Reposted | Total Collections on Each | Balance Outstand'g on Each at Close of Month | Amount of Each Considered Collectible |
|---|---|---|---|---|---|---|---|
| 1441 | Jan. 31, 19[illegible], Balance Arrears Dec. | 6 678 81 | | | 6 209 33 | 469 55 | |
| 1442 | Feb. 28, 19[illegible], Arrears for Jan'y, | 1 788 33 | | | 1 352 08 | 436 25 | |
| 1443 | March 31, 19[illegible], Arrears for Feb'y, | 1 754 53 | | | 1 356 80 | 397 73 | |
| 1444 | April 30, 19[illegible], Arrears for March, | 1 616 71 | | | 1 159 34 | 457 37 | |
| 1445 | May 31, 19[illegible], Arrears for April, | 1 750 98 | | | 1 382 07 | 368 91 | |
| 1446 | June 30, 19[illegible], Arrears for May, | 1 384 32 | | | 1 085 71 | 298 61 | |
| 1447 | July 31, 19[illegible], Arrears for June, | 1 653 38 | | | 1 383 01 | 270 37 | |
| 1448 | Aug. 31, 19[illegible], Arrears for July, | 1 183 50 | | | 952 89 | 300 61 | |
| 1449 | Sept. 30, 19[illegible], Arrears for Aug., | 1 271 40 | | | 1 008 10 | 263 30 | |
| 1450 | Oct. 31, 19[illegible], Arrears for Sept., | 1 471 26 | | | 940 96 | 530 30 | |
| 1451 | Nov. 30, 19[illegible], Arrears for Oct., | 1 774 29 | | | 1 061 37 | 712 92 | |
| 1452 | Dec. 31, 19[illegible], Arrears for Nov., | 1 818 23 | | | 439 44 | 1 379 79 | |
| 1453 | Totals, | 24 140 81 | | | 18 326 10 | 6 814 71 | |
| 1460 | | | | | | | |

| | | This Year | Last Year |
|---|---|---|---|
| 1461 | | | |
| 1462 | Gross Earnings Gas Dept., 12 months ending last month (13A) | | |
| 1463 | Total Arrears up to end of this month (1453) | | |
| 1464 | Per cent. of Arrears (1463) to Gross Earnings (1462) | | |

REPORT FOR 12 months '11.

## EXECUTIVE DEPARTMENT, GENERAL EXPENSES

| | | PLANT | Totals This Year | Totals Last Year | Per M. Sold This Yr. | Per M. Sold Last Yr. |
|---|---|---|---|---|---|---|
| 1500 | Executive Salaries, | 9 454 17 | 9 454 17 | 9 806 31 | .0416 | .0467 |
| 1501 | General Clerical Salaries, | 1 066 85 | 1 066 85 | 804 40 | .0047 | .0038 |
| 1502 | General Office Expense, | 1 202 12 | 1 202 12 | 970 10 | .0053 | .0046 |
| 1503 | Incidental Expense, | 5 162 84 | 5 162 84 | 2 878 32 | .0227 | .0137 |
| 1504 | Rent of Executive Offices, | 1 569 22 | 1 569 22 | 1 484 45 | .0069 | .0071 |
| 1505 | Legal Expenses, | 8 279 48 | 8 279 48 | 5 911 70 | .0365 | .0281 |
| 1506 | Total Above Items, | 26 734 68 | 26 734 68 | 21 855 28 | .1176 | .1040 |
| 1507 | Promoting New Business, | 18 985 52 | 18 985 52 | 16 152 75 | .0835 | .0769 |
| 1508 | Taxes, | 10 580 00 | 10 580 00 | 8 335 20 | .0466 | .0397 |
| 1509 | Total General Expenses, | 56 300 20 | 56 300 20 | 46 343 23 | .2477 | .2206 |

## ANALYSIS OF SPECIAL EXPENSE ACCOUNTS NOS. 1819, 1820, 1821, 1822. NEW BUSINESS

| | | Domestic Fuel Total | Domestic Fuel Per Consumer | Illuminating Total | Illuminating Per Consumer | Industrial Fuel Total | Industrial Fuel Per Consumer | Power Total | Power Per Consumer | Totals Amounts | Totals Per Consumer |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1520 | a. Advertising, Newspaper, etc. | 2514 19 | | 679 01 | | | | | | 3193 20 | 4043 |
| 1521 | b. Circulars and Distr'n, | ✓ | | ✓ | | | | | | ✓ | ✓ |
| 1522 | c. Bonuses and Commissions, | ✓ | | ✓ | | | | | | ✓ | ✓ |
| 1523 | d. Exhibition Expenses, | 500 91 | | ✓ | | | | | | 500 91 | .0635 |
| 1524 | e. Salaries, Wages and Miscins. Expenses | 4134 73 | | 478 50 | | | | | | 4613 23 | .5841 |
| 1525 | Totals | 7149 83 | | 1157 51 | | | | | | 8307 34 | 1.0519 |
| 1526 | Cost of Appliances sold, | 14960 79 | | 1428 12 | | | | | | 16388 41 | 2.0750 |
| 1527 | Appliance Expense, | 6554 17 | | 1699 02 | | | | | | 8253 19 | 1.0450 |
| 1528 | Total cost Appliances, | 21514 96 | | 3127 14 | | | | | | 24641 60 | 3.1200 |
| 1529 | Received for Appliances, | 14496 91 | | 2099 11 | | | | | | 16596 02 | 2.1002 |
| 1530 | f. Loss on Appliances, | 7017 55 | | 1028 03 | | | | | | 8045 58 | 1.0198 |
| 1531 | f. Profit on Appliances, | ✓ | | ✓ | | | | | | ✓ | ✓ |
| 1532 | Piping — Material | 1522 47 | | 574 87 | | | | | | 1797 84 | .2276 |
| 1533 | and — Labor | 1975 70 | | 144 59 | | 160 | | | | 2121 89 | .2687 |
| 1534 | Con- — Miscins. Exp. | 1082 50 | | 477 50 | | ✓ | | | | 1560 00 | .1976 |
| 1535 | nec- — Totals | 4581 17 | | 896 96 | | 160 | | | | 5479 73 | .6939 |
| 1536 | tions — Charged Consumers | 2447 70 | | 397 34 | | ✓ | | | | 2845 04 | .3603 |
| 1537 | g. — Net Cost | 2133 47 | | 499 62 | | 160 | | | | 2634 69 | .3336 |
| | Total cost items a to g | 16300 85 | | 2685 16 | | 160 | | | | 18987 61 | 2.4043 |

## APPLIANCES INTRODUCED AND CONNECTED

### DOMESTIC FUEL

| | Class | No. | No. Cons. | Per Unit Items | |
|---|---|---|---|---|---|
| 1550 | Ranges (new) | 394 | | Feet Pipe per App'l | 7.710 |
| 1551 | " (old) | 1652 | | Cost Pipe & Fit'gs per Ap. | .569 |
| 1552 | Hot Plates, | 416 | | Cost Labor connecting Ap. | .735 |
| 1553 | Water Heaters, | 75 | | Total Cost connecting Ap. | 1.705 |
| 1554 | Heaters and Grates, | 19 | | Total Cost connecting per foot pipe | .221 |
| 1555 | Miscl. | 133 | | | |
| 1556 | | | | Pipe for 70 715 | |
| 1557 | | | | | |

### ILLUMINATING

| Class | No. | No. Cons. | Per Unit Items |
|---|---|---|---|
| Houses piped by Co | | | Avg. rooms per house |
| Houses piped by contract | | | Cost Pipe & Fit'gs per House |
| | | | Cost Labor per House |
| Gas Arcs | | | Cost Pipe and Labor per House |
| Miscl. | | | Cost Pipe and Labor per foot Pipe |

### INDUSTRIAL FUEL

| | | | | | |
|---|---|---|---|---|---|
| 1560 | | | | Feet Pipe per App'l | |
| 1561 | | | | Cost Pipe & Fit'gs per Ap. | |
| 1562 | | | | Total Cost connecting Ap. | |
| 1563 | | | | Cost Labor connecting Ap. | |
| 1564 | | | | Total Cost connecting per foot pipe | |
| 1565 | | | | | |
| 1566 | | | | | |
| 1567 | | | | | |

### POWER

| | | | | | |
|---|---|---|---|---|---|
| | Below 5 H. P. | | | Feet Pipe per Engine | |
| | 5 to 9 H. P. | | | Cost Pipe & Fit'gs per Engine | |
| | 10 to 14 H. P. | | | Cost Labor on connecting per Engine | |
| | 15 to 24 H. P. | | | Total Connection per Engine | |
| | 25 to 39 H. P. | | | Total Connection per foot pipe | |
| | 50 H. P. & Upwards | | | | |

1570
1571
1572
1573
1574

16 REPORT FOR 12 months, 14

## DETAILS OF GAS SALES

| | | Rate | THIS YEAR Cu. Ft. | THIS YEAR Amount | LAST YEAR Cu. Ft. | LAST YEAR Amount | Inc. or Dec. Cu. Ft. | % Inc. or Dec. |
|---|---|---|---|---|---|---|---|---|
| 1600 | | | | | | | | |
| 1601 | | | | | | | | |
| 1602 | Illuminating Gas | | | | | | | |
| 1603 | | | | | | | | |
| 1604 | | | | | | | | |
| 1605 | Gross Sales, | | 227 682 600 | 274 930 89 | 210 752 310 | 253 212 62 | 16 930 290 | 7.44 |
| 1606 | Less Rebates and Allowances | | 414 500 | 1 177 93 | 531 400 | 1 524 56 | 1 6 900 | 28.2 |
| 1607 | Net Sales | | 227 268 100 | 273 752 96 | 210 220 910 | 251 688 06 | 17 047 190 | 7.56 |
| 1608 | | | | | | | | |
| 1609 | Domestic | | | | | | | |
| 1610 | Fuel | | | | | | | |
| 1611 | Gas | | | | | | | |
| 1612 | | | | | | | | |
| 1613 | Gross Sales, | | | | | | | |
| 1614 | Less Rebates and Allowances | | | | | | | |
| 1615 | Net Sales | | | | | | | |
| 1616 | | | | | | | | |
| 1617 | Industrial | | | | | | | |
| 1618 | Fuel | | | | | | | |
| 1619 | Gas | | | | | | | |
| 1620 | | | | | | | | |
| 1621 | Gross Sales | | | | | | | |
| 1622 | Less Rebates and Allowances | | | | | | | |
| 1623 | Net Sales | | | | | | | |
| 1624 | | | | | | | | |
| 1625 | Gas | | | | | | | |
| 1626 | for | | | | | | | |
| 1627 | Power | | | | | | | |
| 1628 | | | | | | | | |
| 1629 | Gross Sales | | | | | | | |
| 1630 | Less Rebates and Allowances | | | | | | | |
| 1631 | Net Sales | | | | | | | |
| 1632 | Total Sales | | 227 268 100 | 273 752 96 | 210 220 910 | 251 688 06 | 17 047 190 | 7.56 |

## STREET LAMPS

| | No. of Lamps | GROSS EARNINGS | | | Amount | Amount per Lamp | Hours Burning | Gas per Hr. | Total Gas Consumed |
|---|---|---|---|---|---|---|---|---|---|
| 1633 | | Open Flame Burners | @ | per year | | | | | |
| 1634 | | do | @ | " | | | | | |
| 1635 | | do | @ | " | | | | | |
| 1636 | | Incandescent Burners | @ | " | | | | | |
| 1637 | | do | @ | " | | | | | |
| 1638 | | do | @ | " | | | | | |
| 1639 | | | | | | | | | |
| 1640 | | Totals | | | | | | | |

### EXPENSES

| | | | Remarks |
|---|---|---|---|
| 1641 | Lighting and Extinguishing | | |
| 1642 | Repairing | | |
| 1643 | Cleaning | | |
| 1644 | Thawing | | |
| 1645 | Rental | | |
| 1646 | Inspecting and Testing | | |
| 1647 | | | |
| 1648 | | | |
| 1649 | | | |
| 1650 | | | |
| 1651 | | | |
| 1652 | | | |
| 1653 | Total Expense | | |
| 1654 | Net Earnings | | per M. ft. Gas |

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REPORT FOR 12 months ending

## LOW PRESSURE STREET MAINS (FEET)

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1700 | 2 | 302 564 | | | 31 056 | 333 625 | | | | 872 | 332 753 |
| 1701 | 3 | " | | | | | | | | | |
| 1702 | 4 | 110 580 | | | 5 213 | 116 093 | | | | | 116 093 |
| 1703 | 6 | 16 474 | | | | 16 474 | | | | | 16 474 |
| 1704 | 8 | 4 822 | | | | 4 822 | | | | | 4 822 |
| 1705 | 10 | 9 100 | | | | 9 100 | | | | | 9 100 |
| 1706 | 12 | 3 950 | | | | 3 950 | | | | | 3 950 |
| 1707 | 16 | 1 300 | | | | 1 300 | | | | | 1 300 |
| 1708 | 20 | 1 400 | | | | 1 400 | | | | | 1 400 |
| 1709 | 24 | | | | | | | | | | |
| 1710 | 30 | | | | | | | | | | |
| 1711 | 36 | | | | | | | | | | |
| 1712 | FIRST Totals | 450 745 | | | 36 269 | 486 764 | | | | | 486 892 |
| 1713 | Miles | 85.5 | | | | 92.2 | | | | | 92.0 |
| 1713a | Miles on 3 inch Basis | | | | | | | | | | |

## BOOSTER MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1714 | | | | | | | | | | | |
| 1715 | | | | | | | | | | | |
| 1716 | | | | | | | | | | | |
| 1717 | | | | | | | | | | | |
| 1718 | | | | | | | | | | | |
| 1719 | Totals | | | | | | | | | | |

## PUMPING MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1720 | | | | | | | | | | | |
| 1721 | | | | | | | | | | | |
| 1722 | | | | | | | | | | | |
| 1723 | | | | | | | | | | | |
| 1724 | | | | | | | | | | | |
| 1725 | Totals | | | | | | | | | | |

## COST OF STREET MAINS. (ALL KINDS)

| | | COST MAINS LAID THIS MONTH | | | | | | COST MAINS LAID THIS YEAR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AMOUNT | | | PER FOOT | | | AMOUNT | | | PER FOOT | | |
| | Size | Labor | Material | Total | Labor | Mat'l | Total | Labor | Material | Total | Labor | Mat'l | Total |
| 1726 | 2 | | | | | | | 3354 00 | 3306 77 | 6660 77 | 108 | 107 | 215 |
| 1727 | 3 | | | | | | | | | | | | |
| 1728 | 4 | | | | | | | 811 60 | 2024 37 | 2885 97 | 155 | 389 | 544 |
| 1729 | 6 | | | | | | | | | | | | |
| 1730 | 8 | | | | | | | | | | | | |
| 1731 | 10 | | | | | | | | | | | | |
| 1732 | 12 | | | | | | | | | | | | |
| 1733 | 16 | | | | | | | | | | | | |
| 1734 | 20 | | | | | | | | | | | | |
| 1735 | 24 | | | | | | | | | | | | |
| 1736 | 30 | | | | | | | | | | | | |
| 1737 | 36 | | | | | | | | | | | | |
| 1738 | Totals, | | | | | | | 4165 60 | 5331 14 | 9496 74 | 115 | 147 | 262 |

| | | THIS MONTH | THIS YEAR | RECAPITULATION | |
|---|---|---|---|---|---|
| 1739 | Cost Low Pressure Mains laid | $ . . | $ 9.496.74 | Miles Low Pressure Main | 92.0 |
| 1740 | " Booster " " | $ . . | $ . . | " Booster Main | |
| 1741 | " Pumping " " | $ . . | $ . . | " Pumping Main | |
| 1742 | Total cost Mains laid | $ . . | $ 9.496.74 | Total Main Mileage | 92.0 |
| 1743 | Deduct value of Mains taken up | $ . . | $ . . | | |
| 1744 | Net cost of Mains | $ . . | $ 9.496.74 | | |

REPORT FOR 12 months — '11.

## SERVICE PIPES LAID

| | | No. Laid This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Year | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1745 | Main to Meter (Old Main) | | | 251 | 5787 | 6038 | " | 6038 |
| 1746 | " " (New Main) | | | 202 | 1439 | 1641 | " | 1641 |
| 1747 | Curb to Meter (Extension) | | | 27 | 353 | 380 | " | 380 |
| 1748 | Total complete services, | | | 480 | 7579 | 8059 | " | 8059 |
| 1749 | Main to Curb (acc't paving) | | | 129 | 277 | 406 | 27 | 379 |
| 1750 | Total No. services | | | 609 | 7856 | 8465 | 27 | 8438 |

## COST OF SERVICES

| | | Gross Cost | Charged Consumers | Net Cost | GROSS COST Per Service | GROSS COST Per Foot | NET COST Per Service | NET COST Per Foot |
|---|---|---|---|---|---|---|---|---|
| 1751 | Labor, | | | | | | | |
| 1752 | Material, | | | | | | | |
| 1753 | Total this month. | | | | | | | |
| 1754 | Previous'y reported, | | | | | | | |
| 1755 | Total this year, | 5784 73 | 5079 39 | 809 34 | 9 48 | 175 | 1 33 | 027 |
| 1756 | Cost last year, | | | | | | | |

| | | THIS MONTH | | THIS YEAR | |
|---|---|---|---|---|---|
| 1757 | Pipe used for complete services, | | feet. | 28016 | feet. |
| 1758 | " " " service extensions, | | feet. | 1169 | feet. |
| 1759 | " " " total complete services, | | feet. | 29185 | feet. |
| 1760 | " " " services to curb, | | feet. | 3737 | feet. |
| 1761 | Total, | | feet. | 32922 | feet. |

## APPLIANCES

| | | DOMESTIC FUEL APPLIANCES | | | | | | IND. APPLIANCES | GAS ENGINES | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Ranges | Hot Pl. | W. H. | Heaters and Grates | Miscls | Total | No. | No. | H. P. |
| 1762 | First of Month, | 9261 | 1760 | 1155 | 297 | 414 | 12887 | | | |
| 1763 | New during Month, | 402 | 205 | 186 | 56 | 48 | 896 | | | |
| 1764 | Total, | 9663 | 1965 | 1340 | 348 | 462 | 13778 | | | |
| 1765 | Off during Month, | 279 | 37 | " | " | " | 320 | | | |
| 1766 | Close of Month, | 9384 | 1928 | 1338 | 348 | 460 | 13458 | | | |
| 1767 | First of Year, | 9261 | 1760 | 1155 | 292 | 414 | 12887 | | | |
| 1768 | Gain or Loss, | 123 | 168 | 183 | 56 | 46 | 576 | | | |

## STREET LAMPS

| | | No. Installed This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Yr. | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1769 | Lamp Services, | | | | | | | |
| 1770 | Boulevard Posts, | | | | | | | |
| 1771 | Common Posts, | | | | | | | |
| 1772 | | | | | | | | |
| 1773 | Total, | | | | | | | |

## PLANT DATA

| | | MAXIMUM CAPACITY 24 hrs. | MAXIMUM CAPACITY 1 hr. | Max. Make 24 hrs. This Mo. | % of Make to Cap. 24 hours | Max. Make 24 hrs. To Date | % of Make to Cap. 24 hours | Least Reserve Capacity |
|---|---|---|---|---|---|---|---|---|
| 1775 | Coal Gas Benches, | " | " | | | | | |
| 1776 | Water Gas Machines, | 1200000 | 50000 | 884000 | 73.67 | 884000 | 73.67 | 316000 |
| 1777 | Total, | 1200000 | 50000 | 884000 | 55.95 | 884000 | 55.95 | 696000 |
| 1778 | | | | | | | | |
| 1779 | | | | | | | | |
| 1780 | | | | | | | | |
| 1781 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| 1782 | Storage Capacity | 850000 | Purifying Capacity Cu. Ft. Material | |
| 1783 | Max. Send out 24 hrs. | 81780 | Cross Section Sq. Ft. (Basis Single flow boxes) | |
| 1784 | " " 1 hr. | " | | |
| 1785 | % Storage to send out 24 hrs. | 104% | | |
| 1786 | " " " " 1 hr. | " | | |
| 1787 | " " " 24 hr. capacity | 53% | | |
| 1788 | | | | |

## SPECIAL EXPENSE ACCOUNT

| No. | ACCOUNT | Total Expense | CHARGED TO No. | Account | Amount | Bal. Special Accounts Close Month Debit | Credit |
|---|---|---|---|---|---|---|---|
| 1800 | Coal Stock Expense, | 90 05 | 500 | Coal Stock, | 90 05 | | |
| 1801 | Coke Stock Expense, | 660 81 | 502 | Coke Stock, | 660 81 | | |
| 1802 | Tar Stock Expense, | 426 92 | 503 | Tar Stock, | 426 92 | | |
| 1803 | Ammonia Stock Expense, | ✓ | 504 | Ammonia Stock, | ✓ | | |
| 1804 | Pur. Dept. and St. Room, | 7 710 57 | Various | | 7 710 57 | | |
| 1805 | Barn Expense, | 4 056 45 | See details next page | | | | |
| 1806 | Preliminary Expense, | ✓ | | | | | |
| 1806a | Depreciation | 47 782 16 | (See Page 26) | | 47 782 16 | | |
| 1806b | Depreciation Tax | 8 228 79 | ( " 26) | | 8 228 79 | | |
| 1807 | Lamps Discontinued, | ✓ | 1515b | St. Lamp Main. | ✓ | | |
| 1808 | Mains Abandoned, | ✓ | 1200 | St. Main Main. | ✓ | | |
| 1809 | Steam, | 9 689 80 | See details next page | | | | |
| | | | 1304b | Meter Dept. Exp. | | | |
| 1810 | Rent, | 5 093 85 | 1402 | Coll. Off. Rent, | Details next page | | |
| | | | 1504 | Exc. Off. Rent, | | | |
| | | | 1805 | Barn Exp., | | | |
| 1811 | Contingent Bench Repairs, | ✓ | 1011 | Bench Repairs, | ✓ | | |
| | | | 1017 | Bldgs. Rep. C. G. | | | |
| 1812 | Gen. W'ks Bldgs. Repairs, | 195 59 | 1113 | " " W. G. | 195 59 | | |
| | | | 1213 | " " P. G. | | | |
| | | | 1018 | App. Rep. C. G. | | | |
| 1813 | General Apparatus Repairs, | 4 292 95 | 1114 | " " W. G. | 4 292 95 | | |
| | | | 1214 | " " P. G. | | | |
| | | | 1019 | Bund. Lab. C. G. | | | |
| 1814 | Sundry Labor, | 1 176 00 | 1115 | " " W. G. | 1 176 00 | | |
| | | | 1215 | " " P. G. | | | |
| | | | 1020 | Fix. H. & Sup. C. G. | | | |
| 1815 | Works Expense and Supplies, | 3 640 76 | 1116 | " " W. G. | 3 640 76 | | |
| | | | 1216 | " " P. G. | | | |
| | | | 1021 | Gen. Sup., C. G. | | | |
| 1816 | General Supervision, | 3 412 26 | 1117 | " " W. G. | 3 412 26 | | |
| | | | 1217 | " " P. G. | | | |
| | | | 1022 | Dis. H. Sta. C. G. | | | |
| 1817 | Dist. Holder Station, | 1 580 21 | 1118 | " " W. G. | 1 580 21 | | |
| | | | 1218 | " " P. G. | | | |
| | | | 1507 | From. N. Bus., | 16 298 85 | | |
| 1819 | Domestic Fuel App'ces., | 16 298 85 | 308 | Const., | | | |
| | | | 1507 | From. N. Bus., | 2 686 04 | | |
| 1820 | Ill'tg. Pipes and Fixtures, | 2 686 04 | 309 | Const., | | | |
| | | | 1507 | From. N. Bus., | 1 60 | | |
| 1821 | Industrial Gas Appl'ces., | 1 60 | 310 | Const., | | | |
| | | | 1507 | From. N. Bus., | | | |
| 1822 | Gas Engines and Piping, | ✓ | 311 | Const., | | | |
| | | | 1508 | Taxes, Gas | 10 580 00 | | |
| 1823 | Taxes Accrued, | 15 860 00 | | Elect. | 5 280 00 | | |
| | | | 249 | Interest, Gas | 51 546 88 | | |
| 1824 | Interest Accrued, | 77 319 76 | | Elect | 25 772 88 | | |
| | | | 900 | Bad Debts, Gas | 3 000 00 | | |
| 1825 | Bad Debts, | 4 800 00 | 900 | Bad Debts, Elect | 1 800 00 | | |
| | 1850 | 130 76 | 1111a | | 130 76 | | |
| | 1840 Office Expenses | 829 30 | 1402a | | 331 73 | | |
| | | | 1502a | | 124 40 | | |
| | | | 3214 | | 165 86 | | |
| | | | 3226 | | 41 41 | | |
| | | | 1898 | | 124 23 | | |
| | | | 3231 | | 41 47 | | |
| | Total, | | | | | | |

TORN PAGES

20 REPORT FOR 12 Months '11

## STEAM ACCOUNT No. 1809

| | DEBITS | | | CREDITS | | |
|---|---|---|---|---|---|---|
| | (a) Fuel Electric | 7 775 00 | | Charged to | | |
| 1900 | Tons, @ | | 1014 | Coal Gas Steam, | | |
| 1901 | Tons, @ | | 1100 | Water Gas Generator, | 4 282 75 | |
| 1902 | Tons, @ | | 1110 | " Pur. and St. | 3 382 05 | |
| 1903 | Total Fuel, | | 1201 | Pumping Purchased Gas, | | |
| | (b) Water Electricity | 815 08 | 1210 | Purification and St. Gas, | | |
| 1904 | Gals. City Water, @ | | 1800a | Coal Stock Expense, | | |
| 1905 | Gals. Pumped by Co. Cost | | 1802a | Ammonia Stock Expense, | | |
| 1906 | Total Water, | | 1815 | Works Expense, | 2025 00 | |
| | (c) Labor Water | 1 649 72 | 1817 | District Holder Station, | | |
| 1907 | Firemen, @ | | | | | |
| 1908 | Helpers, @ | | | | | |
| 1909 | @ | | | | | |
| | Total Labor, | | | | | |
| 1910 | (d) Repairs, | | | | | |
| 1911 | Labor, | | | | | |
| 1912 | Material, | | | | | |
| 1913 | Total Repairs, | | | | | |
| 1914 | Total Cost, a-b-c-d | | | | | |
| 1915 | Less Steam Sold, | | | | | |
| 1916 | Net Cost Steam, | 9 689 80 | | Total Credits, | 9 689 80 | |
| 1917 | Basis of Steam Charges, | | | | | |
| 1918 | | | | | | |
| 1919 | | | | | | |
| 1920 | | | | | | |

## BARN EXPENSE ACCOUNT No. 1805 (14 Horses)

| | | Total | | Per Horse | | | Charged to | | |
|---|---|---|---|---|---|---|---|---|---|
| 1925a | Wages, | 289 | 35 | 20 | 67 | 1305a | | 215 | 97 |
| 1926 | Rent, | 60 | 00 | 4 | 29 | 1306 | | 215 | 08 |
| 1927 | Hay, | 609 | 66 | 45 | 69 | 1306 | | 215 | 08 |
| 1928 | Oats, | 661 | 46 | 47 | 26 | 3008 | | 86 | 00 |
| 1929 | Oil, Meal and Bran, | 15 | 16 | 1 | 08 | 3200 | | 480 | 15 |
| 1930 | Bedding, | 3 | 17 | | 23 | 3204a | | 215 | 10 |
| 1931 | Fuel, Light and Water, | 56 | 03 | 4 | 00 | 3231f | | 258 | 07 |
| 1932 | Med. Attendance and Medicines, | 24 | 38 | 2 | 10 | 3265 | | 172 | 06 |
| 1933 | Barn Repairs, | 34 | 56 | 2 | 47 | 3271 | | 48 | 04 |
| 1934 | Horse Shoeing, | 35 | 70 | 2 | 52 | 3270 | | 215 | 09 |
| 1935 | Insurance on Horses, | 26 | 18 | 1 | 87 | 301 | | 129 | 08 |
| 1936 | Board for Horses, | 448 | 25 | 32 | 02 | 302 | | 215 | 09 |
| 1936a | Total, (a) | 2298 | 40 | 164 | 20 | 351 | | 258 | 13 |
| 1937b | Harness Repairs, | 90 | 52 | 6 | 47 | 1801c | | 251 | 84 |
| 1938 | Wagon Repairs, | 394 | 95 | 28 | 22 | 1802a | | 132 | 18 |
| 1939 | Insurance on Wagons and Harness, | 22 | 23 | 1 | 59 | 1815 | | 86 | 01 |
| 1940 | Misc | 544 | 06 | 38 | 87 | 1814d | | 937 | 67 |
| 1941 | Wages | 958 | 03 | 68 | 44 | 1820g | | 215 | 05 |
| 1942 | Total, Less Steam [illegible] | [illegible] | | [illegible] | | Ret Correction | | 4 | 40 |
| 1943 | Total Barn Expense, | 4 794 | 19 | 306 | 77 | | | 4294 | 19 |

## RENT ACCOUNTS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1950 | Rental paid for Office, | 3867 | 50 | | Charged to | | |
| 1951 | Supt Office | 480 | 00 | 1403 | Rent of Coll. Office, | 480 | 00 |
| 1952 | " for Meter Shop, | 480 | 00 | 1504 | Rent of General Office, | 1319 | 92 |
| 1953 | Wm Hall | 480 | 00 | 1304 | Meter Dep. Expense, | 480 | 00 |
| 1954 | Meter Shop | 459 | 70 | 3227 | | 320 | 92 |
| 1955 | Janitor | 633 | 15 | 5881c | Barn Expense, | 240 | 00 |
| 1956 | Rental Credited Rents Receivable, | 920 | 00 | 5266a | | 36 | 00 |
| 1957 | For | | | 1804c | | 480 | 00 |
| 1958 | For | | | 1814c | | 480 | 00 |
| 1959 | | | | 1814c | | 420 | 00 |
| 1960 | Total, | 4493 | 85 | | | 4493 | 85 |

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# PAY ROLL DATA — MONTH OF

| | Manufacturing Expenses | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| 2000 | Coal Buggy | 1000b | | | | |
| 2001 | Retort House Labor | | | | | |
| 2002 | a Foremen | 1010a | | | | |
| 2003 | b Stoking | 1010a | | | | |
| 2004 | c Furnace men | 1010a | | | | |
| 2005 | d Doctor | 1010a | | | | |
| 2006 | e Scurfling Retorts | 1010a | | | | |
| 2007 | f Cleaning Flues | 1010a | | | | |
| 2008 | g Hydraulic Main Men | 1010a | | | | |
| 2009 | h Wheeling Retort ashes | 1010a | | | | |
| 2010 | Bench Repairs | 1011a | | | | |
| 2011 | Retort House Expense | 1012 | | | | |
| 2012 | Purifying Coal Gas | 1015a | | | | |
| 2013 | Gen'l Bldg. Repairs | 1017a | | | | |
| 2014 | Gen'l Apparatus Rep. | 1018a | | | | |
| 2015 | Sundry Labor | 1019a | | | | |
| 2016 | Experimenting C. G. | 1020 | | | | |
| 2017 | Gen'l Supervision | 1021 | | | | |
| 2018 | | | | | | |
| 2019 | | | | | | |
| 2020 | Total | | | | | |
| 2021 | Mfg. Exp. W. Gas | 1101 | | 80 | | .00000 |
| 2022 | Unloading Oil Cars | 1102 | | " | | " |
| 2023 | Gas Making Labor | 1106 | | " | | " |
| 2024 | a Making Gas | 1106 | 1 823 75 | 1 690 97 | .00747 | .00948 |
| 2025 | b Charging W. G. | 1106 | 822 13 | 900 50 | .00237 | .00440 |
| 2026 | c Clinkering W. G. | 1106 | 264 18 | 891 75 | .00291 | .00383 |
| 2027 | Rep. App. up to Seal | 1107a | 266 00 | 354 84 | .00109 | .00158 |
| 2028 | W. G. Gen. House Exp. | 1108a | 2 11 | 34 25 | .00001 | .00017 |
| 2029 | Purifying W. G. | 1111 | " | " | | " |
| 2030 | Rep. Buildings | 1113 | 84 17 | 78 01 | .00034 | .00032 |
| 2031 | Rep. App. beyond Seal | 1114a | 76 83 | 69 85 | .00026 | .00051 |
| 2032 | Sundry Labor | 1115 | 1347 43 | 1559 21 | .00554 | .00686 |
| 2033 | Experimenting W. G. | 1116 | | | | |
| 2034 | Gen'l Supervision | 1117 | | | | |
| 2035 | | | | | | |
| 2036 | | | | | | |
| 2037 | Total | | $ 3977 09 | $ 3865 62 | .02204 | .02574 |

| | Purchased Gas | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| | Power for Pumping | 1201 | | | | |
| | Purifying Labor | 1211 | | | | |
| | Gen'l Bldg. Repairs | 1213 | | | | |
| | Gen'l App. " | 1214 | | | | |
| | Sundry Labor | 1215 | | | | |
| | Gen'l Supervision | 1217 | | | | |
| | Total | | | | | |
| | Pintsch Gas | | | | | |
| | Retort House Labor | 2408 | | | | |
| | Bench Repairs | 2409 | | | | |
| | Retort House Exp. | 2410 | | | | |
| | Purifying Labor | 2412 | | | | |
| | Gen'l Bldg. Repairs | 2413 | | | | |
| | Sundry Labor | 2414 | | | | |
| | Car Fillers | 2420 | | | | |
| | Pipe Line Repairs | 2421 | | | | |
| | Total | | | | | |
| | Summary Mfg. | | | | | |
| | Coal Gas | 2020 | | | | |
| | Water Gas | 2057 | | | | |
| | Purchased Gas | 2007 | | | | |
| | Pintsch Gas | 2020 | | | | |
| | Total | | | | | |

| | Distribution | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M Sold ThisYr. | Per M Sold LastYr. |
|---|---|---|---|---|---|---|
| | Street Main Maint. | | | | | |
| | a Test and Rep. Leaks | 1300a | 858 21 | 984 64 | .00378 | .00464 |
| | b Rep or Replacing | 1300a | | | | " |
| | c Maint. Governors | 1300g | | | | " |
| | Service Maintenance | | | | | " |
| | a Thawing Services | 1301a | 23 49 | 69 79 | .00010 | .00033 |
| | b Cleaning | 1301c | 18 01 | 14 85 | .00008 | .00001 |
| | c Rep. or Renewing | 1301d | 388 16 | 91 39 | .00171 | .00043 |
| | d Changing or Extend | 1301f | 189 35 | 44 55 | .00083 | .00021 |
| | Street Dept. Exp. | | | 136 84 | . | .00065 |
| | a Rep. St. Dept. Tools | 1302a | 32 55 | 22 14 | .00014 | .00011 |
| | b Pumping Drips | 1302c | 217 86 | 139 22 | .00096 | .00066 |
| | c Taking St. Pressure | 1302e | 60 | 138 87 | .00000 | .00066 |
| | d Gen'l Supervision | 1302f | 1444 08 | 721 17 | .00636 | .00340 |
| | Meter Maintenance | 1303 / 1305 | 7 93 | 662 07 / 11 | .00003 | .00001 / .00315 |
| | a Rep. Old Meters | 1303a | 1988 87 | 1843 67 | .00875 | .00879 |
| | b Test " " | 1303c | 295 10 | 1527 97 | .00130 | .00728 |
| | c Rep. Old Connections | 1303d | 9 46 | 19 18 | .00004 | .00009 |
| | d Making New " | 1303b | 16 84 | 3 75 | .00007 | .00002 |
| | e Shop Foremen | 1303h | 963 63 | 210 91 / 492 24 | .00426 | .00234 |
| | f Changing Meters | 1303i | | | | |
| | g Governor Expense | 1303k | 78 72 | | .00035 | |
| | Meter Dept. Exp. | | | | | |
| | a Meter Clerks | 1304a | 514 06 | 488 39 | .00226 | .00232 |
| | b Foremen | 1304b | | 164 85 | | .00074 |
| | c Rep. Shop Tools | 1304c | 2 03 | " | .00001 | " |
| | Setting Meters | 1305a | 1217 04 | 926 62 | .00536 | .00446 |
| | Removing Meters | 1305b | 535 71 | 605 68 | .00237 | .00288 |
| | S. & R. Supervision | 1305c | 68 | " | .00030 | " |
| | Gratuitous Work | 1305a / 1305b | 80 | 7 10 | .00000 | .00004 |
| | | 1305f | 41 | 2 29 | .00000 | .00001 |
| | a Gen'l Complaints | 1306a | 1 524 95 | 1 385 02 | .00671 | .00659 |
| | b Rep. Cons. Property | 1306b / 1306c | 12 08 / 63 04 | 20 64 / 118 24 | .00006 / .00030 | .00010 / .00056 |
| | c Investigating, etc. | 1306f | | 6 98 | | .00003 |
| | d Inspecting | 1306f | | " | | |
| | | 1306b | 97 26 | 49 74 | .00043 | .00024 |
| | Total | | $ 9 998 70 | 749 78 | .04400 | .04640 |

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# PAY ROLL DATA

MONTH OF

| | Collection Expense | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| 2038 | Reading Meters | | | | | |
| 2039 | a First Reading | 1400a | 867 52 | 969 38 | .00383 | .00461 |
| 2040 | b Retakes | 1400b | 420 77 | 189 26 | .00185 | .00090 |
| 2041 | Clerical Salaries | 1401 | 6 487 95 | 5 771 39 | .02855 | .03747 |
| 2042 | Addressing Machine | 1402c | 173 00 | 199 00 | .00076 | .00095 |
| | | | 223 62 | 211 69 | .00100 | .00103 |
| 2043 | Del. Receipted Bills | 1402e | | | | |
| 2044 | Delivering Bills | 1404 | 204 79 | 168 87 | .00090 | .00080 |
| 2045 | Outside Collection | 1405 | 1 620 00 | 1 560 00 | .00718 | .00742 |
| 2046 | | | | | | |
| 2047 | Total | | 9 995 97 | 9 169 39 | .04401 | .04360 |
| 2048 | | | | | | |
| 2049 | Gen'l Exp. | 1503 | 7 50 | | .00003 | |
| 2050 | Executive Salaries | 1500 | 3 524 28 | 3 579 00 | .01555 | .01699 |
| 2051 | Clerical Salaries | 1501 | 854 80 | 800 42 | .00376 | .00381 |
| 2052 | Legal Expense | 1502 | 65 32 | 75 98 | .00029 | .00036 |
| 2053 | Total | | 4 462 50 | 4 446 38 | .01963 | .02116 |
| 2054 | | | | | | |
| 2055 | Stock Accounts | 502 | 6 75 | | .00003 | |
| 2056 | Making New Oxide | 505 | 352 98 | 149 03 | .00155 | .00071 |
| 2057 | Main Stock | 506 | 6 06 | 63 68 | .00003 | .00030 |
| 2058 | Steel Pipe Stock | 507 | 68 33 | | .00030 | |
| 2059 | Fittings " | 508 | | | | |
| 2060 | Service " | 509 | | | | |
| 2061 | Appliance " | 512 | 3 90 | | .00002 | |
| 2062 | Miscellaneous | 513 | | | | |
| 2063 | | 569 | | 38 | | .00018 |
| 2064 | Total | | 438 02 | 213 09 | .00193 | .00101 |
| 2065 | | | | | | |
| 2066 | Coal Stock Exp. | | | | | |
| 2067 | Unloading Coal | 1800a | 132 76 | 58 52 | | |
| 2068 | Weighing Coal | 1800a | | | | |
| 2069 | Piling-Trimming-Shed | 1800a | | | | |
| 2070 | Rep. Shed-Conveyors | 1800c | | | | |
| 2071 | COKE STOCK EXP. | | | | | |
| 2072 | Coke Buggy | 1801a | 240 62 | 315 25 | | |
| 2073 | Work on Pile | 1801a | | | | |
| 2074 | Hauling Ret. to Yard | 1801b | | 100 61 | | |
| 2075 | Marketing | 1801b | | | | |
| 2076 | Rep. Apparatus | 1801c | 33 09 | | | |
| 2077 | Steward | | 376 25 | 422 38 | | |

| | Special Expense Accounts | Acct. No. | Total Wages This Year | Total Wages Last Year |
|---|---|---|---|---|
| | Tar Stock Exp. Bal. 1.1 | | 376 25 | |
| | a Distilling | 1802a | 172 20 | |
| | b Tar Plant Rep. | 1802b | | |
| | Ammonia Stock Exp. Bal. 1.1. | | | |
| | a Concentrating, etc. | 1803a | | |
| | b Apparatus Rep. | 1803b | | |
| | Purchasing Dept. | | | |
| | a Pur. Agt. & Clerks | 1804a | 518 00 | |
| | b Handling Stock | 1804b | 1 343 60 | |
| | Barn Expense | 1805 | 289 33 | |
| | Prelimin. Exp. New W'k. | 1806 | | |
| | Steam Shovel, Wilkes-Barre | | 30 | |
| | a Firemen-Helpers | 1809c | | |
| | b Hauling Ashes | 1809c | | |
| | c Sundry Labor | 1809c | | |
| | d Haul'g Coal to Boilers | 1809a | | |
| | e Boiler Repairs | 1809d | | |
| | f Boiler Changes | 1809c | | |
| | Rent—Janitors, etc. | 1810 | 637 15 | |
| | Gen'l Works Bldg. Rep. | 1812c | 60 25 | |
| | " App. Repairs | 1813c | 187 44 | |
| | Sundry Labor | 1814 | 1 175 45 | |
| | Bench Repairs | 1811 | | |
| | Works Expense | 1815 | | |
| | General Superintendence | | 3 00 | |
| | a Chemists | 1810a | | |
| | b Clerical Salaries | 1810b | 3 597 96 | 3 |
| | c Gen'l Supervision | 1810c | | |
| | Dist. Holder Sta. | 1817 | 927 68 | |
| | New Bus. Expense | | 42 10 | |
| | a Advertising Men | | 442 94 | |
| | b Demonstrator-Ass'ts | | 5 26 | |
| | c Solicitors | | 2 121 89 | 2 |
| | d Clerks | | 4 088 79 | 3 |
| | e App'l Connections | | 4 491 21 | 4 |
| | | 1805 | 90 | |
| | | 1809 | | |
| | | 1807 | 1 246 17 | 1 |
| | | 1808 | 207 25 | |
| | | 1807 | 132 76 | |
| | | 1811 | | |
| | Total | | 33 530 45 | 33 |

| | Construction | | Total Wages This Year | Total Wages Last Year | Per M. ThisYr. | Per M. LastYr. |
|---|---|---|---|---|---|---|
| | Gas Works | 300 | | | | |
| | Mains | 301 | 4 452 02 | 5 830 47 | | |
| | Services | 302 | 3 588 74 | 3 983 95 | | |
| | Meters | 303 | 60 | 12 00 | | |
| | Street Lamps | 304 | | | | |
| | Tar Plant | 306 | | | | |
| | Pintsch Plant | 309 | | | | |
| | Gen'l | | | 1 769 73 | | |
| | N.J. | | 60 59 | 3 130 54 | | |
| | G11 | | 808 45 | | | |
| | G17 | | 87 00 | | | |
| | G10 | | 223 | | | |
| | G20 | | 151 25 | | | |
| | Total | | 9 150 68 | 14 467 15 | | |
| | Summary | | | | | |
| | Manufacturing | 2037 | 5 377 09 | 5 865 62 | .02207 | |
| | Distribution | 2037 | 9 998 70 | 9 749 78 | .04120 | |
| | Collection Exp. | 2047 | 9 995 97 | 9 169 39 | .04401 | |
| | General Exp. | 2063 | 4 462 50 | 4 446 38 | .01963 | |
| | Stock Accounts | 2064 | 438 02 | 213 09 | | |
| | Special Expenses | 2077 | 22 830 45 | 23 585 68 | .10046 | |
| | Construction | 2052 | 9 150 68 | 14 467 15 | | |
| | Total | | 62 253 41 | 67 197 20 | .2740 | |

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REPORT FOR 12 months '11 22

## PAY ROLL DATA

| | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs per Day | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs per Day |
|---|---|---|---|---|---|---|---|---|
| 2070 | **Mfg. Dept.** | | | | **Office and General** | | | |
| 2071 | Foremen, | 2 | 80.00 | 12 | Cashiers, | 1 | 70.00 | 9 |
| 2072 | Stokers, | | | | Ass't Cashiers, | 1 | 30.00 | 9 |
| 2073 | " Helpers | | | | Bookkeepers Gen., | 1 | 80.00 | 9 |
| 2074 | | | | | " Cons., | 5 | 65.00 | 9 |
| 2075 | Water Gas Makers, | 2 | 2.50 | 12 | " Petty Led., | 1 | 60.00 | 9 |
| 2076 | " " " Helpers, | 2 | 2.25 | 12 | | | | |
| 2077 | | | | | Clerks:—New Bus. Dept., | | | |
| 2078 | Furnace Men, | | | | Application " | 1 | 70.00 | 9 |
| 2079 | Coke Men, | | | | Contract " | 1 | 60.00 | 9 |
| 2080 | Coal Men, | | | | Appl. Sales " | | - | |
| 2081 | | | | | Tabulating " | | - | |
| 2082 | Hydraulic Main, | | | | Collection " | 2 | 45.00 | 9 |
| 2083 | Patchers, | | | | Auditing " | | - | |
| 2084 | | | | | Filing " | | - | |
| 2085 | Purifying, | | | | Pay Roll " | 1 | 50.00 | 9 |
| 2086 | | | | | Distribution " | 1 | 25.00 | 9 |
| 2087 | Laborers, | | | | Purchasing " | 1 | 55.00 | 9 |
| 2088 | | | | | Store-room " | 1 | 85.00 | 9 |
| 2089 | Engineers, | 1 | 50.00 | 12 | Coke & Tar " | | - | |
| 2090 | Works Mechanics, | 2 | 2.20 | 10 | Night Operator | 1 | 40.00 | 9 |
| 2091 | Carpenters, & Blacksmiths | 2 | 2.15 | 10 | | | | |
| 2092 | District Holder | 1 | 1.75 | 10 | | | | |
| 2093 | Chemists, | | | | Representatives, | 6 | 75.00 | 9 |
| 2094 | | | | | Ass't Representatives, | | | |
| 2095 | Works Clerks, | 1 | 50.00 | 10 | | | | |
| 2096 | | | | | Floor Salesmen, | 1 | 75.00 | 9 |
| 2097 | **Street Dept.** | | | | Collectors, | 3 | 55.00 | 9 |
| 2098 | S. & M. Gang Foremen, | 1 | 75.00 | 10 | | | - | |
| 2099 | " " " Laborers, | 5 | 2.25 | 10 | Stenographers, | 2 | 55.00 | 9 |
| 2100 | | | | | Office Boys, | | - | |
| 2101 | **Fitting Dept.** | | | | Janitor | 1 | 60.00 | 9 |
| 2102 | Fitters, | 2 | 2.25 | 10 | Meter Readers, | 3 | 2.00 | 9 |
| 2103 | " Helpers, | 4 | 1.75 | 10 | Troublemen, | | | |
| 2104 | | | | | | | | |
| 2105 | Meter Dept. Foremen, | 2 | 75.00 | 10 | Branch Office, | 1 | 60.00 | 9 |
| 2106 | " " Repairers, | 3 | 1.90 | 10 | | | | |
| 2107 | " " Clerks, | | | | **Special Men** | | | |
| 2108 | | | | | General Books | 1 | 60.00 | 9 |
| 2109 | Arc Repairers, | 3 | 1.80 | 10 | | | | |
| 2110 | " Lighters, | | | | | | | |
| 2111 | | | | | | | | |
| 2112 | | | | | | | | |
| 2113 | **Engineering Dept.** | | | | **Dept. Heads & Supts.** | | | |
| 2114 | | | | | Genl. Supt. | 1 | 150.00 | 9 |
| 2115 | | | | | Comm. Dept. Mgr. | 1 | 150.00 | 9 |
| 2116 | | | | | Supt. Distribution | 1 | 90.00 | 9 |
| 2117 | | | | | | | | |
| 2118 | | | | | | | | |
| 2119 | | | | | | | | |
| 2120 | **Pintsch Dept.** | | | | | | | |
| 2121 | | | | | | | | |
| 2122 | | | | | | | | |
| 2123 | | | | | | | | |
| 2124 | | | | | | | | |
| 2125 | | | | | | | | |
| 2126 | **Tar Dept.** | | | | | | | |
| 2127 | | | | | | | | |
| 2128 | | | | | | | | |
| 2129 | | | | | | | | |
| 2130 | | | | | | | | |
| 2131 | | | | | | | | |
| 2132 | | | | | | | | |
| 2133 | Total, | | | | Total, | | | |

REPORT FOR 12 months '11

## REPAIR AND MAINTENANCE ACCOUNT

| | | | This Year | | | | | | | Last Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Labor | | Material | | Total | | Per M. Mfd. | Total | | Per M. Mfd. |
| 2175 | Coal Shed and Apparatus | (1800c) | | | | | | | | | | |
| 2176 | Coke Yard " | (1801d) | | | | | | | | | | |
| 2177 | Tar Dep't " | (1802b) | | | | | | | | | | |
| 2178 | Ammonia " | (1803b) | | | | | | | | | | |
| 2179 | Drawing and Charging Machinery, | (1010b) | | | | | | | | | | |
| 2180 | Retort House Conveyors, | (1010c) | | | | | | | | | | |
| 2181 | Bench Renewals, | (1011b) | | | | | | | | | | |
| 2182 | Miscellaneous Bench Repairs, | (1011a) | | | | | | | | | | |
| 2183 | Water Gas Generating Apparatus, | (1107) | 273 | 50 | 274 | 78 | 548 | 28 | .0023 | 809 | 53 | .0031 |
| 2184 | Boiler Repairs | (1800d) | - | | | | | | | | | |
| 2185 | General Works Repairs, Building | (1017, 1113, 1206) | 393 | 80 | 425 | 42 | 819 | 22 | .0034 | 762 | 05 | .0012 |
| 2186 | " " " Apparatus | (1018, 1114, 1207) | 76 | 83 | 4923 | 63 | 5000 | 46 | .0204 | 1719 | 90 | .0075 |
| 2187 | | | | | | | | | | | | |
| 2188 | | | | | | | | | | | | |
| 2189 | Total Mfg. Dept. | | 744 | 13 | 5623 | 83 | 6367 | 96 | Per M. Sold | 2791 | 48 | Per M. Sold |
| 2190 | Mains | (1300) | 871 | 36 | 38 | 39 | 909 | 75 | .0041 | 1743 | 77 | .0083 |
| 2191 | Services | (1301) | 566 | 91 | 1 | 17 | 565 | 74 | .0025 | 446 | 98 | .0021 |
| 2192 | Meters | (1303) | 3025 | 60 | 1225 | 06 | 4250 | 66 | .0187 | 3608 | 79 | .0172 |
| 2193 | Lamps | (1818) | | | | | | | | | | |
| 2194 | Total Dist'n and Lamp Dept. | | 4463 | 87 | 1262 | 28 | 5726 | 15 | .0253 | 5799 | 54 | .0276 |
| 2195 | Total All Dep'ts. | | 5208 | 00 | 6886 | 11 | 12094 | 11 | - | 8591 | 02 | .0408 |

## GAS USED BY COMPANY

| | WHERE USED | Cu. Ft. | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2200 | Gas Works | 8 500 | 1815 | | 1 99 | |
| 2201 | Elect. Works | 8 500 | 3008 | | 1 99 | |
| 2202 | Gas Shop | 138 000 | 1304b | | 31 95 | |
| 2203 | Office | 382 600 | 1840 | | 89 21 | |
| 2204 | Elect. meter Shop | 3 900 | 3264b 3293 | | 90 | |
| 2205 | District Holder | 15 100 | 1817 | | 3 05 | |
| 2206 | | | | | | |
| 2207 | | | | | | |
| 2208 | | | | | | |
| 2209 | | | | | | |
| 2210 | | | | | | |
| 2211 | | | | | | |
| 2212 | | | | | | |
| 2213 | | | | | | |
| 2214 | Totals | 556 600 | | | 129 09 | |

## COKE USED BY COMPANY

| | WHERE USED | Weight | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2215 | Bench Fuel | | 1002 | | | |
| 2216 | Boiler Fuel | | 1809 | | | |
| 2217 | Pintsch Bench Fuel | | 2401 | | | |
| 2218 | Generator Fuel | 3730.30 | 1101 | 6.96 | 25954 27 | |
| 2219 | Street Department | | 1300 | | | |
| 2220 | Meter Shop | | 1304b | | | |
| 2221 | | | | | | |
| 2222 | | | | | | |
| 2223 | | | | | | |
| 2224 | | | | | | |
| 2225 | | | | | | |
| 2226 | | | | | | |
| 2227 | Totals | 3730.30 | | 6.96 | 25954 27 | |

## COAL USED BY COMPANY

| | | Tons | Cost | WHERE USED | Acct. No. | Tons | Cost |
|---|---|---|---|---|---|---|---|
| 2228 | Used during month (2304) | 164.53 | 989 66 | Coal Carbonized | 1000 | | |
| 2229 | | | | Boiler Fuel | 1009 | | |
| 2230 | | | | Bench Fuel | 1002 | | |
| 2231 | | | | Street Department | 1300 | .50 | 8 50 |
| 2232 | | | | Tar ~~Sold~~ | | 58.00 | 705 91 |
| 2233 | | | | Sold | | 106.03 | 780 25 |
| 2234 | Total | 164.53 | 989 66 | | Total | 164.53 | 989 66 |

## TAR SOLD AND USED

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2235 | Sold and Used (2344) | 87 822 | 3603 23 | Sold | | 87 822 | 3603 23 |
| 2236 | | | | Used in Pitch Plant | | | |
| 2237 | | | | Used for Gas Making | | | |
| 2238 | | | | | | | |
| 2239 | Total | 87 822 | 3603 23 | | Total | 87 822 | 3603 23 |

## OIL USED BY COMPANY

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2240 | Used during Month (2376) | 926 351 | 22336 86 | Enricher | 1102 | 926 351 | 22336 86 |
| 2241 | | | | Pintsch | 2400 | | |
| 2242 | | | | | | | |
| 2243 | | | | | | | |
| 2244 | | | | | | | |
| 2245 | Total | 926 351 | 22336 86 | | Total | 926 351 | 22336 86 |

## COAL STOCK

| | | BITUMINOUS GAS COAL | | | CANNEL COAL | | | STEAM COAL | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tons | Cost | Per Ton | Tons | Cost | Per Ton | Tons | Cost | Per Ton |
| 2300 | First of Month | 463 94 | 2577 89 | 5558 | | | | | | |
| 2301 | Rec'd during Mo. | ~ | ~ | | | | | | | |
| 2302 | Coal Stock Exp. | | 43 23 | | | | | | | |
| 2303 | Total Cost | 463 94 | 2621 12 | 5650 | | | | | | |
| 2304 | Used during Mo. | 164 53 | 989 66 | 6015 | | | | | | |
| 2305 | Close of Mo. | 299 41 | 1631 46 | 5448 | | | | | | |

| | | | |
|---|---|---|---|
| 2307 | Coal Stock Expense | (1800a) | $ . |
| 2308 | do | (1800b) | . |
| 2309 | do | (1800c) | . |
| 2311 | | | . |
| | Total Expense | (to line 2302) | $ |

## COKE STOCK

## BREEZE STOCK

| | | Total Tons | Total Cost | Av. Per Ton | Total Tons | Total Cost | Av. Per Ton |
|---|---|---|---|---|---|---|---|
| 2320 | Stock first of month | 269 00 | 1665 29 | 6 19 | 102 72 | 152 63 | 1 49 |
| 2321 | Received or made during month | 3807 05 | 26 174 17 | 6 88 | 6 00 | 9 00 | 1 50 |
| 2322 | Coke Expense as below | | 375 43 | | | | |
| 2323 | Total Cost | 4076 05 | 28 214 89 | 6 92 | 108 72 | 161 63 | 1 49 |
| 2323a | Coke used under Benches | | | | | | |
| 2323b | Used elsewhere than under Benches | | | | | | |
| 2324 | Total Coke used during Month | 3730 30 | 25 954 27 | 6 96 | 26 00 | 62 75 | 2 42 |
| 2325 | Sold during month | 108 05 | 695 95 | 6 44 | ~ | ~ | |
| 2326 | Total Sold and Used | 3838 35 | 26 650 22 | 6 94 | 26 00 | 62 75 | 2 42 |
| 2327 | Stock close of month | 237 70 | 1 564 67 | 6 58 | 82 72 | 98 88 | 1 20 |

| | | | | | |
|---|---|---|---|---|---|
| 2328 | Coke Stock Expense | Coke (1801a) | $ . | Breeze (1801e) | $ . |
| 2329 | do | (1801b) | . | (1801f) | . |
| 2330 | do | (1801c) | . | (1801g) | . |
| 2331 | do | (1801d) | . | (1801h) | . |
| 2332 | do | | . | | . |
| 2333 | Total Expense | (to line 2322) | | | |

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## TAR STOCK

| | | Coal Gas Tar | | | | Water Gas Tar | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | | Gallons | Cost | Per Gal. | |
| 2340 | Stock first of month | 12475 | 249 50 | | 02 | 114482 | 2288 65 | | 02 |
| 2341 | Made and bought during month | - | - | | | 14650 | 4028 44 | | |
| 2342 | Tar Expense as below | | | | | | 1028 81 | | |
| 2343 | Total Cost | 12475 | 249 50 | | 02 | 260982 | 7345 90 | | 02 |
| 2344 | Sold and used during month | 1783 | 35 66 | | | 86039 | 3570 38 | | 02 |
| 2345 | Stock close of month | 10692 | 213 84 | | | 174943 | 3775 52 | | 02 |
| 2347 | Tar Stock Expense (1802a) | | | $ | . | | | $ | . |
| 2348 | do (1802b) | | | | . | | | | . |
| 2349 | do (1802c) | | | | . | | | | . |
| 2350 | | | | | . | | | | . |
| 2351 | | | | | . | | | | . |
| 2352 | Total Expense (to line 2342) | | | $ | | | | $ | |

## AMMONIA STOCK

| | | Pounds | Cost | Per Lb. |
|---|---|---|---|---|
| 2360 | Stock first of month | | | |
| 2361 | Made during month | | | |
| 2362 | Ammonia Expense as below | | | |
| 2363 | Total Cost | | | |
| 2364 | Sold during month | | | |
| 2365 | Stock close of month | | | |
| 2367 | Ammonia Expense (1803a) | | $ . | $ . |
| 2368 | do (1803b) | | . | . |
| 2369 | do (1803c) | | . | . |
| 2370 | Total Expense (to line 2362) | | $ | |

## OIL STOCK

| | | GAS OIL | | | | PINTSCH OIL | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | | Per Gal. | Gallons | Cost | | Per Gal. |
| 2372 | Stock first of month | 74455 | 815 | 72 | 1.10 | | | | |
| 2373 | Received during month | 956788 | 23 | 117 | 92 | 1.10 | | | |
| 2374 | Oil Expense | | | | | | | | |
| 2375 | Total Cost | 886248 | 23 | 933 | 64 | 1.10 | | | |
| 2376 | Used during month | 836497 | 22 | 870 | 51 | 1.10 | | | |
| 2377 | Stock close of month | 49751 | 1 | 062 | 13 | 1.10 | | | |

Page 19 item 1806a Depreciation 5% on valuation $955,648.30 carried in suspense pending determination of exact amount by court in Dallas Gen suit - $47 782 16

Page 19 item 1806b Assumption tax 1% on Gross receipts $294,292.95 @ $1.20 per M carried in suspense pending determination of exact amount if any by the court - $ 3528.79

## PINTSCH DEPARTMENT

| | MANUFACTURING | Plant | Output | Output per M | TOTAL This Year | TOTAL Last Year | Total per M. This Yr. | Total per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 2400 | Oil, Gals., @ | | | | | | | |
| 2401 | Bench Fuel, Tons, @ | | | | | | | |
| 2402 | " @ | | | | | | | |
| 2403 | Total Cost Material, | | | | | | | |
| 2404 | Tar | | | | | | | |
| 2405 | Hydrocarbon Oil, | | | | | | | |
| 2406 | Total Residuals, | | | | | | | |
| 2407 | Net Cost Materials, | | | | | | | |
| 2408 | Retort House Labor, | | | | | | | |
| 2409 | Bench Repairs, | | | | | | | |
| 2410 | Retort House Expense, | | | | | | | |
| 2411 | Steam, | | | | | | | |
| 2412 | Purification, | | | | | | | |
| 2413 | Works Repairs, | | | | | | | |
| 2414 | Sundry Labor, | | | | | | | |
| 2415 | Works Expense and Supplies, | | | | | | | |
| 2416 | Total Manufacturing, | | | | | | | |
| | DISTRIBUTION | | Receiver Expense | Receiver per M. | | | | |
| 2420 | Car Fillers, | | | | | | | |
| 2421 | Pipe Line Repairs, | | | | | | | |
| 2422 | Hose, | | | | | | | |
| 2423 | Sundries, | | | | | | | |
| 2424 | Total, | | | | | | | |
| 2425 | Gas Lost, | | | | | | | |
| 2426 | Total Distribution, | | | | | | | |
| 2427 | Total Manuf'g and Distribution Exp. | | | | | | | |

### GROSS EARNINGS

| | | | | | |
|---|---|---|---|---|---|
| 2430 | Gas, . . | Cu. ft. | | | |
| 2431 | . . | Cu. ft. | | | |
| 2432 | . . | Cu. ft. | | | |
| 2433 | Total Earnings, . . | Cu. ft. | | | |
| 2434 | Expenses as above, | | | | |
| 2435 | Taxes, | | | | |
| 2436 | Depreciation on plant % | | | | |
| 2440 | Total Expenses, | | | | |
| 2441 | Net Earnings Pintsch Dep't, | | | | |
| 2442 | % Credit Income, Acc't No. 202 | | | | |
| 2443 | % Credit Pintsch Comp. Co. | | | | |
| 2444 | Gas on hand 1st of Month, . . | Cu. ft. | Gas Sold . . | | Cu. ft. |
| 2445 | Gas made, . . | Cu. ft. | Gas on hand last of month . . | | Cu. ft. |
| 2446 | . . | Cu. ft. | Gas lost . . | | Cu. ft. |
| 2447 | Total Gas to Account for, . . | Cu. ft. | Total Gas Accounted for . . | | Cu. ft. |

| | | This Year | % | Last Year | % |
|---|---|---|---|---|---|
| 2450 | % Gas Lost to Gas Made, | " " | " | " " | " |
| 2451 | % Gas Lost to Gas Sold, | " " | | " " | |
| 2452 | Kind of Oil Used, | " " | C. F. | " " | C. F. |
| 2453 | Amount Gas Made per Gallon Oil, | " " | Gals. | " " | Gals. |
| 2454 | Amount Oil Used per 1000 C. F. Made, | " " | " | " " | " |
| 2455 | Amount Oil Used per 1000 C. F. Sold, | " " | | " " | |
| 2456 | Number Retorts in Use, | " " | | " " | |
| 2457 | | " " | | " " | |
| 2458 | Kind of Fuel Used, | " " | | " " | |
| 2459 | Amount Fuel Used, Lbs. | Furnaces | Boilers | Furnaces | Boilers |
| 2460 | Amount Fuel Used, Lbs. per M. ft. Made, | | | | |
| 2461 | Amount Fuel Used, Lbs. per M. ft. Sold, | | | | |
| 2462 | | | | | |
| 2463 | | | | | |
| 2464 | | | | | |
| 2465 | | | | | |

## APPROVALS AND RECORD

AUDITED AND VOUCHED FOR BY SECRETARY

APPROVED BY DEPARTMENT SUPERINTENDENT

APPROVED BY MANAGER (OR ACTING MGR.)

DATE REPORT WAS MAILED BY COMPANY

DATE RECEIVED AT N. Y. OFFICE

CHECKED BY

REVIEWED BY

DATE OF REVIEWING LETTER

DATE OF CO.'S LETTER OF REPLY

THIS REPORT HAS BEEN SEEN BY

| OFFICE DEPT. | CORPORATION DEPT. | EXECUTIVE DEPT. | GEN. MGR'S OFFICE | ENGINEERING DEPT. | AUDITING DEPT. | STATISTICAL DEPT. | NEW BUSINESS DEPT. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

Lincoln Gas & Electric Light Co.

**Manufacturing and Expense Reports**

OF

# GAS DEPARTMENT

FOR Year ENDING December 31, 1912

# General Rules for Reporting

1. The Company's name should be stamped on report covers, and on the first page, and the name of the City or Plant at the head of every other page in the report.

2. Date of reports should be stamped at the top of every page.

3. Decreases should be in red.

4. Never use copying ink.

5. Special or unusual entries, corrections of back errors, changes in cumulative figures, discrepancies between annual and monthly reports, should invariably be explained.

6. Carry per unit costs four decimal places.

7. Items which do not apply to your Company's business, and cannot be filled in, should be checked, excepting large sections such as lines 1200-22, which should be ruled out.

8. Zeros should be filled in; don't leave blank lines.

9. Where statistical information asked for is not given, state reasons for omitting.

10. Figure "per meter" data on meters at close of month, less company and sub-meters.

11. Figure "per consumer" data on consumers at close of month.

12. Show residuals, lines 1004 to 1007, **"per ton of coal carbonized."**

13. Line 1425 should show the sum total of lines 905 and 906 on previous month's report, plus line 907 on current month's report.

14. Each copy of the report sent to the New York Office should be signed by the Secretary, Department Superintendent and by the General Manager or Acting General Manager.

15. The Manager or Acting Manager should inclose with every report to the New York Office a letter in duplicate reviewing the report and calling attention to all items of interest or of marked change.

REPORT FOR Year Ending December 31 - 1912.

## GROSS EARNINGS

| | FROM SALE OF GAS | AMOUNTS This Year | AMOUNTS Last Year | Increase or Decrease | Receipts per M. Sold This Year | Receipts per M. Sold Last Year |
|---|---|---|---|---|---|---|
| 900 | Illuminating Purposes, | | | | | |
| 901 | Domestic Fuel " | 281 312 75 | 273 752 96 | 7 559 79 | 1.2003 | 1.2045 |
| 902 | Industrial Fuel " | | | | | |
| 903 | Power " | | | | | |
| 904 | Street Lamp " | | | | | |
| 905 | Total from Gas Sales, | 281 312 75 | 273 752 96 | 7 559 79 | 1.2003 | 1.2045 |
| 906 | Meter charge on Minimum Bills | 900 25 | 925 50 | 25 25 | .0038 | .0041 |
| 907 | Forfeited Discount, | 2 949 11 | 2 614 49 | 334 62 | .0126 | .0115 |
| 908 | Total Earnings from Gas, | 285 162 11 | 277 292 95 | 7 869 16 | 1.2167 | 1.2201 |
| 909 | Bad Debts, | 3 000 00 | 3 000 00 | ✓ | .0128 | .0132 |
| 910 | Gross Earnings Gas Dep't, | 282 162 11 | 274 292 95 | 7 869 16 | 1.2039 | 1.2069 |
| 911 | Operating Expenses (Total) (917) | 175 573 49 | 158 374 11 | 17 199 38 | .7491 | .6970 |
| 912 | Net Earnings Gas Dept. | 106 588 62 | 115 918 84 | 9 330 22 | .4548 | .5099 |

## SUMMARY OF OPERATING EXPENSES

| | | Plant | Output | Consumers | Meters | TOTAL COST This Year | TOTAL COST Last Year |
|---|---|---|---|---|---|---|---|
| 913 | Manufacturing (1200) | 16 562 59 | 61 951 73 | ✓ | ✓ | 78 514 32 | 70 386 32 (378) |
| 914 | Distribution (1300) | 8 383 75 | ✓ | 7 215 45 | 7 860 13 | 23 459 33 | 18 984 28 |
| 915 | Collection (1400) | ✓ | ✓ | 9 179 33 | 3 700 64 | 12 879 97 | 12 325 30 |
| 916 | General (1500) | 60 719 87 | ✓ | ✓ | ✓ | 60 719 87 | 56 300 20 |
| 917 | Totals | 85 666 21 | 61 951 73 | 16 394 78 | 11 560 77 | 175 573 49 | 158 374 11 |

## SUMMARY OF OPERATING EXPENSES. PER UNIT

| | | Per M. Sold: Plant | Output | Consumers | Meters | Total This Year | Total Last Year | Per Consumer: Consumers' Charges | Meter Charges | Total C. & M. | Per Meter: Consumer Charges | Meter Charges | Total C. & M. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 913a | Manufacturing (1200) | .0707 | .2643 | ✓ | ✓ | .3350 | .2817 (.2097) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 914a | Distribution (1300) | .0358 | ✓ | .0308 | .0335 | .1001 | .0835 | .960 | 1.046 | 2.006 | .8732 | .9512 | 1.8244 |
| 915a | Collection (1400) | ✓ | ✓ | .0392 | .0158 | .0550 | .0542 | 1.221 | .493 | 1.714 | 1.110 | .4478 | 1.5588 |
| 916a | General (1500) | .2591 | ✓ | ✓ | ✓ | .2591 | .2477 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 917a | Totals, | .3656 | .2643 | .0700 | .0493 | .7492 | .6968 | 2.181 | 1.539 | 3.720 | 1.9842 | 1.3990 | 3.3832 |

## SUMMARY OF GAS SALES. (POPULATION THIS YEAR 52 200, LAST YEAR 51 000)

| | | Total Sales (Cu. Ft.) This Year | Total Sales (Cu. Ft.) Last Year | No. of Meters. This Year | No. of Meters. Last Year | Average Sale per Meter This Year | Average Sale per Meter Last Year | Avg. Sale per Capita This Year | Avg. Sale per Capita Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 918 | Illuminating Gas, | | | | | | | | |
| 919 | Dom. Fuel Gas, | | | | | | | | |
| 920 | Ind. Fuel Gas, | | | | | | | | |
| 921 | Power Gas, | | | | | | | | |
| 922 | Total Fuel Gas, | 234 386 000 | 227 268 100 | | | | | | |
| 923 | Total Private Sales, | 234 386 000 | 227 268 100 | 8 263 | 8 098 | 28 370 | 28 140 | 4 490 | 5 162 |
| 924 | Street Lamps, | | | No. Lamps | | Av'g per Lamp | | | |
| 925 | Total Sales, | 234 386 000 | 227 268 100 | 8 263 | 8 098 | 28 370 | 28 140 | 4 490 | 5 162 |

## CONSUMERS

| | | No. Using Ill'tg Gas Only | No. Using Fuel Gas Only | No. Using Both | Total No. Consumers | Total Using Ill'tg Gas | Total Using Fuel Gas |
|---|---|---|---|---|---|---|---|
| 926 | First of Month, Year | | | | 7 563 | | |
| 927 | New during Month, Year | | | | 4 268 | | |
| 928 | Total, | | | | 11 831 | | |
| 929 | Off during Month, Year | | | | 4 015 | | |
| 930 | Close of Month, Year | | | | 7 816 | | |
| 931 | First of Year, | | | | 17 563 | | |
| 932 | Gain or Loss, | | | | 253 | | |

## CONSUMER DATA

| | | This Year | Last Year | | This Year | Last Year |
|---|---|---|---|---|---|---|
| 941 | Ill'tg Sales per Ill'tg Consumer, | | | Inhabitants per Ill'tg Consumer | | |
| 942 | Dom. F. " " Dom. F. " | | | " " Dom. Fuel " | | |
| 943 | Indust'l " " Ind. " | | | " " Ind. Fuel " | | |
| 944 | Power " " Power " | | | " " Power " | | |
| 945 | Average Sales per Consumer, | 30 780 | 28 780 | " " Consumer | 6.76 | 5.571 |

REPORT FOR

## MANUFACTURING DEPARTMENT. COAL GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1000 | Coal Carbonized @ | | | | | | | |
| 1001 | Enricher @ | | | | | | | |
| 1002 | Bench Fuel @ | | | | | | | |
| 1003 | Total Cost C. G. Mfg. Mat'l | | | | | | | |
| 1004 | Coke Residual @ | | | | | | | |
| 1005 | Tar " @ | | | | | | | |
| 1006 | Ammonia " @ | | | | | | | |
| 1007 | Carbon " @ | | | | | | | |
| 1008 | Total Residuals | | | | | | | |
| 1009 | Net Cost C. G. Mfg. Material | | | | | | | |
| 1010 | Retort House Labor | | | | | | | |
| 1011 | Bench Repairs | | | | | | | |
| 1012 | Retort House Expense | | | | | | | |
| 1013 | Total Cost Generating Coal Gas | | | | | | | |
| 1014 | Steam | | | | | | | |
| 1015 | Purifying C. G. Labor, Exp. & Repairs | | | | | | | |
| 1016 | " Material | | | | | | | |
| 1017 | General Works, Bldgs., Repairs (C. G.) | | | | | | | |
| 1018 | " Apparatus " (C. G.) | | | | | | | |
| 1019 | Sundry Labor (C. G.) | | | | | | | |
| 1020 | Works Expense and Supplies (C. G.) | | | | | | | |
| 1021 | General Supervision (C. G.) | | | | | | | |
| 1022 | District Holder Station (C. G.) | | | | | | | |
| 1023 | Total Purification and Storage | | | | | | | |
| 1024 | Total Cost Coal Gas in Holder | | | | | | | |

| | COAL GAS STATISTICS | This Year. | Last Year |
|---|---|---|---|
| 1029 | Coal Gas Made | Cu. ft. | Cu. ft. |
| 1030 | Kind of Coal used | | |
| 1031 | Coal Carbonized | Tons | Tons |
| 1032 | Yield per lb. Coal | Cu. ft. | Cu. ft. |
| 1033 | Cost of Coal per ton delivered (with freight @ $ per ton shipped) | $ | $ |
| 1034 | Average number retorts in use | | |
| 1035 | Average charge per retort | Lbs. | Lbs. |
| 1036 | Average make per retort Per 24 hrs. | Cu. ft. | Cu. ft. |
| 1037 | Average make per man charged acc't No. 1010 Per M Hrs. | Cu. ft. | Cu. ft. |
| 1038 | Coke made per ton Coal Carbonized | Lbs. | Lbs. |
| 1039 | Coke used for Bench Fuel per ton Coal Carbonized | Lbs. | Lbs. |
| 1040 | Coal used for Bench Fuel " " | Lbs. | Lbs. |
| 1041 | Receipts for Coke per ton sold | $ | $ |
| 1042 | " " " per ton Coal Carbonized | $ | $ |
| 1043 | Tar made per ton Coal Carbonized | Gals. | Gals. |
| 1044 | Receipts for Tar per " | ¢ | ¢ |
| 1045 | " " " per lb. sold | ¢ | ¢ |
| 1046 | Ammonia made per ton Coal Carbonized | Lbs. | Lbs. |
| 1047 | Receipts for Ammonia " | ¢ | ¢ |
| 1048 | " " " per lb. sold | ¢ | ¢ |
| 1049 | Carbon sold | Tons | Tons |
| 1050 | Price received for Carbon per ton | $ | $ |
| 1051 | Gas Purified per bu. per change | Cu. ft. | Cu. ft. |
| 1052 | Spent Oxide sold Tons @ $ per ton | | |
| 1053 | Illuminating Power Max. | C. P. | C. P. |
| 1054 | Illuminating Power Min. | C. P. | C. P. |
| 1055 | Illuminating Power Avg. | C P. | C. P. |
| 1056 | Heat Units (B. T. U.) Max. | B. T. U | B. T. U. |
| 1057 | Heat Units (B. T. U.) Min. | B. T. U. | B. T. U. |
| 1058 | Heat Units (B. T. U.) Avg. | B. T. U | B. T. U. |
| 1059 | | | |
| 1060 | | | |
| 1061 | | | |

REPORT FOR

## MANUFACTURING DEPARTMENT. WATER GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1100 | Steam for Generating Water Gas | - | 3 910 00 | .0151 | 3 910 00 | 4 297 75 | .0151 | .0176 |
| 1101 | Generator Fuel 2920.14 Tons @ | - | 28 407 02 | .1100 | 28 407 02 | 25 973 02 | .1100 | .1064 |
| 1102 | Enricher, 85 173 Gal. Gas 10 @ | - | 27 905 07 | .1081 | 27 905 07 | 22 336 86 | .1081 | .0914 |
| 1103 | Total W. G. Making Material, | - | 60 222 09 | .2332 | 60 222 09 | 52 607 63 | .2332 | .2154 |
| 1104 | Water Gas Tar Residual Acc't. | - | 3 319 72 | .0128 | 3 319 72 | 4 028 44 | .0128 | .0165 |
| 1105 | Net Cost W. G. Mfg. Material, | - | 56 902 37 | .2204 | 56 902 37 | 48 579 19 | .2204 | .1989 |
| 1106 | Gas Making Labor, | - | 3 823 62 | .0148 | 3 823 62 | 3 884 79 | .0148 | .0159 |
| 1107 | Repairs to W. G. Gen. Apparatus, | - | 1 438 53 | .0056 | 1 438 53 | 548 28 | .0056 | .0022 |
| 1108 | W. G. Generating House Expense, | - | 394 63 | .0015 | 394 63 | 167 38 | .0015 | .0007 |
| 1109 | Total Cost Generating W. G., | - | 62 559 15 | .2423 | 62 559 15 | 53 179 64 | .2423 | .2176 |
| 1110 | Steam, | - | 4 889 59 | .0189 | 4 889 59 | 3 357 05 | .0189 | .0137 |
| 1111 | Purifying W. G. Labor, Exp. and Rep., | - | 291 11 | .0011 | 291 11 | 130 76 | .0011 | .0005 |
| 1112 | Purifying W. G. Material, | - | 615 26 | .0024 | 615 26 | 600 00 | .0024 | .0025 |
| 1113 | General Works Repairs, Buildings, | 237 55 | " | - | 237 55 | 819 22 | .0009 | .0033 |
| 1114 | General Apparatus Repairs, | 429 03 | " | - | 429 03 | 5 000 46 | .0017 | .0210 |
| 1115 | Sundry Labor, | 3 332 54 | - | - | 3 332 54 | 2 523 98 | .0129 | .0100 |
| 1116 | Works Expense and Supplies, | 5 585 00 | - | - | 5 585 00 | 3 640 26 | .0216 | .0149 |
| 1117 | General Supervision, | 3 554 00 | - | - | 3 554 00 | 3 412 26 | .0138 | .0139 |
| 1118 | District Holder Station, | 3 424 47 | - | - | 3 424 47 | 1 581 37 | .0132 | .0064 |
| 1119 | Total Cost Purification and Storage, | 16 562 59 | 5795 96 | .0224 | 22 358 55 | 21 065 36 | .0865 | .0862 |
| 1120 | Total Cost Water Gas in Holder, | 16 562 59 | 68 355 11 | .2647 | 84 917 70 | 74 245 00 | .3288 | .3039 |

### WATER GAS STATISTICS

| | | This Year. | Last Year. |
|---|---|---|---|
| 1130 | Water Gas Made, | 258 . 705 . 648 Cu. ft. | 244 . 251 . 700 Cu. ft. |
| 1131 | Enricher Used, | . 851 . 273 Gals. | . 826 . 351 Gals. |
| 1132 | Enricher Used per M., | . 3 30 Gals. | . 3 38 Gals. |
| 1133 | Candles per Gal. Enricher, | | |
| 1134 | Boiler Fuel per M., | Lbs. | . Lbs. |
| 1135 | Generator Fuel per M., | 30 . 45 Lbs. | 29 . 37 Lbs. |
| 1136 | Number of Runs, | 31229 | |
| 1137 | Average Make per Run, | . 8 . 269 Cu. ft. | . 6 . 890 Cu. ft. |
| 1138 | Average Make per Gas Maker per 24 Hours, | 1 . 041 . 000 Cu. ft. | 1 . 006 . 360 Cu. ft. |
| 1139 | Gas Purified per Bu. Material per Charge, | . . Cu. ft. | . . Cu. ft. |
| 1140 | | | |
| 1141 | Tar Made per M. Cu. Ft. Gas, | . . 45 Gals. | . . 6 Gals. |
| 1142 | Tar Made per M. Gal. Oil Used. | . 135 . 8 Gals. | . 177 . 4 Gals. |
| 1143 | | | |
| 1144 | | | |
| 1145 | Illuminating Power Water Gas — Max. | C. P. | C. P. |
| 1146 | Illuminating Power Water Gas — Min. | C. P. | C. P. |
| 1147 | Illuminating Power Water Gas — Avg. | C. P. | C. P. |
| 1148 | Heat Units, (B. T. U.) — Max. | 665 B. T. U. | 657 B. T. U. |
| 1149 | Heat Units, (B. T. U.) — Min. | 600 B. T. U. | 622 B. T. U. |
| 1150 | Heat Units, (B. T. U.) — Avg. | 635 B. T. U. | 638 B. T. U. |
| 1151 | | | |
| 1152 | | | |
| 1153 | | | |

### MIXED GAS STATISTICS

| | | | This Year. | Last Year. |
|---|---|---|---|---|
| 1155 | Illuminating Power, | Max. | C. P. | C. P. |
| 1156 | Illuminating Power, | Min. | C. P. | C. P. |
| 1157 | Illuminating Power, | Avg. | C. P. | C. P. |
| 1158 | Heat Units, (B. T. U.) | Max. | B. T. U. | B. T. U. |
| 1159 | Heat Units, (B. T. U.) | Min. | B. T. U. | B. T. U. |
| 1160 | Heat Units, (B. T. U.) | Avg. | B. T. U. | B. T. U |
| 1161 | Sulphur Contents, | Max. | | |
| 1162 | Sulphur Contents, | Avg. | | |
| 1163 | Oxygen Contents, | Max. | | |
| 1164 | Oxygen Contents, | Avg | | |
| 1165 | | | | |

REPORT FOR.

## MANUFACTURING DEPARTMENT. PURCHASED GAS

| | | Plant Expense | Output Expense | Output per M. | TOTAL COST This Year | TOTAL COST Last Year | Total Cost per M. This Yr. | Total Cost per M. Last Yr. |
|---|---|---|---|---|---|---|---|---|
| 1200 | Crude Gas Purchased, | | | | | | | |
| 1201 | Power for Pumping, | | | | | | | |
| 1202 | Enricher, | | | | | | | |
| 1203 | | | | | | | | |
| 1204 | | | | | | | | |
| 1205 | Total Cost Materials, | | | | | | | |
| 1206 | Tar, | | | | | | | |
| 1207 | Ammonia, | | | | | | | |
| 1208 | Total Residuals, | | | | | | | |
| 1209 | Net Cost Materials, | | | | | | | |
| 1210 | Steam, | | | | | | | |
| 1211 | Purifying Pur. Gas, Labor, Exp. & Rep., | | | | | | | |
| 1212 | " " " Material, | | | | | | | |
| 1213 | General Works Rep. Bldgs., | | | | | | | |
| 1214 | General Apparatus Repairs, | | | | | | | |
| 1215 | Sundry Labor, | | | | | | | |
| 1216 | Works Expense and Supplies, | | | | | | | |
| 1217 | General Supervision, | | | | | | | |
| 1218 | District Holder Station, | | | | | | | |
| 1219 | | | | | | | | |
| 1220 | | | | | | | | |
| 1221 | Total Purification and Storage, | | | | | | | |
| 1222 | Total Cost Purchased Gas in Holder, | | | | | | | |
| 1223 | | | | | | | | |
| 1224 | | | | | | | | |
| 1225 | | | | | | | | |
| 1226 | | | | | | | | |
| 1227 | | | | | | | | |
| 1228 | | | | | | | | |
| 1229 | | | | | | | | |

## MANUFACTURING DEPARTMENT. MIXED GAS

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1250 | Total Cost Manuf'g Coal Gas, | | | | | | | | | | | | | | | | | | |
| 1251 | " " " Water Gas, | 16 | 562 | 59 | 68 | 355 | 11 | .2647 | 84 | 917 | 70 | 74 | 245 | 00 | .3288 | .3039 |
| 1252 | " " " Coal & Water Gas, | 16 | 562 | 59 | 68 | 355 | 11 | .2647 | 84 | 917 | 70 | 74 | 245 | 00 | .3288 | .3039 |
| 1253 | " " " Gas Purchased, | | ✓ | | | ✓ | | ✓ | | ✓ | | | ✓ | | ✓ | ✓ |
| 1254 | " " All Gas Manufacturing Dept. | 16 | 562 | 59 | 68 | 355 | 11 | .2647 | 84 | 917 | 70 | 74 | 245 | 00 | .3288 | .3039 |
| 1255 | Output Coal Gas Lost and Unacc'd for | | ✓ | | 6 | 225 | 16 | .0241 | 6 | 225 | 16 | 3 | 802 | 61 | .0241 | .0156 |
| 1256 | " " " Used by Co., | | ✓ | | | 140 | 68 | .0005 | | 140 | 68 | | 129 | 09 | .0005 | .0005 |
| 1257 | Total Deductions from Manuf'g Costs, | | ✓ | | 6 | 365 | 84 | .0246 | 6 | 365 | 84 | 3 | 931 | 70 | .0246 | .0161 |
| 1258 | Net Cost in Holder of Gas Charged Stock Acc't, | 16 | 562 | 59 | 61 | 989 | 27 | .2401 | 78 | 551 | 86 | 70 | 313 | 30 | .3042 | .2878 |
| 1259 | Difference Stock on Hand First and Last of Mo., | | ✓ | | | 37 | 54 | .0001 | | 37 | 54 | | 73 | 03 | .0001 | .0003 |
| 1260 | Net Cost in Holder of Gas Sold, | 16 | 562 | 59 | 61 | 951 | 73 | .2400 | 78 | 514 | 32 | 70 | 386 | 33 | .3041 | .2881 |

## GAS ACCOUNT. CUBIC FEET

| | | This Year | Last Year | Increase | Decrease | Per Cent. of Totals |
|---|---|---|---|---|---|---|
| 1280 | Gas on Hand First of ~~Month~~, | 676 40 | 830 000 | ✓ | 153 600 | ✓ |
| 1281 | Coal Gas Made during ~~Month~~, | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1282 | Water " " " " | 258 205 600 | 244 251 700 | 13 953 900 | ✓ | ✓ |
| 1283 | Gas Purchased " " | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1284 | Total Gas Made and Purch'd, | 258 205 600 | 244 251 700 | 13 953 900 | ✓ | 100% |
| 1285 | Total Gas to Account for, | 258 882 000 | 245 081 700 | 13 800 300 | ✓ | 100% |
| 1286 | Gas on Hand at Close of ~~Month~~, | 678 000 | 676 400 | 1 600 | ✓ | ✓ |
| 1287 | Gas Delivered to Mains, | 258 204 000 | 244 405 300 | 13 798 700 | ✓ | 100% |
| 1288 | Gas Sold, | 234 386 000 | 227 268 100 | 7 117 900 | ✓ | 90.8 |
| 1289 | Gas Used by Co., | 569 100 | 556 600 | 12 500 | ✓ | .2 |
| 1290 | Total Gas Sold and Used, | 234 955 100 | 227 824 700 | 7 130 400 | ✓ | 91.0 |
| 1291 | Gas unaccounted for, | 23 248 900 | 16 580 600 | 6 668 300 | ✓ | 9.0 |

## DISTRIBUTION DEPARTMENT EXPENSE

| | | Charge Plant Amount | Charge Plant Per M Sold | Charge Consumers Amount | Charge Consumers Per Cons. | Charge Meters Amount | Charge Meters Per Meter | Total Cost This Year | Total Cost Last Year | Total Cost per M. Sold This Yr. | Total Cost per M. Sold Last Yr. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1300 | Street Main Maint'n'c | 1 133 54 | .0048 | " | " | " | " | 1 133 54 | 409 75 | .0048 | .0040 |
| 1301 | Service " | " | " | 1414 37 | .1882 | " | " | 1414 37 | 566 74 | .0060 | .0025 |
| 1302 | Street Dep't Expense, | 1 025 05 | .0044 | 1 586 15 | .2110 | " | " | 2611 20 | 2 162 94 | .0111 | .0095 |
| 1310 | Pumping Gas, | " | " | " | " | " | " | " | " | " | " |
| 1303 | Meter Maintenance, | " | " | " | " | 4201 10 | .5092 | 4201 10 | 4 180 20 | .0180 | .0184 |
| 1304 | Meter Dep't Expense, | " | " | " | " | 1 751 35 | .2119 | 1 751 35 | 1 584 38 | .0075 | .0070 |
| 1305 | Setting & Rem. Meters | " | " | 950 80 | .1265 | 1 901 68 | .2301 | 2 852 48 | 2 873 49 | .0122 | .0126 |
| 1306 | Gratuitous Work, | " | " | 3 264 13 | .4345 | " | " | 3 264 13 | 2 904 17 | .0139 | .0128 |
| 1307 | Total above Items, | 2 158 59 | .0092 | 7 215 45 | .9600 | 7 860 13 | .9512 | 17 234 17 | 15 181 67 | .0735 | .0668 |
| 1308 | Gas Lost & Unacct. for | 6 225 16 | .0266 | " | " | " | " | 6 225 16 | 3 802 61 | .0266 | .0167 |
| 1309 | Total Distrib'n Ex. | 8 383 75 | .0358 | 7 215 45 | .9600 | 7860 13 | .9512 | 23 459 33 | 18 984 28 | .1001 | .0835 |

## DISTRIBUTION DEPARTMENT DATA

### METER ACCOUNT

| | | | Equitable No. | Equitable No. | Equitable No. | 3 | 5 | 10 | 20 | 30 | 45 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1320 | | Owned by Co. first of Year | | | | 2939 | 5270 | 89 | 85 | 11 | 14 | 4 | " | 6 | 2 | " | " | " | 8420 |
| 1321 | | Bought during Yr. | | | | " | 150 | " | 10 | " | " | " | " | " | " | " | " | " | 160 |
| 1322 | | Total, | | | | 2939 | 5420 | 89 | 95 | 11 | 14 | 4 | " | 6 | 2 | " | " | " | 8580 |
| 1323 | | Condemned & Dest'd, | | | | 3 | " | " | 1 | " | " | " | " | " | " | " | " | " | 4 |
| 1324 | | Owned this Date, | | | | 2936 | 5420 | 89 | 94 | 11 | 14 | 4 | " | 6 | 2 | " | " | " | 8576 |
| 1325 | IN USE THIS DATE | Illuminating, | | | | | | | | | | | | | | | | | |
| 1326 | | Domestic Fuel, | | | | 2887 | 5194 | 66 | 86 | 10 | 13 | 1 | " | 5 | 1 | " | " | " | 8263 |
| 1327 | | Industrial " | | | | | | | | | | | | | | | | | |
| 1328 | | Power, | | | | | | | | | | | | | | | | | |
| 1329 | | Sub-Meters, | | | | | | | | | | | | | | | | | |
| 1330 | | Company, | | | | " | " | 1 | 2 | " | 1 | " | " | " | " | " | " | " | 6 |
| 1331 | | Total, | | | | 2887 | 5196 | 67 | 88 | 10 | 14 | 1 | " | 5 | 1 | " | " | " | 8269 |
| 1332 | IN STOCK | Shop, | | | | 49 | 224 | 22 | 6 | 1 | " | 3 | " | 1 | 1 | " | " | " | 307 |
| 1333 | | Locked, | | | | " | " | " | " | " | " | " | " | " | " | " | " | " | |
| 1334 | | Total, | | | | 49 | 224 | 22 | 6 | 1 | " | 3 | " | 1 | 1 | " | " | " | 307 |
| 1335 | | Total Owned, | | | | 2936 | 5420 | 89 | 94 | 11 | 14 | 4 | " | 6 | 2 | " | " | " | 8576 |
| 1336 | | Increase or Decrease, | | | | 17 | 176 | 4 | 5 | " | " | " | " | " | " | " | " | " | 160 |
| 1337 | | Meters in use first of Year, | | | | 2904 | 5020 | 71 | 83 | 10 | 14 | 1 | " | 5 | 1 | " | " | " | 8109 |

### METERS

| | | Per Mile Main This Yr. | Per Mile Main Last Yr. | Per 1000 Popul'n This Yr. | Per 1000 Popul'n Last Yr. | No. Set This Yr. | No. Set Last Yr. | No. Removed This Yr. | No. Removed Last Yr. |
|---|---|---|---|---|---|---|---|---|---|
| 1340 | Illuminating, | | | | | | | | |
| 1341 | Domestic Fuel, | | | | | | | | |
| 1342 | Industrial " | | | | | | | | |
| 1343 | Power Gas, | | | | | | | | |
| 1344 | Total Meters, | | 884 | | 158.8 | | 4186 | | 3928 |
| 1345 | No. Consumers, | | | | | | | | |
| 1346 | No. Service Pipes, | | | | | | | | |

| | | No. | % of Total No. | Cost Each |
|---|---|---|---|---|
| | Meters Tested "Regular Test" | 2637 | 44.02 | .0839 |
| | " " "Routine Test" | 533 | 6.47 | .0839 |
| | " Repaired, | 2530 | 34.25 | 1.312 |
| | " Set, | 6921 | 83.76 | .2964 |
| | " Removed, | 6656 | 80.55 | .1219 |
| | " Transferred, | " | " | " |
| | No. Leaks of Meters, | 748 | 9.05 | 1.312 |

| | | | | | |
|---|---|---|---|---|---|
| 1350 | Cost meter Maintenance per Meter passing through Shop, | .1973 | | | |
| 1351 | " " " " in Use, | 5092 | | | |
| 1352 | No. Leaks at Connections, | | | | |
| 1353 | | | | | |
| 1354 | | | | | |
| 1356 | Service Maintenance per Complete Service in Use, | | | | |
| 1357 | " Repairs per Service handled | | | | |
| 1358 | No. Services Repaired, | 17 ; | Cost each, | 2:54 | |
| 1359 | No. Services Renewed, | 25 ; | " " | 12:06 | |
| 1360 | No. Services Changed, | 24 ; | " " | 3:46 | |
| 1361 | No. Services Cleaned, | 2 ; | " " | 3:78 | |
| 1362 | No. Leaks at Services, | 4 ; | " " | 5:38 | |
| 1363 | No. Leaks in Broken Mains, | 16 ; | " " | 17:05 | |
| 1364 | No. Leaks Account Defective Main Joints, | 25 ; | " " | 6:94 | |
| 1365 | | | | | |
| 1366 | | | | | |
| 1367 | Leakage per Mile Actual Main This Year | 239900 Cu. ft.; | Last Year, | 183331 Cu. ft. | |
| 1368 | " " 3-inch " " " | 168700 " ; | " " | 125363 " | |

REPORT FOR

## COLLECTION DEPARTMENT

| | | Charge Consumers Amount | Charge Consumers Per Cons. | Charge Meters Amount | Charge Meters Per Meter | Total Cost This Year | Total Cost Last Year | Total per M. Sold This Year | Total per M. Sold Last Year |
|---|---|---|---|---|---|---|---|---|---|
| 1400 | Reading Meters, | 926 84 | .1233 | 463 40 | .0561 | 1 390 24 | 1 388 76 | .0059 | .0061 |
| 1401 | Collection Clerical Salaries, | 4 650 13 | .6187 | 2 325 03 | .2814 | 6 975 16 | 6 519 95 | .0298 | .0287 |
| 1402 | Collection Office Expense, | 1 226 58 | .1632 | 613 29 | .0742 | 1 839 87 | 1 757 15 | .0079 | .0077 |
| 1403 | Rent of Collection Office, | 598 25 | .0796 | 298 92 | .0362 | 897 17 | 729 27 | .0038 | .0032 |
| 1404 | Delivering Bills, | 307 17 | .0409 | ✓ | ✓ | 307 17 | 283 68 | .0013 | .0012 |
| 1405 | Outside Collections, | 1 470 36 | .1956 | ✓ | ✓ | 1 470 36 | 1 646 49 | .0063 | .0072 |
| 1406 | Total Collect'n Expenses, | 9 179 33 | 1.2214 | 3 700 64 | .4479 | 12 879 97 | 12 325 30 | .0550 | .0541 |

## COLLECTION DEPARTMENT DATA

### READING METERS

| | | First Reading Total Hours | First Reading Av. Time Each | First Reading No. Mar. pr. Hr. | First Reading Cost Each | Stragglers and Retakes No. | Stragglers and Retakes Hours | Stragglers and Retakes Cost Ea. | Total No. | Total Exp. (1400) per Meter This Year | Total Exp. (1400) per Meter Last Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1410 | Meters, | 4037 | .0493 | 20.26 | .0122 | 11376 | 891 | .0402 | 93140 | .1682 | .1715 |
| 1411 | Meter Readers, | 3 | | | | | | | | | |

### CLERICAL SALARIES

| | | No. Clerks | Avg. Pay Each | Amount | Cost per Meter This Year | Cost per Meter Last Year | Cost per Consumer This Year | Cost per Consumer Last Year |
|---|---|---|---|---|---|---|---|---|
| 1415 | Total Acc't No. 1401, | 10 | 697 51 | 6 975 16 | .844 | .805 | .928 | .826 |

### DELIVERING BILLS

| | | No. Bills | Labor | Expense | Total Cost | Tot. per Bill |
|---|---|---|---|---|---|---|
| 1420 | By Mail, | 2 850 | ✓ | 54 50 | 54 50 | .0200 |
| 1421 | By Co.'s Employees, | 85 176 | 307 17 | ✓ | 307 17 | .0036 |
| 1422 | Called for at Office, | 3 600 | ✓ | ✓ | ✓ | ✓ |
| 1423 | Totals, | 91 626 | 307 17 | 54 50 | 361 67 | .0039 |

### COLLECTIONS

| | | Gas Bills No. | Gas Bills Amount | Per Cent. of Total No. | Per Cent. of Total Amt. | Cost of Collection Amount | Cost of Collection Per Bill | Cost of Collection Per Cent. |
|---|---|---|---|---|---|---|---|---|
| 1425 | Total Private Gas Bills, (Like MS previous month.) | | | | | | | |
| | COLLECTIONS | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1426 | At Office by Mail, | 7 623 | 32 531 17 | 9.6 | 11.5 | 141 15 | .1851 | 9.6 |
| 1427 | At Office by Tellers, | 65 998 | 224 566 28 | 83.0 | 79.4 | 1 270 40 | .1849 | 83.0 |
| 1428 | Bills Deposited in Banks, | 2 243 | 9 546 72 | 2.8 | 3.4 | 41 17 | .1836 | 2.8 |
| 1429 | Total at Office, | 75 863 | 266 644 17 | 95.4 | 94.3 | 1 402 72 | .1849 | 95.4 |
| 1430 | By Co.'s Salaried Collectors, | 3 662 | 16 082 74 | 4.6 | 5.7 | 67 64 | .1847 | 4.6 |
| 1431 | By Co.'s Pay Stations, | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1432 | By Express Co.'s, | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1433 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1434 | Total Outside Collections, | 3 662 | 16 082 74 | 4.6 | 5.7 | 67 64 | .1847 | 4.6 |
| 1435 | Total Collections, | 79 525 | 282 726 91 | 100.0 | 100.0 | 1 470 36 | .1849 | 100.0 |
| 1436 | Balance Outstanding Close of Month, | | | | | | | |

### ARREARS FOR CURRENT MONTH

| | Arrears | Amount Charged to Arrears Each Date | Collected During Mo. on Each Month's Arrears | Previous Collections Reported | Total Collections on Each | Balance Outstand'g on Each at Close of Month | Amount of Each Considered Collectible |
|---|---|---|---|---|---|---|---|
| 1441 | Jan. 31, 19 ✓, Balance Arrears Dec. | 7 780 87 | | | 6 687 83 | 1 093 04 | |
| 1442 | Feb. 28, 19 ✓, Arrears for Jan'y, | 1 920 75 | | | 1 433 70 | 487 05 | |
| 1443 | March 31, 19 ✓, Arrears for Feb'y, | 1 848 69 | | | 1 424 25 | 424 44 | |
| 1444 | April 30, 19 ✓, Arrears for March, | 1 509 79 | | | 1 198 93 | 310 86 | |
| 1445 | May 31, 19 ✓, Arrears for April, | 1 328 76 | | | 1 097 02 | 231 74 | |
| 1446 | June 30, 19 ✓, Arrears for May, | 1 313 61 | | | 1 246 11 | 17 50 | |
| 1447 | July 31, 19 ✓, Arrears for June, | 1 527 29 | | | 1 271 02 | 256 27 | |
| 1448 | Aug. 31, 19 ✓, Arrears for July, | 1 525 43 | | | 933 76 | 591 67 | |
| 1449 | Sept. 30, 19 ✓, Arrears for Aug., | 1 459 72 | | | 990 75 | 468 97 | |
| 1450 | Oct. 31, 19 ✓, Arrears for Sept., | 1 750 42 | | | 1 178 19 | 572 23 | |
| 1451 | Nov. 30, 19 ✓, Arrears for Oct., | 1 689 24 | | | 828 87 | 860 37 | |
| 1452 | Dec. 31, 19 ✓, Arrears for Nov., | 2 103 68 | | | 523 61 | 1 597 97 | |
| 1453 | Totals, | 25 751 65 | | | 18 864 04 | 6 893 61 | |
| | | | | | Bad debts written off | 3 970 93 | |
| 1460 | | | | | | 2 922 68 | |
| 1461 | | | | | This Year | | Last Year |
| 1462 | Gross Earnings Gas Dept., 12 months ending last month (13A) | | | | 278 953.78 | | 272 234.03 |
| 1463 | Total Arrears up to end of this month (1453) | | | | 3822.68 | | 5814.71 |
| 1464 | Per cent. of Arrears (1463) to Gross Earnings (1462) | | | | 1.37% | | 2.1% |

REPORT FOR

## EXECUTIVE DEPARTMENT, GENERAL EXPENSES

| | | PLANT | Totals This Year | Totals Last Year | Per M. Sold This Yr. | Per M. Sold Last Yr. |
|---|---|---|---|---|---|---|
| 1500 | Executive Salaries, | 8,917.30 | 8,917.30 | 9,454.17 | .0386 | .0416 |
| 1501 | General Clerical Salaries | 1,209.05 | 1,209.05 | 1,066.85 | .0053 | .0047 |
| 1502 | General Office Expense, | 1,173.41 | 1,173.41 | 1,202.12 | .0050 | .0053 |
| 1503 | Incidental Expense, | 4,775.01 | 4,775.01 | 5,162.84 | .0204 | .0227 |
| 1504 | Rent of Executive Offices, | 1,737.73 | 1,737.73 | 1,569.22 | .0074 | .0069 |
| 1505 | Legal Expenses, | 7,954.73 | 7,954.73 | 8,279.48 | .0339 | .0364 |
| 1506 | Total Above Items, | 25,767.23 | 25,767.23 | 26,734.68 | .1099 | .1176 |
| 1507 | Promoting New Business, | 19,692.64 | 19,692.64 | 18,985.52 | .0840 | .0835 |
| 1508 | Taxes, | 15,260.00 | 15,260.00 | 10,580.00 | .0651 | .0466 |
| 1509 | Total General Expenses, | 60,719.87 | 60,719.87 | 56,300.20 | .2590 | .2477 |

## ANALYSIS OF SPECIAL EXPENSE ACCOUNTS NOS. 1819, 1820, 1821, 1822. NEW BUSINESS

| | | Domestic Fuel Total | Domestic Fuel Per Consumer | Illuminating Total | Illuminating Per Consumer | Industrial Fuel Total | Industrial Fuel Per Consumer | Power Total | Power Per Consumer | Totals Amounts | Totals Per Consumer |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1520 | a. Advertising, Newspaper, etc. | 2416.86 | | 425.69 | | | | | | 2842.55 | 53.62 |
| 1521 | b. Circulars and Distr'n, | " | | " | | | | | | " | " |
| 1522 | c. Bonuses and Commissions, | " | | " | | | | | | " | " |
| 1523 | d. Exhibition Expenses, | 1327.57 | | | • | | | | | 1327.57 | 25.04 |
| 1524 | e. Salaries, Wages and Miscins. Expenses | 4776.90 | | 644.83 | | | | | | 5421.73 | 102.30 |
| 1525 | Totals | 8521.33 | | 1070.52 | | | | | | 9591.85 | 180.96 |
| 1526 | Cost of Appliances sold, | 14026.45 | | 3156.57 | | | | | | 17183.02 | 334.3 |
| 1527 | Appliance Expense, | 6132.71 | | 1541.05 | | | | | | 7673.76 | 144.6 |
| 1528 | Total cost Appliances, | 20149.16 | | 4697.62 | | | | | | 24846.78 | 468.7 |
| 1529 | Received for Appliances, | 15095.98 | | 2448.87 | | | | | | 17544.85 | 331.0 |
| 1530 | f. Loss on Appliances, | 5053.18 | | 2248.75 | | | | | | 7301.93 | 137.9 |
| 1531 | f. Profit on Appliances, | | | | | | | | | " | |
| 1532 | Piping — Material | 2074.78 | | 436.84 | | | | | | 2511.62 | 47.39 |
| 1533 | and — Labor | 2012.67 | | 17.88 | | | | | | 2030.55 | 38.31 |
| 1534 | Con- — Miscins. Exp. | 1382.19 | | 621.67 | | | | | | 2003.86 | 37.80 |
| 1535 | nec- — Totals | 5469.64 | | 1076.39 | | | | | | 6546.03 | 123.50 |
| 1536 | tions — Charged Consumers | 3131.07 | | 612.10 | | | | | | 3743.17 | 70.62 |
| 1537 | g. — Net Cost | 2338.57 | | 464.29 | | | | | | 2802.86 | 52.88 |
| | Total cost items a to g | 15913.08 | | 3789.56 | | | | | | 19696.64 | 371.74 |

## APPLIANCES INTRODUCED AND CONNECTED

| | DOMESTIC FUEL Class | No. | No. Conn. | Per Unit Items | ILLUMINATING Class | No. | No. Conn. | Per Unit Items |
|---|---|---|---|---|---|---|---|---|
| 1550 | Ranges (new) | | 340 | Feet Pipe per App'l | Houses piped by Co | | | Ave. rooms per house |
| 1551 | " (old) | | 1705 | Cost Pipe & Fit'gs per Ap. | Houses piped by contract | | | Cost Pipe & Fit'gs per House |
| 1552 | Hot Plates, | | 532 | Cost Labor connecting Ap. | | | | Cost Labor per House |
| 1553 | Water Heaters, | | 35 | Total Cost connecting Ap. | Gas Arcs | | 167 | Cost Pipe and Labor per House |
| 1554 | Heaters and Grates, | | 26 | Total Cost connecting per foot pipe | Miscl. | | 10 | Cost Pipe and Labor per foot Pipe |
| 1555 | Miscl. | | 108 | | | | | |
| 1556 | | | | Ft pipes for fuel 22940 | | | | |
| 1557 | | | | | | | | |

| | INDUSTRIAL FUEL | | | | POWER | | | |
|---|---|---|---|---|---|---|---|---|
| 1560 | | | | Feet Pipe per App'l | Below 5 H. P. | | | Feet Pipe per Engine |
| 1561 | | | | Cost Pipe & Fit'gs per Ap. | 5 to 9 H. P. | | | Cost Pipe & Fit'gs per Engine |
| 1562 | | | | Total Cost connecting Ap. | 10 to 14 H. P. | | | Cost Labor on connecting per Engine |
| 1563 | | | | Cost Labor connecting Ap. | 15 to 24 H. P. | | | Total Connection per Engine |
| 1564 | | | | Total Cost connecting per foot pipe | 25 to 39 H. P. | | | Total Connection per foot pipe. |
| 1565 | | | | | 50 H. P. & Upwards | | | |
| 1566 | | | | | | | | |
| 1567 | | | | | | | | |
| 1570 | | | | | | | | |
| 1571 | | | | | | | | |
| 1572 | | | | | | | | |
| 1573 | | | | | | | | |
| 1574 | | | | | | | | |

REPORT FOR

## DETAILS OF GAS SALES

| | | Rate | THIS YEAR Cu. Ft. | THIS YEAR Amount | LAST YEAR Cu. Ft. | LAST YEAR Amount | Inc. or Dec. Cu. Ft. | % Inc. or Dec. |
|---|---|---|---|---|---|---|---|---|
| 1600 | | | | | | | | |
| 1601 | | | | | | | | |
| 1602 | Illuminating Gas | | | | | | | |
| 1603 | | | | | | | | |
| 1604 | | | | | | | | |
| 1605 | Gross Sales, | | 234 720 200 | 282 246 31 | 227 682 600 | 274 930 89 | 7 037 600 | 3.09 |
| 1606 | Less Rebates and Allowances | | 334 200 | 933 56 | 414 500 | 1 177 93 | 60 300 | 19.37 |
| 1607 | Net Sales | | 234 386 000 | 281 312 75 | 227 268 100 | 273 752 96 | 7 117 900 | 2.13 |
| 1608 | | | | | | | | |
| 1609 | Domestic | | | | | | | |
| 1610 | Fuel | | | | | | | |
| 1611 | Gas | | | | | | | |
| 1612 | | | | | | | | |
| 1613 | Gross Sales, | | | | | | | |
| 1614 | Less Rebates and Allowances | | | | | | | |
| 1615 | Net Sales | | | | | | | |
| 1616 | | | | | | | | |
| 1617 | Industrial | | | | | | | |
| 1618 | Fuel | | | | | | | |
| 1619 | Gas | | | | | | | |
| 1620 | | | | | | | | |
| 1621 | Gross Sales | | | | | | | |
| 1622 | Less Rebates and Allowances | | | | | | | |
| 1623 | Net Sales | | | | | | | |
| 1624 | | | | | | | | |
| 1625 | Gas | | | | | | | |
| 1626 | for | | | | | | | |
| 1627 | Power | | | | | | | |
| 1628 | | | | | | | | |
| 1629 | Gross Sales | | | | | | | |
| 1630 | Less Rebates and Allowances | | | | | | | |
| 1631 | Net Sales | | | | | | | |
| 1632 | Total Sales | | 234 386 000 | 281 312 75 | 227 268 100 | 273 752 96 | 7 117 900 | 2.13 |

## STREET LAMPS

| | No. of Lamps | GROSS EARNINGS | | | Amount | Amount per Lamp | Hours Burning | Gas per Hr. | Total Gas Consumed |
|---|---|---|---|---|---|---|---|---|---|
| 1633 | | Open Flame Burners | @ | per year | | | | | |
| 1634 | | do | @ | " | | | | | |
| 1635 | | do | @ | " | | | | | |
| 1636 | | Incandescent Burners | @ | " | | | | | |
| 1637 | | do | @ | " | | | | | |
| 1638 | | do | @ | " | | | | | |
| 1639 | | | | | | | | | |
| 1640 | | Totals | | | | | | | |

### EXPENSES

| | | Amount | Remarks |
|---|---|---|---|
| 1641 | Lighting and Extinguishing | | |
| 1642 | Repairing | | |
| 1643 | Cleaning | | |
| 1644 | Thawing | | |
| 1645 | Rental | | |
| 1646 | Inspecting and Testing | | |
| 1647 | | | |
| 1648 | | | |
| 1649 | | | |
| 1650 | | | |
| 1651 | | | |
| 1652 | | | |
| 1653 | Total Expense | | |
| 1654 | Net Earnings | | per M. ft. Gas |

REPORT FOR

## LOW PRESSURE STREET MAINS (FEET)

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1700 | 2 | 332 753 | 24 314 | | 24 314 | 357 067 | | | | | 357 067 |
| 1701 | 3 | – | | | | | | | | | |
| 1702 | 4 | 116 093 | 1 284 | | 1 284 | 117 377 | | | | | 117 377 |
| 1703 | 6 | 16 474 | 048 | | 048 | 16 522 | | | | | 16 522 |
| 1704 | 8 | 4 822 | | | | 4 822 | | | | | 4 822 |
| 1705 | 10 | 9 100 | | | | 9 100 | | | | | 9 100 |
| 1706 | 12 | 3 950 | | | | 3 950 | | | | | 3 950 |
| 1707 | 16 | 1 300 | | | | 1 300 | | | | | 1 300 |
| 1708 | 20 | 1 400 | | | | 1 400 | | | | | 1 400 |
| 1709 | 24 | | | | | | | | | | |
| 1710 | 30 | | | | | | | | | | |
| 1711 | 36 | | | | | | | | | | |
| 1712 | FEET Totals | 485 892 | 25 646 | | 25 646 | 511 538 | | | | | 511 538 |
| 1713 | Miles | 92.0 | 4 9 | | | 96 9 | | | | | 96 9 |
| 1713a | Miles on 8-inch Basis | | | | | 137 8 | | | | | 137 8 |

## BOOSTER MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo | Taken up During Mo. | Total Previous Deductions | Total Deductions To Date | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1714 | | | | | | | | | | | |
| 1715 | | | | | | | | | | | |
| 1716 | | | | | | | | | | | |
| 1717 | | | | | | | | | | | |
| 1718 | | | | | | | | | | | |
| 1719 | Totals | | | | | | | | | | |

## PUMPING MAINS

| | Size Inches | In Use First of Year | Laid This Month | Prev. Report This Year | Total This Year | Total To Date | Abandoned During Mo. | Taken up During Mo. | Total Previous Deductions | Total Deductions | In Use Close This Mo. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1720 | | | | | | | | | | | |
| 1721 | | | | | | | | | | | |
| 1722 | | | | | | | | | | | |
| 1723 | | | | | | | | | | | |
| 1724 | | | | | | | | | | | |
| 1725 | Totals | | | | | | | | | | |

## COST OF STREET MAINS. (ALL KINDS)

| | | COST MAINS LAID THIS MONTH | | | | | | COST MAINS LAID THIS YEAR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount | | | Per Foot | | | Amount | | | Per Foot | | |
| | Size | Labor | Material | Total | Labor | Mat'l | Total | Labor | Material | Total | Labor | Mat'l | Total |
| 1726 | 2 | | | | | | | 2259 40 | 2479 65 | 4739 05 | 093 | 102 | 195 |
| 1727 | 3 | | | | | | | | | | | | |
| 1728 | 4 | | | | | | | 219 10 | 317 61 | 536 71 | 171 | 247 | 418 |
| 1729 | 6 | | | | | | | 6 00 | 16 56 | 22 56 | 125 | 345 | 470 |
| 1730 | 8 | | | | | | | | | | | | |
| 1731 | 10 | | | | | | | | | | | | |
| 1732 | 12 | | | | | | | | | | | | |
| 1733 | 16 | | | | | | | | | | | | |
| 1734 | 20 | | | | | | | | | | | | |
| 1735 | 24 | | | | | | | | | | | | |
| 1736 | 30 | | | | | | | | | | | | |
| 1737 | 36 | | | | | | | | | | | | |
| 1738 | Totals | | | | | | | 2485 00 | 2813 82 | 5298 82 | 097 | 110 | 207 |

| | | THIS MONTH | THIS YEAR |
|---|---|---|---|
| 1739 | Cost Low Pressure Mains laid | $ . . | $ 5.298.82 |
| 1740 | " Booster " | $ . . | $ . . |
| 1741 | " Pumping " " | $ . . | $ . . |
| 1742 | Total cost Mains laid | $ . | $ 5.298.82 |
| 1743 | Deduct value of Mains taken up | $ . . | $ . . |
| 1744 | Net cost of Mains | $ . . | $ 5.298.82 |

RECAPITULATION

| | |
|---|---|
| Miles Low Pressure Main | 96.9 |
| " Booster Main | |
| " Pumping Main | |
| Total Main Mileage | 96.9 |

REPORT FOR

## SERVICE PIPES LAID

| | | No. Laid This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Year | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1745 | Main to Meter (Old Main) | 291 | | 291 | 6038 | 6329 | 7 | 6322 |
| 1746 | " " (New Main) | 148 | | 148 | 1641 | 1789 | | 1789 |
| 1747 | Curb to Meter (Extension) | 48 | | 48 | 380 | 428 | | 428 |
| 1748 | Total complete services, | 487 | | 487 | 8059 | 8546 | 7 | 8539 |
| 1749 | Main to Curb (acc't paving) | 115 | | 115 | 379 | 494 | 47 | 447 |
| 1750 | Total No. services | 602 | | 602 | 8438 | 9040 | 54 | 8986 |

## COST OF SERVICES

| | | Gross Cost | Charged Consumers | Net Cost | GROSS COST Per Service | GROSS COST Per Foot | NET COST Per Service | NET COST Per Foot |
|---|---|---|---|---|---|---|---|---|
| 1751 | Labor, | 3430 40 | " | " | | | | |
| 1752 | Material, | 2071 34 | " | " | | | | |
| 1753 | Total this month, Yr. | 5501 74 | 5797 86 | 296 12 | 9 12 | 162 | 493 | .0088 |
| 1754 | Previously reported, | " | " | " | | | | |
| 1755 | Total this year, | 5501 74 | 5797 86 | 296 12 | 9 12 | 162 | 493 | .0088 |
| 1756 | Cost last year, | | | | | | | |

| | | THIS MONTH | | THIS YEAR | |
|---|---|---|---|---|---|
| 1757 | Pipe used for complete services, | | feet. | 28598 | feet. |
| 1758 | " " " service extensions, | | feet. | 2484 | feet. |
| 1759 | " " " total complete services, | | feet. | 31082 | feet. |
| 1760 | " " " services to curb, | | feet. | 2801 | feet. |
| 1761 | Total, | | feet. | 33883 | feet. |

## APPLIANCES

| | | DOMESTIC FUEL APPLIANCES Ranges | Hot Pl. | W. H. | Heaters and Grates | Miscls | Total | W.H. APPLIANCES No. | GAS ENGINES No. | H. P. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1762 | First of Month, | 9384 | 1928 | 1338 | 348 | 460 | 13458 | | | |
| 1763 | New during Month, | 344 | 241 | 310 | 63 | 124 | 1082 | | | |
| 1764 | Total, | 9728 | 2169 | 1648 | 411 | 584 | 14540 | | | |
| 1765 | Off during Month, | 324 | 8 | " | " | " | 332 | | | |
| 1766 | Close of Month, | 9404 | 2161 | 1648 | 411 | 584 | 14208 | | | |
| 1767 | First of Year, | 9384 | 1928 | 1338 | 348 | 460 | 13458 | | | |
| 1768 | Gain or Loss, | 20 | 233 | 310 | 63 | 124 | 750 | | | |

## STREET LAMPS

| | | No. Installed This Month | No. Previously Rep't'd this Yr. | Total This Year | No. in Use First of Yr. | Total No. | No. Disc. This Year | No. in Use This Date |
|---|---|---|---|---|---|---|---|---|
| 1769 | Lamp Services, | | | | | | | |
| 1770 | Boulevard Posts, | | | | | | | |
| 1771 | Common Posts, | | | | | | | |
| 1772 | | | | | | | | |
| 1773 | Total, | | | | | | | |

## PLANT DATA

| | | MAXIMUM CAPACITY 24 hrs. | MAXIMUM CAPACITY 1 hr. | Max. Make 24 hrs. This Mo. | % of Make to Cap. 24 hours | Max. Make 24 hrs. To Date | % of Make to Cap. 24 hours | Least Reserve Capacity |
|---|---|---|---|---|---|---|---|---|
| 1775 | Coal Gas Benches, | " | " | " | " | " | - | - |
| 1776 | Water Gas Machines, | 12000000 | 500000 | 825753 | 68.7 | 900277 | 75.0 | 374247 |
| 1777 | Total, | 12000000 | 500000 | 825753 | 68.7 | 900277 | 75.0 | 374247 |
| 1778 | | | | | | | | |
| 1779 | | | | | | | | |
| 1780 | | | | | | | | |
| 1781 | | | | | | | | |

| | | | | |
|---|---|---|---|---|
| 1782 | Storage Capacity | 850000 | Purifying Capacity Cu. Ft. Material | |
| 1783 | Max. Send out 24 hrs. | 834096 | Cross Section Sq. Ft. (Basis Single flow boxes) | |
| 1784 | " " 1 hr. | 125384 | | |
| 1785 | % Storage to send out 24 hrs. | 101.8 | | |
| 1786 | " " " " 1 hr. | 677.5 | | |
| 1787 | " " " 24 hr. capacity | 10.1 | | |
| 1788 | | | | |

REPORT FOR

## SPECIAL EXPENSE ACCOUNT

| No. | ACCOUNT | Total Expense | CHARGED TO No. | Account | Amount | Bal. Special Accounts Close Month Debit | Credit |
|---|---|---|---|---|---|---|---|
| 1800 | Coal Stock Expense, | 109 49 | 500 | Coal Stock, | 109 49 | | |
| 1801 | Coke Stock Expense, | 406 85 | 502 | Coke Stock, | 406 85 | | |
| 1802 | Tar Stock Expense, | 2 958 68 | 503 | Tar Stock, | 2 958 68 | | |
| 1803 | Ammonia Stock Expense, | " | 504 | Ammonia Stock, | | | |
| 1804 | Pur. Dept. and St. Room, | 3 667 54 | See Details | | | | |
| 1805 | Barn Expense, | 4 539 03 | See Details next page. | | | | |
| 1806 | Preliminary Expense, | | | | | | |
| 1807 | Depreciation | 49 021 67 | (See Page 26) | | 49 021 67 | | |
| 1806 | Depreciation Gov. | 8 464 86 | (See Page 26) | | 8 464 86 | | |
| 1807 | Lamps Discontinued, | | 1818b | St. Lamp Mntc., | | | |
| 1808 | Mains Abandoned, | " | 1300 | St. Main Mntc., | | | |
| 1809 | Steam. | 10 264 60 | See Details next Page | | | | |
| | | | 1304b | Meter Dept. Exp. | | | |
| 1810 | Rent. | 7 152 61 | 1403 | Coll. Off. Rent, | See Details next Page | | |
| | | | 1504 | Exc. Off. Rent, | | | |
| | | | 1805 | Barn Exp., | | | |
| 1811 | Contingent Bench Repairs, | " | 1011 | Bench Repairs, | | | |
| | | | 1017 | Bldgs. Rep. C. G. | | | |
| 1812 | Gen. W'ks Bldgs. Repairs. | 183 95 | 1113 | " " W. G. | 183 95 | | |
| | | | 1213 | " " P. G. | | | |
| | | | 1018 | App. Rep. C. G. | | | |
| 1813 | General Apparatus Repairs, | 309 43 | 1114 | " " W. G. | 309 43 | | |
| | | | 1214 | " " P. G. | | | |
| | | | 1019 | Sund. Lab. C. G. | | | |
| 1814 | Sundry Labor, | 1 716 57 | 1115 | " " W. G. | 1 716 57 | | |
| | | | 1215 | " " P. G. | | | |
| | | | 1020 | Wks. Et. & Impt. C. G. | | | |
| 1815 | Works Expense and Supplies | 5 202 00 | 1116 | " " W. G. | 5 585 00 | | |
| | | | 1216 | " " P. G. | | | |
| | | | 1021 | Gen. Sup., C. G. | | | |
| 1816 | General Supervision, | 3 554 00 | 1117 | " " W. G. | 3 554 00 | | |
| | | | 1217 | " " P. G. | | | |
| | | | 1022 | Dis. H. Sta. C. G. | | | |
| 1817 | Dist. Holder Station | 3 425 14 | 1118 | " " W. G. | 3 425 14 | | |
| | | | 1218 | " " P. G. | | | |
| | | | 1507 | Prom. N. Bus., | 15 913 08 | | |
| 1819 | Domestic Fuel App'ces., | 15 913 08 | 308 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | 3 783 56 | | |
| 1820 | Ill'tg. Pipes and Fixtures, | 3 783 56 | 309 | Const., | | | |
| | | | 1507 | Prom. N. Bus., | | | |
| 1821 | Industrial Gas Appl'ces | " | 310 | Const., | | | |
| | | | 1507 | Prom. N. Bus | | | |
| 1822 | Gas Engines and Piping, | " | 311 | Const., | | | |
| | | | 1506 | Taxes, Gas | 15 000 00 | | |
| 1823 | Taxes Accrued, | 21 600 00 | | Elec | 6 600 00 | | |
| | | | 209 | Interest, Gas | 63 117 13 | | |
| 1824 | Interest Accrued, | 90 895 21 | | Elec | 27 778 08 | | |
| | | | 909 | Bad Debts, Gas | 3 000 00 | | |
| 1825 | Bad Debts, | 4 800 00 | 909 | Bad Debts, Elec | 1 800 00 | | |
| 1850 | | 91 63 | 1111 | | 91 63 | | |
| 1840 | | 2 146 37 | 1402 | | 858 49 | | |
| | | | 1502 | | 321 95 | | |
| | | | 3214 | | 42927 | | |
| | | | 3226 | | 10735 | | |
| | | | 1819 | | 321 95 | | |
| | | | 3251 | | 10736 | | |
| | Total. | | | | | | |

REPORT FOR

## STEAM ACCOUNT No. 1809

| | DEBITS | | | | | CREDITS | | | |
|---|---|---|---|---|---|---|---|---|---|
| | (a) Fuel Electric | | 8 | 895 | 00 | Charged to | | | |
| 1900 | Tons, @ | | | | | 1014 Coal Gas Steam, | | | |
| 1901 | Tons, Tar @ | | | 100 | 00 | 1100 Water Gas Generator, | 3 | 910 | 00 |
| 1902 | Tons, coal @ | | | 100 | 00 | 1110 " Pur. and St. | 4 | 889 | 59 |
| 1903 | Total Fuel, | | | | | 1201 Pumping Purchased Gas, | | | |
| | (b) Water Electricity | | 1 | 092 | 22 | 1210 Purification and St. Gas, | | | |
| 1904 | Gals. City Water, @ | | | | | 1800a Coal Stock Expense, | | | |
| 1905 | Gals. Pumped by Co. Cost | | | | | 1803a Ammonia Stock Expense, | | | |
| 1906 | Total Water, | | | | | 1815 Works Expense, | 3 | 055 | 6 |
| | (c) Labor Water | | 1 | 667 | 37 | 1817 District Holder Station, | | | |
| 1907 | Firemen, @ | | | | | | | | |
| 1908 | Helpers, @ | | | | | | | | |
| 1909 | @ | | | | | | | | |
| | Total Labor, | | | | | | | | |
| 1910 | (d) Repairs, | | | | | | | | |
| 1911 | Labor, | | | | | | | | |
| 1912 | Material, | | | | | | | | |
| 1913 | Total Repairs, | | | | | | | | |
| 1914 | Total Cost, a-b-c-d | | | | | | | | |
| 1915 | Less Steam Sold, | | | | | | | | |
| 1916 | Net Cost Steam, | | 11 | 854 | 59 | Total Credits, | 11 | 854 | 59 |
| 1917 | Basis of Steam Charges, | | | | | | | | |
| 1918 | | | | | | | | | |
| 1919 | | | | | | | | | |
| 1920 | | | | | | | | | |

## BARN EXPENSE ACCOUNT No. 1805 (14 Horses)

| | | Total | | Per Horse | | | Charged to | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1925a | Wages, | 406 | 86 | 29 | 06 | 1305a | | 242 | 65 | |
| 1926 | Rent, | 60 | 00 | 4 | 29 | 1305b | | 242 | 65 | |
| 1927 | Hay, | 865 | 27 | 61 | 80 | 1306a | | 242 | 68 | |
| 1928 | Oats, | 837 | 60 | 59 | 83 | 3008 | | 97 | 07 | |
| 1929 | Oil Meal and Bran, | 27 | 87 | 1 | 99 | 3200 | | 485 | 40 | |
| 1930 | Bedding, | 8 | 71 | | 62 | 3204 | | 242 | 70 | |
| 1931 | Fuel, Light and Water, | 59 | 38 | 4 | 24 | 3221f | | 291 | 13 | |
| 1932 | Med. Attendance and Medicines, | | 55 | | 39 | 3265 | | 194 | 12 | |
| 1933 | Barn Repairs, | 15 | 97 | 1 | 14 | 3271 | | 48 | 53 | |
| 1934 | Horse Shoeing, | 78 | 50 | 5 | 61 | 3272 | | 242 | 70 | |
| 1935 | Insurance on Horses, | 31 | 23 | 2 | 23 | 301 | | 145 | 66 | |
| 1936 | Board for Horses, | 604 | 28 | 43 | 16 | 302 | | 142 | 70 | |
| 1936a | Total, (a) | 2996 | 21 | 214 | 36 | 351 | | 291 | 37 | |
| 1937b | Harness Repairs, | 179 | 85 | 12 | 84 | 1802a | | 291 | 01 | |
| 1938 | Wagon Repairs, | 361 | 81 | 25 | 84 | 1815 | | 97 | 08 | |
| 1939 | Insurance on Wagons and Harness, | 6 | 24 | | 45 | 1819a | | 1213 | 51 | |
| 1940 | Misel. | 505 | 63 | 36 | 11 | 1820a | | 242 | 67 | |
| 1941 | Wages | 786 | 49 | 56 | 11 | | | | | |
| 1942 | Total, (b) | 1840 | 02 | 131 | 41 | | | | | |
| 1943 | Total Barn Expense, | 4836 | 23 | 345 | 77 | | | 4 | 836 | 23 |

## RENT ACCOUNTS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1950 | Rental paid for Office, Lincoln | 5339 | 35 | | Charged to | | | |
| 1951 | Uni Place Havelock | 288 | 35 | 1403 | Rent of Coll. Office, | 682 | 28 | |
| 1952 | " for Meter Shop, | 480 | 00 | 1504 | Rent of General Office, | 1523 | 85 | |
| 1953 | Misel. | 177 | 81 | 1304b | Meter Dep. Expense, | 618 | 06 | |
| 1954 | " for Barn, | 102 | 95 | 3215 | | 331 | 14 | |
| 1955 | Janitor | 631 | 04 | 3227 | | 380 | 70 | |
| 1956 | Rental Credited Rents Receivable, | 325 | 00 | 1305f | Barn Expense, | 541 | 09 | |
| 1957 | For Steam Heat | 2629 | 96 | 3231f | | 137 | 47 | |
| 1958 | For | | | 3264a | | 67 | 24 | |
| 1959 | | | | 1804a | | 618 | 06 | |
| 1960 | Total, | 6957 | 46 | 1814a | | 124 | 63 | |
| | | | | 1819a | | 677 | 37 | |
| | | | | 1820a | | 256 | 57 | |
| | | | | | | 6957 | 46 | |

# PAY ROLL DATA

MONTH OF

| | Manufacturing Expenses | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| 2000 | Coal Buggy | 1000b | | | | |
| 2001 | Retort House Labor | | | | | |
| 2002 | a Foreman | 1010a | | | | |
| 2003 | b Stoking | 1010a | | | | |
| 2004 | c Furnace men | 1010a | | | | |
| 2005 | d Doctor | 1010a | | | | |
| 2006 | e Scurfing Retorts | 1010a | | | | |
| 2007 | f Cleaning Flues | 1010a | | | | |
| 2008 | g Hydraulic Main Men | 1010a | | | | |
| 2009 | h Wheeling Retort ashes | 1010a | | | | |
| 2010 | Bench Repairs | 1011a | | | | |
| 2011 | Retort House Expense | 1012 | | | | |
| 2012 | Purifying Coal Gas | 1015a | | | | |
| 2013 | Gen'l Bldg. Repairs | 1017a | | | | |
| 2014 | Gen'l pparatus Rep. | 1018a | | | | |
| 2015 | Sundry Labor | 1019a | | | | |
| 2016 | Experimenting C. G. | 1020 | | | | |
| 2017 | Gen'l Supervision | 1021 | | | | |
| 2018 | | | | | | |
| 2019 | | | | | | |
| 2020 | Total | | | | | |
| 2021 | Mfg. Exp. W. Gas | | | | | |
| 2022 | Unloading Oil Cars | 1102 | | | | |
| 2023 | Gas Making Labor | 1106 | | | | |
| 2024 | a Making Gas | 1106 | 1771 53 | 1823 75 | .00725 | .00747 |
| 2025 | b Charging W. G. | 1106 | 943 39 | 822 12 | .00365 | .00327 |
| 2026 | c Clinkering W. G. | 1106 | 871 58 | 954 18 | .00358 | .00314 |
| 2027 | Rep. App. up to Seal | 1107a | 409 81 | 266 00 | .00159 | .00109 |
| 2028 | W. G. Gen. House Exp. | 1108a | 132 10 | 2 11 | .00052 | .00001 |
| 2029 | Purifying W. G. | 1111 | 134 39 | ✓ | .00052 | ✓ |
| 2030 | Rep. Buildings | 1113 | ✓ | 84 17 | ✓ | .00034 |
| 2031 | Rep. App. beyond Seal | 1114a | 50 55 | 76 83 | .00019 | .00021 |
| 2032 | Sundry Labor | 1115 | 1615 97 | 1347 93 | .00626 | .00552 |
| 2033 | Experimenting W. G. | 1116 | | | | |
| 2034 | Gen'l Supervision | 1117 | | | | |
| 2035 | | | | | | |
| 2036 | | | | | | |
| 2037 | Total | | 5929 04 | 5587 09 | .02296 | .02292 |

| | Purchased Gas | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Mfg. ThisYr. | Per M. Mfg. LastYr. |
|---|---|---|---|---|---|---|
| | Power for Pumping | 1201 | | | | |
| | Purifying Labor | 1211 | | | | |
| | Gen'l Bldg. Repairs | 1213 | | | | |
| | Gen'l App. " | 1214 | | | | |
| | Sundry Labor | 1215 | | | | |
| | Gen'l Supervision | 1217 | | | | |
| | Total | | | | | |
| | Pintsch Gas | | | | | |
| | Retort House Labor | 2408 | | | | |
| | Bench Repairs | 2409 | | | | |
| | Retort House Exp. | 2410 | | | | |
| | Purifying Labor | 2412 | | | | |
| | Gen'l Bldg. Repairs | 2413 | | | | |
| | Sundry Labor | 2414 | | | | |
| | Car Fillers | 2420 | | | | |
| | Pipe Line Repairs | 2421 | | | | |
| | Total | | | | | |
| | Summary Mfg. | | | | | |
| | Coal Gas | 2020 | | | | |
| | Water Gas | 2057 | | | | |
| | Purchased Gas | 2007 | | | | |
| | Pintsch Gas | 2020 | | | | |
| | Total | | | | | |

| | Distribution | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| | Street Main Maint. | | | | | |
| | a Test and Rep. Leaks | 1300a | 1016 41 | 858 31 | .00454 | .00378 |
| | b Rep or Replacing | 1300a | | | | |
| | c Maint. Governors | 1300g | 45 29 | ✓ | .00019 | ✓ |
| | Service Maintenance | 1300d | 25 00 | ✓ | .00011 | ✓ |
| | a Thawing Services | 1301a | 302 17 | 28 39 | .00129 | .00012 |
| | b Cleaning | 1301c | 17 96 | 18 01 | .00008 | .00008 |
| | c Rep. or Renewing | 1301d | 284 24 | 288 15 | .00126 | .00127 |
| | d Changing or Extend. | 1301f | 40 90 | 189 35 | .00018 | .00083 |
| | Street Dept. Exp. | | | | | |
| | a Rep. St. Dept. Tools | 1302a | 45 12 | 32 55 | .00019 | .00014 |
| | b Pumping Drips | 1302c | 190 06 | 217 85 | .00081 | .00096 |
| | c Taking St. Pressure | 1302e | 2 80 | 60 | .00001 | .00000 |
| | d Gen'l Supervision | 1302f | 1929 15 | 1444 08 | .00823 | .00636 |
| | Meter Maintenance | 1301 1302d | 5 19 | 7 03 | .00002 .00001 | .00003 |
| | a Rep. Old Meters | 1303a | 2683 03 | 1988 87 | .01145 | .00875 |
| | b Test " " | 1303c | 315 26 | 295 10 | .00135 | .00130 |
| | c Rep. Old Connections | 1303d | 1 50 | 9 46 | .00001 | .00004 |
| | d Making New " | 1303f | ✓ | 70 54 | ✓ | .00003 |
| | e Shop Foremen | 1303h | 522 00 | 553 63 | .00223 | .00244 |
| | f Changing Meters | 1303i | ✓ | | | |
| | g Governor Expense | 1303k | 50 53 | 78 72 | .00022 | .00035 |
| | Meter Dept. Exp. | | | | | |
| | a Meter Clerks | 1304a | 581 07 | 514 06 | .00248 | .00226 |
| | b Foremen | 1304b | | | | |
| | c Rep. Shop Tools | 1304c | | 2 03 | ✓ | .00001 |
| | Setting Meters | 1305a | 1444 32 | 1217 04 | .00612 | .00536 |
| | Removing Meters | 1305b | 535 98 | 538 71 | .00229 | .00237 |
| | S. & R. Supervision | 1305c | | 68 | ✓ | .00000 |
| | Gratuitous Work | 1305b 1305c | 7 80 | 80 41 | .00003 | .00000 |
| | a Gen'l Complaints | 1306a | 2018 01 | 1524 95 | .00861 | .00671 |
| | b Rep. Cons. Property | 1306b 1306c | 9 61 | 13 08 1 68 04 | .00004 .00026 | .00006 .00020 |
| | c Investigating, etc. | 1306f | 12 45 | | | |
| | d Inspecting | 1306f | | | | |
| | | 1306b | 6 97 | 97 26 | .00003 | .00043 |
| | Total | | 12 107 03 | 9 998 70 | .05164 | .04400 |

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# PAY ROLL DATA — MONTH OF

| | Collection Expense | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. Sold ThisYr. | Per M. Sold LastYr. |
|---|---|---|---|---|---|---|
| 2038 | Reading Meters | | | | | |
| 2039 | a First Reading | 1400a | 858 07 | 863 82 | .00366 | .00382 |
| 2040 | b Retakes | 1400b | 430 18 | 420 77 | .00184 | .00185 |
| 2041 | Clerical Salaries | 1401 | 6 965 16 | 6487 95 | .02972 | .02855 |
| 2042 | Addressing Machine | 1402c | 189 84 / 44 90 | 172 00 / 222 64 | .00081 / .00061 | .00076 / .00100 |
| 2043 | Del. Receipted Bills | 1402e | | | | |
| 2044 | Delivering Bills | 1404 | 209 79 | 209 79 | .00089 | .00092 |
| 2045 | Outside Collection | 1405 | 1403 00 | 1620 00 | .00612 | .00713 |
| 2046 | | | | | | |
| 2047 | Total | | 10 230 76 | 9995 97 | .04365 | .04401 |
| 2048 | | | | | | |
| 2049 | Gen'l Exp. | 1503 | | 7 50 | ✓ | .00003 |
| 2050 | Executive Salaries | 1500 | 4 896 60 | 3 534 28 | .02089 | .01555 |
| 2051 | Clerical Salaries | 1501 | 1 162 05 | 854 80 | .00496 | .00376 |
| 2052 | Legal Expense | 1502 / 1862 | 54 00 / 240 00 | 65 92 | .00023 / .00102 | .00029 |
| 2053 | Total | | 6 342 65 | 4 462 50 | .02710 | .01963 |
| 2054 | | | | | | |
| 2055 | Stock Accounts | 502 | ✓ | 6 75 | ✓ | .00003 |
| 2056 | Making New Oxide | 505 | 213 03 | 352 98 | .00091 | .00155 |
| 2057 | Main Stock | 506 | ✓ | 6 06 | ✓ | .00003 |
| 2058 | Steel Pipe Stock | 507 | 2524 | 68 33 | .00011 | .00030 |
| 2059 | Fittings " | 508 | ✓ | ✓ | ✓ | ✓ |
| 2060 | Service " | 509 | ✓ | ✓ | ✓ | ✓ |
| 2061 | Appliance " | 512 | - | 3 90 | ✓ | .00002 |
| 2062 | Miscellaneous | 513 | ✓ | ✓ | ✓ | ✓ |
| 2063 | | | ✓ | ✓ | ✓ | ✓ |
| 2064 | Total | | 238 07 | 438 02 | .00102 | .00192 |
| 2065 | | | | | | |
| 2066 | Coal Stock Exp. | | | | | |
| 2067 | Unloading Coal | 1800a | 109 49 | 132 74 | .00047 | |
| 2068 | Weighing Coal | 1800a | | | | |
| 2069 | Piling-Trimming-Shed | 1800a | | | | |
| 2070 | Rep. Shed-Conveyors | 1800c | | | | |
| 2071 | COKE STOCK EXP. | | | | | |
| 2072 | Coke Buggy | 1801a | 329 16 | 210 42 | .00129 | |
| 2073 | Work on Pile | 1801a | | | | |
| 2074 | Hauling Ret. to Yard | 1801b | | | | |
| 2075 | Marketing | 1801b / 1862 | 33 33 | 33 09 | .00010 | |
| 2076 | Rep. Apparatus | 1801d | | | | |
| 2077 | Forward | | 769 98 | 876 25 | .00 | |

| | Special Expense Accounts | Acct. No. | Total Wages This Year | Total Wages Last Year | Per M. ThisYr. | Per M. LastYr. |
|---|---|---|---|---|---|---|
| | Tar Stock Exp. Carried Forward | | 459 98 | 376 25 | Per Gall. | |
| | a Distilling | 1802a | 461 37 | 172 20 | | |
| | b Tar Plant Rep. | 1802b | | | | |
| | Ammonia Stock Exp. Brought Forward | | | | Per Lb. | |
| | a Concentrating, etc. | 1803a | | | | |
| | b Apparatus Rep. | 1803b | | | | |
| | Purchasing Dept. Brought Forward | | | | Per M. Mfg. | |
| | a Pur. Agt. & Clerks | 1804a | 1 620 18 | 518 00 | — | - |
| | b Handling Stock | 1804b | 795 44 | 1 343 60 | — | — |
| | Barn Expense | 1805 | 406 85 / 386 49 | 289 35 / 1 025 79 | — | — |
| | Prelimin. Exp. New Wks. | 1806 | | | — | — |
| | Steamfitter's Helper Brought Forward | | | 30 | | |
| | a Firemen-Helpers | 1809a | | | | |
| | b Hauling Ashes | 1809c | | | | |
| | c Sundry Labor | 1809c | | | | |
| | d Haul'g Coal to Boilers | 1809a | 1809 9 72 | | | |
| | e Boiler Repairs | 1809d | 1841 38 53 | | | |
| | f Boiler Changes | 1809c | | | | |
| | Rent—Janitors, etc. | 1810 | 621 04 | 633 15 | — | — |
| | Gen'l Works Blg. Rep. | 1812c | 62 57 | 69 25 | | |
| | " App. Repairs | 1813c | 45 60 | 127 44 | | |
| | Sundry Labor | 1814 | 1 716 57 | 1 176 45 | | |
| | Bench Repairs | 1815 | 541 34 | | | |
| | Works Expense | 1815 | 5 65 | | | |
| | General Superintendent Brought Forward | | 1892 4 50 | 3 00 | | |
| | a Chemist | 1810a | 1892 10 27 / 440 60 | | | |
| | b Clerical Salaries | 1810b | | 3 397 86 | | |
| | c Gen'l Supervision | 1816c | 3 540 80 | | | |
| | Dist. Holder Sta. | 1817 | 1 383 54 | 927 64 | | |
| | New Bus. Expense | 1819 | | 42 10 | Per M. Sold | |
| | a Advertising Men | a | 396 00 | 422 94 | .00169 | .01685 |
| | b Demonstrator-Ass'ts | b | | 526 | ✓ | .00002 |
| | c Solicitors | c | 2 020 28 | 2 121 89 | .00862 | .00987 |
| | d Clerks | d | 3 997 91 | 4 088 79 | .01705 | .01799 |
| | e App'l Connections | e | 4 721 46 | 4 491 21 | .02019 | .01977 |
| | | 1839 | | 90 | ✓ | .00004 |
| | | 1846 | 1 403 51 | 1 246 07 | .00598 | .00548 |
| | | 1847 | 87 49 | 208 25 | .00037 | .00092 |
| | | 1850a | 191 76 | 130 96 | .00082 | .00058 |
| | | 1799 | 80 16 | | .00034 | |
| | | 1850a | | | .00035 | |
| | Total | | 26 078 61 | 22 830 45 | .11120 | .10046 |

| | Construction | | Total Wages This Year | Total Wages Last Year | Per M. ThisYr. | Per M. Las Yr. |
|---|---|---|---|---|---|---|
| | Gas Works | 300 | | | — | — |
| | Mains | 301 | 3 228 13 | 4 452 02 | — | — |
| | Services | 302 | 3 805 68 | 3 588 74 | — | — |
| | Meters | 303 | | 60 | — | — |
| | Street Lamps | 304 | 2 74 | | — | — |
| | Tar Plant | 306 | | | — | — |
| | Pintsch Plant | 309 | | | — | — |
| | Real Estate Owned | | 2974 | | | |
| | | 311 | | 60 39 | | |
| | | 317 | 151 02 | 808 45 | | |
| | | 319 | 7 82 | 87 00 | | |
| | | 320 | | 223 | | |
| | | 321 | 18 90 / 107 44 | 151 25 | | |
| | Total | | 7 351 47 | 9 150 68 | — | — |
| | Summary | | | | | |
| | Manufacturing | 2067 | 5 929 04 | 5 377 09 | .02296 | .02280 |
| | Distribution | 2067 | 12 107 08 | 9 998 70 | .05164 | .04400 |
| | Collection Exp. | 2047 | 10 230 76 | 9 995 97 | .04365 | .04401 |
| | General Exp. | 2063 | 6 352 65 | 4 462 50 | .02710 | .01963 |
| | Stock Accounts | 2064 | 238 27 | 438 02 | — | — |
| | Special Expenses | 2077 | 26 078 61 | 22 830 45 | .11120 | .10046 |
| | Construction | 2062 | 7 351 47 | 9 150 68 | — | — |
| | | | 68 289 83 | 62 253 41 | | 2740 |

## PAY ROLL DATA

| | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day | NATURE OF WORK | EMPLOYEES No. of | Rate | Hrs. per Day |
|---|---|---|---|---|---|---|---|---|
| 2070 | **Mfg. Dept.** | | | | **Office and General** | | | |
| 2071 | Foremen, | 2 | 8.50 | 12 | Cashiers, | 1 | 70.00 | 9 |
| 2072 | Stokers, | | | | Ass't Cashiers, | 1 | 30.00 | 4 |
| 2073 | " Helpers, | | | | Bookkeepers Gen., | 2 | 80.00 | 9 |
| 2074 | | | | | " Cons., | 4 | 65.00 | 9 |
| 2075 | Water Gas Makers, | 2 | 2.50 | 12 | " Petty Led., | 1 | 55.00 | 9 |
| 2076 | " " " Helpers, | 2 | 2.25 | 12 | | ✓ | | |
| 2077 | | | | | Clerks:—New Bus. Dept., | ✓ | | |
| 2078 | Furnace Men, | | | | Application " | 1 | 70.00 | 9 |
| 2079 | Coke Men, | | | | Contract " | 1 | 60.00 | 9 |
| 2080 | Coal Men, | | | | Appl. Sales " | | | |
| 2081 | | | | | Tabulating " Plant | 1 | 50.00 | 9 |
| 2082 | Hydraulic Main, | | | | Collection " | 1 | 50.00 | 9 |
| 2083 | Patchers, | | | | Auditing " | | | |
| 2084 | | | | | Filing " | | | |
| 2085 | Purifying, | | | | Pay Roll " | 1 | 45.00 | 9 |
| 2086 | | | | | Distribution " | 1 | 60.00 | 9 |
| 2087 | Laborers, | | | | Purchasing " | 1 | 60.00 | 9 |
| 2088 | | | | | Store-room " | 1 | 70.00 | 9 |
| 2089 | Engineers, | 1 | 50.00 | 12 | Coke & Tar " | | | |
| 2090 | Works Mechanics, | 2 | 2.25 | 12 | Night Operator | 1 | 40.00 | 9 |
| 2091 | Carpenters, Blacksmith, | 1 | 3.00 | 10 | Day Operator | 1 | 40.00 | 9 |
| 2092 | District Holder | 1 | 55.00 | 10 | | | | |
| 2093 | Chemists, | | | | Representatives, | 6 | 75.00 | 9 |
| 2094 | | | | | Ass't Representatives, | | | |
| 2095 | Works Clerks, | | | | | | | |
| 2096 | | | | | Floor Salesmen, | 1 | 75.00 | 9 |
| 2097 | **Street Dept.** | | | | Collectors, | 2 | 55.00 | 9 |
| 2098 | S. & M. Gang Foremen, | 1 | 75.00 | 10 | | | | |
| 2099 | " " " Laborers, | 12 | 2.00 | 10 | Stenographers, | 2 | 55.00 | 9 |
| 2100 | | | | | Office Boys, | | | |
| 2101 | **Fitting Dept.** | | | | | | | |
| 2102 | Fitters, | 8 | 2.75 | 10 | Meter Readers, | 1 | 50.00 | 9 |
| 2103 | " Helpers, | 5 | 1.75 | 10 | Troublemen, | 3 | 2.00 | 9 |
| 2104 | | | | | | | | |
| 2105 | Meter Dept. Foremen, | 2 | 77.50 | 10 | Branch Office, | 2 | 55.00 | 9 |
| 2106 | " " Repairers, | 3 | 53.10 | 10 | | | | |
| 2107 | " " Clerks, | | | | **Special Men** | | | |
| 2108 | Leak Man | 1 | 75.00 | 10 | | | | |
| 2109 | Arc Repairers, | | | | | | | |
| 2110 | " Lighters, | | | | | | | |
| 2111 | | | | | | | | |
| 2112 | | | | | | | | |
| 2113 | **Engineering Dept.** | | | | **Dept. Heads & Supts.** | | | |
| 2114 | | | | | Comm. Dept. Mgr. | 1 | 175.00 | 9 |
| 2115 | | | | | General Superintendent | 1 | 200.00 | 9 |
| 2116 | | | | | Supt. Distribution | 1 | 90.00 | 9 |
| 2117 | | | | | Purchasing Agent | 1 | 100.00 | 9 |
| 2118 | | | | | Resident Engineer | 1 | 85.00 | 9 |
| 2119 | | | | | | | | |
| 2120 | **Pintsch Dept.** | | | | | | | |
| 2121 | | | | | | | | |
| 2122 | | | | | | | | |
| 2123 | | | | | | | | |
| 2124 | | | | | | | | |
| 2125 | | | | | | | | |
| 2126 | **Tar Dept.** | | | | | | | |
| 2127 | | | | | | | | |
| 2128 | | | | | | | | |
| 2129 | | | | | | | | |
| 2130 | | | | | | | | |
| 2131 | | | | | | | | |
| 2132 | | | | | | | | |
| 2133 | Total, | | | | Total, | | | |

REPORT FOR

## REPAIR AND MAINTENANCE ACCOUNT

| | | | This Year | | | | | | | Last Year | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Labor | | Material | | Total | | Per M. Mfd. | Total | | Per M. Mfd. | |
| 2175 | Coal Shed and Apparatus | (1800c) | | | | | | | | | | | |
| 2176 | Coke Yard " | (1801d) | | | | | | | | | | | |
| 2177 | Tar Dep't " | (1802b) | | | | | | | | | | | |
| 2178 | Ammonia " | (1803b) | | | | | | | | | | | |
| 2179 | Drawing and Charging Machinery. | (1010b) | | | | | | | | | | | |
| 2180 | Retort House Conveyors. | (1010c) | | | | | | | | | | | |
| 2181 | Bench Renewals. | (1011b) | | | | | | | | | | | |
| 2182 | Miscellaneous Bench Repairs. | (1011a) | | | | | | | | | | | |
| 2183 | Water Gas Generating Apparatus. | (1107 ) | 468 | 15 | 970 | 58 | 1438 | 73 | .00557 | 548 | 28 | .0023 | |
| 2184 | Boiler Repairs | (1800d) | ✓ | | ✓ | | ✓ | | | ✓ | | ✓ | |
| 2185 | General Works Repairs. Building | {1017 1118 1218} | ✓ | | 237 | 55 | 237 | 55 | .00092 | 819 | 72 | .0034 | |
| 2186 | " " " Apparatus | {1018 1114 1214} | 50 | 55 | 378 | 48 | 429 | 03 | .00166 | 5000 | 46 | .0204 | |
| 2187 | | | ✓ | | ✓ | | ✓ | | | | | | |
| 2188 | | | ✓ | | ✓ | | ✓ | | .00815 | | | | |
| 2189 | Total Mfg. Dept. | | 518 | 70 | 1586 | 61 | 2105 | 31 | Per M. Sold | 6367 | 96 | .0261 Per M. Sold | |
| 2190 | Mains | (1800) | 1102 | 74 | 30 | 80 | 1133 | 54 | .00483 | 909 | 75 | .0041 | |
| 2191 | Services | (1801) | 693 | 96 | 720 | 41 | 1414 | 37 | .00603 | 565 | 74 | .0025 | |
| 2192 | Meters | (1808) | 3593 | 44 | 640 | 44 | 4233 | 88 | .01807 | 4250 | 66 | .0187 | |
| 2193 | Lamps | (1818) | ✓ | | ✓ | | ✓ | | ✓ | ✓ | | ✓ | |
| 2194 | Total Dist'n and Lamp Dept. | | 5890 | 14 | 1391 | 65 | 6781 | 79 | .02893 | 5726 | 15 | .0253 | |
| 2195 | Total All Dep'ts. | | 5908 | 84 | 2978 | 26 | 8887 | 10 | .03792 | 12094 | 11 | ✓ | |

## GAS USED BY COMPANY

| | WHERE USED | Cu. Ft. | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2200 | Gas Works. | 8400 | 1815 | ✓ | 2 15 | |
| 2201 | Elect. Works | 8400 | 3008 | | 2 15 | |
| 2202 | Gas Shop | 180700 | 1304 | | 45 78 | |
| 2203 | Office | 131900 | 1840 | | 30 96 | |
| 2204 | Elect. meter Shop | 39003 | 3644 3293 | | 9 48 | |
| 2205 | Storeroom | 116700 | 1804 | | 29 24 | |
| 2206 | New Dist Holder | 85000 | 1817 | | 20 92 | |
| 2207 | | | | | | |
| 2208 | | | | | | |
| 2209 | | | | | | |
| 2210 | | | | | | |
| 2211 | | | | | | |
| 2212 | | | | | | |
| 2213 | | | | | | |
| 2214 | Totals | 569100 | ✓ | ✓ | 140 68 | |

## COKE USED BY COMPANY

| | WHERE USED | Weight | Charged to Acc't No. | Rate | Amount | REMARKS |
|---|---|---|---|---|---|---|
| 2215 | Bench Fuel | | 1002 | | | |
| 2216 | Boiler Fuel | | 1809 | | | |
| 2217 | Pintsch Bench Fuel | | 2401 | | | |
| 2218 | Generator Fuel | 3930.1 | 1101 | | 1768 53 | |
| 2219 | Street Department | | 1800 | | | |
| 2220 | Meter Shop | | 1304b | | | |
| 2221 | | | | | | |
| 2222 | | | | | | |
| 2223 | | | | | | |
| 2224 | | | | | | |
| 2225 | | | | | | |
| 2226 | | | | | | |
| 2227 | Totals | | | | | |

## COAL USED BY COMPANY

| | | Tons | Cost | WHERE USED | Acct. No. | Tons | Cost |
|---|---|---|---|---|---|---|---|
| 2228 | Used during month (2304) | 114.2 | 100.00 | Coal Carbonized | 1000 | | |
| 2229 | Sold | 114.5 | 723.50 | Boiler Fuel | 1009 | 14.2 | 100.00 |
| 2230 | 3000# | 65.0 | 175.50 | Bench Fuel | 1003 | | |
| 2231 | | | | Street Department | 1500 | | |
| 2232 | | | | Sold | | 114.5 | 723.50 |
| 2233 | | | | Elec Dept | | 65.0 | 175.50 |
| 2234 | Total | 193.7 | 999.00 | | Total | 193.7 | 999.00 |

## TAR SOLD AND USED

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2235 | Sold and Used (2344) | 116 471 | 5093 81 | Sold | | 116 471 | 5093 81 |
| 2236 | Adjustment | 116 636 | 5729 22 | Used in Pitch Plant | | | |
| 2237 | | | | Used for Gas Making | | | |
| 2238 | | | | Adjustment | | 166 636 | 5729 22 |
| 2239 | Total | 283 107 | 10823 03 | | Total | 283 107 | 10823 03 |

## OIL USED BY COMPANY

| | | Gallons | Cost | WHERE USED | Acct. No. | Gallons | Cost |
|---|---|---|---|---|---|---|---|
| 2240 | Used during Month (2370) | 851 183 | 26581 67 | Enricher | 1103 | 851 183 | 26581 67 |
| 2241 | 3000# | 20 234 | 546 32 | Pitch 3000# | 2000 | 20 234 | 546 32 |
| 2242 | | | | | | | |
| 2243 | | | | | | | |
| 2244 | | | | | | | |
| 2245 | Total | 871 417 | 27427 99 | | Total | 871 417 | 27427 99 |

## COAL STOCK

| | | BITUMINOUS GAS COAL | | | | | | STEAM COAL | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Tons | Cost | Per Ton | Tons | Cost | Per Ton | Tons | Cost | Per Ton |
| 2300 | First of Month | 299 41 | 1631 46 | 5 448 | | | | | | |
| 2301 | Rec'd during Mo. | | 22 37 | - | | | | | | |
| 2302 | Coal Stock Exp. | | 90 87 | - | | | | | | |
| 2303 | Total Cost | 299 41 | 1744 70 | 5 825 | | | | | | |
| 2304 | Used during Mo. | 193 70 | 999 00 | 5 158 | | | | | | |
| 2305 | Close of Month | 105 71 | 745 70 | 7 058 | | | | | | |
| 2307 | Coal Stock Expense | | (1800a) | | $ | | | | | |
| 2308 | do | | (1800b) | | | | | | | |
| 2309 | do | | (1800c) | | | | | | | |
| 2311 | | | | | | | | | | |
| 2312 | Total Expense | | (to line 2302) | | $ | | | | | |

## COKE STOCK

## BREEZE STOCK

| | | Total Tons | Total Cost | Av. Per Ton | Total Tons | Total Cost | Av. Per Ton |
|---|---|---|---|---|---|---|---|
| 2320 | Stock first of month | 237.10 | 1564 67 | 6 58 | | | |
| 2321 | Received or made during month | 3939.40 | 27480 18 | 6 98 | | | |
| 2322 | Coke Expense as below | - | 406 85 | - | | | |
| 2323 | Total Cost | 4177.60 | 29451 70 | 7 05 | | | |
| 2323a | Coke used under Benches | - | | | | | |
| 2323b | Used elsewhere than under Benches | 3930.10 | 27683 53 | 7 04 | | | |
| 2324 | Total Coke used during Month | 3930.10 | 27683 53 | 7 04 | | | |
| 2325 | Sold during month | 20 50 | 137 50 | 6 71 | | | |
| 2326 | Total Sold and Used | 3950 60 | 27821 03 | 7 04 | | | |
| 2327 | Stock close of month | 227.00 | 1630 67 | 7 18 | | | |
| 2328 | Coke Stock Expense | Coke (1801a) | $ | Breeze (1801e) | $ | | |
| 2329 | do | (1801b) | | (1801f) | | | |
| 2330 | do | (1801c) | | (1801g) | | | |
| 2331 | do | (1801d) | | (1801h) | | | |
| 2332 | do | | | | | | |
| 2333 | Total Expense | (to line 2322) | | | | | |

## TAR STOCK

| | | Coal Gas Tar | | | Water Gas Tar | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2340 | Stock first of ~~month~~ yr | | | | 174943 | $ 3775.52 | .0216 |
| 2341 | Made and bought during ~~month~~ yr | | | | 115564 | 3 6477.2 | .0327 |
| 2342 | Tar Expense as below | | | | - | 3 714.42 | |
| 2343 | Total Cost | | | | 290507 | 11 187.66 | .0383 |
| 2344 | Sold and used during ~~month~~ yr | | | | 283107 | 10 823.03 | .0382 |
| 2345 | Stock close of ~~month~~ yr | | | | 7400 | 314.63 | .0425 |
| 2347 | Tar Stock Expense (1802a) | | | | $3714.42 | $ | |
| 2348 | do (1802b) | | | | | | |
| 2349 | do (1802c) | | | | | | |
| 2350 | | | | | | | |
| 2351 | | | | | | | |
| 2352 | Total Expense (to line 2342) | | | | | $3714.42 | |

## AMMONIA STOCK

| | | Pounds | Cost | Per Lb. |
|---|---|---|---|---|
| 2360 | Stock first of month | | | |
| 2361 | Made during month | | | |
| 2362 | Ammonia Expense as below | | | |
| 2363 | Total Cost | | | |
| 2364 | Sold during month | | | |
| 2365 | Stock close of month | | | |
| 2367 | Ammonia Expense (1803a) | | $ | $ |
| 2368 | do (1803b) | | | |
| 2369 | do (1803c) | | | |
| 2370 | Total Expense (to line 2362) | | $ | |

## OIL STOCK

| | | GAS OIL | | | PINTSCH OIL | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. |
| 2372 | Stock first of ~~month~~ yr | 49746 | 1343.13 | .0270 | | | |
| 2373 | Received during ~~month~~ yr | 833560 | 27542.75 | .0330 | | | |
| 2374 | Oil Expense | " | " | | | | |
| 2375 | Total Cost | 883306 | 28885.88 | .0327 | | | |
| 2376 | Used during ~~month~~ yr | 871507 | 28438.49 | .0326 | | | |
| 2377 | Stock close of ~~month~~ yr | 11799 | 447.39 | .0379 | | | |

Page 19 item 1806a Depreciation @ 5% on valuation of $980,433.33 carried in suspense pending determination of exact amount by court in Decree Gross Receipts - $49,021.67

Page 19 item 1806b Occupation Tax of 3% on Gross receipts $282,162.11 @ $1.00 per M carried in suspense pending determination of exact amount, if any, by the courts - amount $8466.86

REPORT FOR

## PINTSCH DEPARTMENT

| | MANUFACTURING | Plant | Output | Output per M | TOTAL This Year | TOTAL Last Year | Total per M. ThisYr. | Total per M. LastYr. |
|---|---|---|---|---|---|---|---|---|
| 2400 | Oil, Gals., @ | | | | | | | |
| 2401 | Bench Fuel, Tons, @ | | | | | | | |
| 2402 | " @ | | | | | | | |
| 2403 | Total Cost Material, | | | | | | | |
| 2404 | Tar | | | | | | | |
| 2405 | Hydrocarbon Oil, | | | | | | | |
| 2406 | Total Residuals, | | | | | | | |
| | Net Cost Materials, | | | | | | | |
| 2408 | Retort House Labor, | | | | | | | |
| 2409 | Bench Repairs, | | | | | | | |
| 2410 | Retort House Expense, | | | | | | | |
| 2411 | Steam, | | | | | | | |
| 2412 | Purification, | | | | | | | |
| 2413 | Works Repairs, | | | | | | | |
| 2414 | Sundry Labor, | | | | | | | |
| 2415 | Works Expense and Supplies, | | | | | | | |
| 2416 | Total Manufacturing, | | | | | | | |
| | DISTRIBUTION | | Receiver Expense | Receiver per M. | | | | |
| 2420 | Car Fillers, | | | | | | | |
| 2421 | Pipe Line Repairs, | | | | | | | |
| 2422 | Hose, | | | | | | | |
| 2423 | Sundries, | | | | | | | |
| 2424 | Total, | | | | | | | |
| 2425 | Gas Lost, | | | | | | | |
| 2426 | Total Distribution, | | | | | | | |
| 2427 | Total Manuf'g and Distribution Exp. | | | | | | | |

### GROSS EARNINGS

| | | | | | |
|---|---|---|---|---|---|
| 2430 | Gas, | Cu. ft. | | | |
| 2431 | | Cu. ft. | | | |
| 2432 | | Cu. ft. | | | |
| 2433 | Total Earnings, | Cu. ft. | | | |
| 2434 | Expenses as above, | | | | |
| 2435 | Taxes, | | | | |
| 2436 | Depreciation on plant % | | | | |
| 2440 | Total Expenses, | | | | |
| 2441 | Net Earnings Pintsch Dep't, | | | | |
| 2442 | % Credit income, Acc't No. 202 | | | | |
| 2443 | % Credit Pintsch Comp. Co. | | | | |

| | | | | |
|---|---|---|---|---|
| 2444 | Gas on hand 1st of Month, | Cu. ft. | Gas Sold | Cu. ft. |
| 2445 | Gas made, | Cu. ft. | Gas on hand last of month | Cu. ft. |
| 2446 | | Cu. ft. | Gas lost | Cu. ft. |
| 2447 | Total Gas to Account for, | Cu. ft. | Total Gas Accounted for | Cu. ft. |

| | | This Year | % | Last Year, | % |
|---|---|---|---|---|---|
| 2450 | % Gas Lost to Gas Made, | " " | " | " " | " |
| 2451 | % Gas Lost to Gas Sold, | " " | | " " | |
| 2452 | Kind of Oil Used, | " " | | " " | |
| 2453 | Amount Gas Made per Gallon Oil, | " " | C. F. | " " | C. F. |
| 2454 | Amount Oil Used per 1000 C. F. Made, | " " | Gals. | " " | Gals. |
| 2455 | Amount Oil Used per 1000 C. F. Sold, | " " | " | " " | " |
| 2456 | Number Retorts in Use, | " " | | " " | |
| 2457 | | " " | | " " | |
| 2458 | Kind of Fuel Used, | " " | | " " | |
| 2459 | Amount Fuel Used, Lbs. | Furnaces | Boilers | Furnaces | Boilers |
| 2460 | Amount Fuel Used, Lbs. per M. ft. Made, | | | | |
| 2461 | Amount Fuel Used, Lbs. per M. ft. Sold, | | | | |
| 2462 | | | | | |
| 2463 | | | | | |
| 2464 | | | | | |
| 2465 | | | | | |



TORN PAGES

## APPROVALS AND RECORD

AUDITED AND VOUCHED FOR BY SECRETARY

APPROVED BY DEPARTMENT SUPERINTENDENT

APPROVED BY MANAGER (OR ACTING MGR.)

DATE REPORT WAS MAILED BY COMPANY

DATE RECEIVED AT N. Y. OFFICE

CHECKED BY

REVIEWED BY

DATE OF REVIEWING LETTER

DATE OF CO.'S LETTER OF REPLY

THIS REPORT HAS BEEN SEEN BY

| OFFICE DEPT. | CORPORATION DEPT. | EXECUTIVE DEPT. | GEN. MGR'S OFFICE | ENGINEERING DEPT. | AUDITING DEPT. | STATISTICAL DEPT. | NEW BUSINESS DEPT. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

1143 *Generator House & Otis Elevator.*

(5 years old.)

Item # 1. Contract—
House built summer 1908 on percentage basis.
Price elevator $940.00 erected.

Item #2. Amounts paid out by company a/c erection of building and elevator as above:

| | |
|---|---|
| State Journal Co.—blue print paper | $1.50 |
| Star Publishing Co.—legal notice | 2.50 |
| Company pay roll | 59.61 |
| Nebrasba Hardware Co.—miscellaneous | 1.05 |
| R. S. Young—building material | 21.24 |
| " " " " " | 257.12 |
| Company pay roll | 204.63 |
| Water | 20.00 |
| Hahn—advance | 500.00 |
| Incidental | 1.75 |
| Nebraska Hardware Co. | 1.77 |
| Lincoln Transfer Co.—frt. and dray | 6.60 |
| Transfer voucher—water | 20.00 |
| O. R. Mallat—photos | 3.00 |
| John Davis Co.—tee | 8.75 |
| Western Gas Construction Co.—tee | 46.95 |
| Material from stock | 17.64 |
| Company pay roll | 109.49 |
| C. P. Hahn—advance | 1,100.00 |
| Company pay roll | 38.52 |
| Transfer voucher—water | 20.00 |
| Gooden & Hahn—advance | 350.00 |
| " " —final payment | 1,101.38 |
| Brown Lumber Co.—lumber | 15.25 |
| Nebraska Material Co.—sand | 6.57 |
| R. S. Young Co.—cement | 3.06 |
| Material from stock | 9.90 |
| Western Glass & Paint Co.—paint | 9.70 |
| Brown Lumber Co.—lumber | 3.36 |
| Nebraska Hardware Co.—miscellaneous | 1.65 |
| Company pay roll | 95.45 |
| R. S. Young Co.—cement | 14.61 |
| Company pay roll | .80 |
| Korsmeyer Co.—shades and receptacles | 1.40 |
| R. S. Young Co.—cement | 17.83 |
| Brown Lumber Co.—lumber | 136.09 |
| Western Glass & Paint Co.—oil | .55 |
| Company pay roll | 40.83 |
| Lincoln Trans-er Co.—freight and drayage | 38.68 |
| Nebraska Hardware Co.—miscellaneous | 72.05 |

| | | |
|---|---|---|
| | A. L. Gooden—labor | 157.45 |
| | Capitol City Iron Works—weights | 3.12 |
| | Nichols Roofing Co.—tar paper | 4.10 |
| 1144 | Western Supply Co.—fittings | $6.26 |
| | R. S. Young Co.—building material | 31.98 |
| | Nebraska Material Co.—sand, etc | 31.85 |
| | R. S. Young Co.—building material | 28.62 |
| | Company pay roll | 60.08 |
| | Baker Hardware Co.—miscellaneous | 1.80 |
| | Cooper & Cole—fittings | .90 |
| | Company pay roll | 16.86 |
| | Arthur Gaddis—labor | 15.00 |
| | R. S. Young Co.—building material | 12.50 |
| | Total | $4,737.80 |
| | Charged to account G 5 | 182.83 |
| | Credits a/c lumber returned | 3.46 |
| | Total credits | $186.29 |
| | Net total | $4551.51 |
| | Otis elevator item payment | $470.00 |
| | Final payment | 470.00 |
| | Otis Elevator Co.—auto gates | 30.00 |
| | Total | $970.00 |
| | Credits | 48.68 |
| | Net total | $921.32 |
| | Add for building as above | 4,551.51 |
| | Grand net total | $5,472.83 |

1145 *Generator House & Elevator.*

| | | |
|---|---|---|
| Payments to Otis Elevator Co. a/c elevator as per records of the company | $470 | |
| | 470 | |
| | 30 | |
| | $970 | |
| Credits | 48.68 | |
| Net amount as above | | $921.32 |
| Freight and dray—Lincoln Transfer Co. | | 38.68 |
| Elevator total | | $960.00 |

| | | |
|---|---|---|
| Payments to Gooden & Hahn a/c building as per records of the company | $500 | |
| | 1,100 | |
| | 350 | |
| | 1,101.38 | |
| | 157.45 | |
| | | $3,208.83 |
| | | $4,168.83 |
| Total amount in construction account from records of the company | | $5,472.83 |
| Difference which includes foundation, painting and miscellaneous items | | $1,304.00 |
| Deduct for tee to Western Gas Construction Co. | | 46.95 |
| | | $1,257.05 |
| Grand total | | $5,425.88 |
| Cost of building without elevator | | 4,465.88 |
| Lea allowed for elevator | $1,060.00 | |
| " " " generator house | 3,739.00 | |
| Total | $4,799.00 | |
| Lea's shortage | 626.88 | |

1146 *7'-6" Water Gas Machine.*

(One year old.)

Item #1. Contract—
Generator—carburettor—superheater—seal—pyrometer and steel floor erected on our foundation.. $8,000.00

Item #2. Amounts paid out by Company a/c of erection of 7'-6" Water Gas Machine as above:

| | |
|---|---|
| F. W. Brown Lumber Co.—lumber | 4.68 |
| Henkle & Joyce—hardware | 5.13 |
| Nichols Roofing Co. | 1.75 |
| Rudge & Guenzel Co.—sledge handles | 1.50 |
| Company pay roll | 68.90 |
| Western Gas Construction Co. on contract | 1,100.00 |
| " " " " " " | 1,100.00 |
| Baker Hdw. Co.—hardware | 12.55 |
| Brown Lbr. Co.—lumber | 5.40 |
| Nebraska Material Co.—stone, sand & cement | 99.32 |

| | |
|---|---|
| Company pay roll | 21.49 |
| Western Gas Construction Co. on contract | 1,700.00 |
| Western Supply Co.—valves | 20.82 |
| Chicago & Northwestern Ry.—freight | 3.35 |
| Johns-Manville Co.—cement | 34.83 |
| Nebraska Material Co.—sand | 2.73 |
| C., B. & Q. R. R.—freight | .93 |
| J. R. Lehmer Co.—fuse blocks | 2.20 |
| Rudge & Guenzel Co.—nails | .20 |
| Searle-Chapin Co.—lumber | 2.00 |
| Western Supply Co.—unions | 6.00 |
| From Company storeroom—fittings | .69 |
| Western Supply Co.—unions | .92 |
| Western Gas Construction Co. on contract | 1,884.54 |
| Company pay roll | 17.05 |
| Nebraska Material Co.—material | 10.40 |
| Transfer voucher for money advanced to Western Gas erector to apply on contract | 1,790.46 |
| Engine bought from us and credited to contract | 400.00 |
| Allowance for repairs on old machine | 25.10 |
| Total amount of construction cost from Co. records | 8,322.90 |

No allowance for engineering or supervision.

1147 *7'–6" Water Gas Machine.*

| | |
|---|---|
| Payments to Western Gas Construction Co. as per records of the company including freight | $1,100.00 |
| | 1,100.00 |
| | 1,700.00 |
| | 1,884.54 |
| | 1,790.46 |
| Total | $7,575.00 |
| Allowance for old engine | 400.00 |
| Allowance for repairs on old machine | 25.00 |
| Total | $8,000.00 |
| Additional items in construction cost as per records of the company | 322.94 |
| Grand total | $8,322.94 |
| Lea allowed for machine $8,477.00 | |
| " " " floor 1,026.00 | |
| | $9,503.00 |
| Lea's average | $1,180.06 |

1148 *7′-6″ Water Gas Machine.*

(Three years old.)

Item #1. Contract—

| | |
|---|---|
| Not in company office—price made for generator, carburettor, superheater, seal, scrubber condenser, 10″x12″ Atlas engine, #7 blower and counter shaft also 15′x28′ steel floor erected on company's foundation | $10,900.00 |

Item #2. Amounts paid out by company a/c erection of 7′-6″ water gas machine as above:

| | |
|---|---|
| Company pay roll | 1.09 |
| C. B. & Q. R. R.—freight | 594.60 |
| Brown Lumber Co.—lumber | 17.84 |
| Nebraska Hardware Co.—hardware | 1.40 |
| Western Supply Co.—fittings | 4.38 |
| Company pay roll | 120.19 |
| Transfer voucher for water | 15.00 |
| D. J. Sweeney, erecter—advance | 50.00 |
| " " " " " | 250.00 |
| " " " " " | 175.00 |
| Transfer voucher a/c. 2 yr. notes | 5,500.00 |
| D. J. Sweeney, advance | 200.00 |
| C. B. & Q. R. R.—freight & demurrage | 237.76 |
| R. S. Young Co.—building material | 177.60 |
| Lincoln Transfer Co.—freight & drayage | 16.20 |
| Sullivan & Shaberg—men and team | 70.00 |
| Company pay roll | 29.10 |
| C. B. & Q. R. R.—freight | 9.14 |
| D. J. Sweeney—advance | 100.00 |
| " " " " | 100.00 |
| " " " " | 125.00 |
| " " " " | 160.00 |
| Nebraska Hardware Co.—miscellaneous | 1.68 |
| Western Gas Construction Co.—blast pipe | 190.00 |
| O. R. Mallat—photos | 3.00 |
| Company pay roll | 13.37 |
| Transfer voucher (?) | 182.83 |
| D. J. Sweeney—advance | 250.00 |
| " " " " | 50.00 |
| " " " " | 175.00 |
| " " " " | 175.00 |
| Brown Lumber Co. | 10.00 |
| Cooper & Cole—fittings | 23.77 |
| Crane Co.—fittings | 50.00 |
| Dahsen & Ress—machine work | 3.50 |
| Lincoln Transfer Co.—freight and drayage | 1.30 |
| Nebraska Hardware—hardware | 17.46 |

1721

| | | |
|---|---|---|
| | Western Supply Co.—fittings | 107.74 |
| | R. S. Young—stone & cement | 17.74 |
| 1149 | Western Supply Co.—fittings | $1.49 |
| | Material out of stock | 7.44 |
| | Company pay roll | 98.31 |
| | Incidental items to company | 1.75 |
| | D. J. Sweeney—advance | 175.00 |
| | " " " " | 125.00 |
| | " " " " | 75.00 |
| | " " " " | 50.00 |
| | Material out of stock | 37.36 |
| | Brown Lbr. Co.—lumber | 35.25 |
| | Crane Co.—gate valve # | 10.00 |
| | Cooper & Cole—fittings | 22.32 |
| | Dahsen & Ress—machine work | 3.00 |
| | Incidental to Company | .25 |
| | Nebraska Paper & Bag Co.—card board | .60 |
| | Cooper & Cole Bros.—valves and ells | 3.61 |
| | Nebraska Paper & Bag Co.—card board | .15 |
| | Western Supply Co.—fittings | 108.54 |
| | Nebraska Hardware—miscellaneous | 5.63 |
| | Coke from stock—7½ tons@$5.25 | 39.38 |
| | Company pay roll | 197.94 |
| | Transfer voucher—water | 15.00 |
| | D. J. Sweeney—advance | 40.00 |
| | Material from stock | .72 |
| | Sunderland Roofing Co.—belt | 107.26 |
| | Western Supply Co.—fittings | 29.57 |
| | Nichols Roofing Co.—tar paper | 5.66 |
| | Brown Lumber Co.—lumber | 5.57 |
| | Riggs Pharmacy—li-*the*rage | .45 |
| | Western Supply Co.—fittings | 41.04 |
| | Lincoln Water Dept.—water | 66.00 |
| | Company pay roll | 69.84 |
| | Incidental expense | 5.26 |
| | Korsmeyer Co.—wire and fuses | 23.45 |
| | Nebraska Hardware Co.—miscellaneous | 2.09 |
| | Incidental expense | .60 |
| | Material from company stock | 4.01 |
| | Lincoln Transfer Co.—freight and drayage | 2.77 |
| | Material from Company stock | 45.15 |
| | Water commissioner pipe | 4.60 |
| | T. J. Thorpe—machine work | 12.50 |
| | Western Supply Co.—fittings | 71.59 |
| | Company pay roll | 33.19 |
| | Dahsen & Ress—machine work | 20.00 |
| | Nebraska Hardware Co.—miscellaneous | 1.43 |
| | Company pay roll | 7.92 |
| | Western Supply Co.—fittings | 29.24 |
| | Western Gas Construction Co.—payment | 500.00 |
| | Material from company stock | 4.50 |

| | |
|---|---|
| Western Gas Construction Company—payment.. | 1,000.00 |
| " " " " " .. | 1,000.00 |
| Total ..... | $13,374.12 |
| Credit to company ..... | 8.40 |
| Net cost to company as above not including engineering or supervisions ..... | $13,365.72 |

1150 *7'–6" Water Gas Set.*

(Three years old.)

Amounts paid Western Gas Construction Co. as per records of the company:

| | |
|---|---|
| | $50.00 |
| | 175.00 |
| Notes | 5,500.00 |
| | 200.00 |
| | 100.00 |
| | 100.00 |
| | 125.00 |
| | 160.00 |
| | 250.00 |
| | 50.00 |
| | 175.00 |
| | 175.00 |
| | 175.00 |
| | 125.00 |
| | 75.00 |
| | 50.00 |
| | 40.00 |
| | 500.00 |
| | 1,000.00 |
| | 1,000.00 |
| Total paid direct to Western Gas Construction Co. | $10,025.00 |
| Freight paid ..... | 841.50 |
| Drayage ..... | 70.00 |
| Total of above items..... | $10,936.50 |
| Credits ..... | 8.40 |
| Net as above..... | $10,928.10 |
| Total in construction account..... | $13,365.72 |
| Amount represented by incidentals..... | $2,437.62 |

| | | |
|---|---|---|
| Lea allowed for generator, superheater, carburetter and wash box and foundations... | $8,477.00 | |
| Lea allowed for condenser and scrubber and foundation ..... | 1,219.00 | |
| Lea allowed for floor (½)..... | 1,026.00 | |
| Lea allowed for blower equipment..... | 1,435.00 | |
| | | $12,157.00 |
| Lea shortage ..... | | 1,208.00 |

1151 *6'–6" Water Gas Set.*

(12 years old.)

Contract Nov., 1901.

Item #1. Contract—

| | |
|---|---|
| One generator, carburetter, superheater, seal, scrubber, condenser, engine and blower..... | $7,827.00 |

Item #2.

| | | |
|---|---|---|
| Feb. 1902. | T. Radford—labor and material..... | 79.75 |
| Mch. " | Western Gas Construction Co. on contract.. | 3,397.01 |
| " " | " " " " " " .. | 536.67 |
| | T. J. Schweibold—erector..... | 60.00 |
| | " " ..... | 100.00 |
| | " " ..... | 50.00 |
| | " " ..... | 75.00 |
| | Lincoln Transfer Co. ..... | 37.06 |
| | Miscellaneous cash ..... | .90 |
| | Westover—contract steel work..... | 413.00 |
| | Cooper & Cole—fittings..... | 1.81 |
| | T. J. Schweibold—erector..... | 35.00 |
| | " " ..... | 225.00 |
| | F. W. Brown Lbr. Co.—lumber..... | 3.34 |
| | R. S. Young Bldg. & Supply Co..... | 10.00 |
| | Lincoln Sash Door Mfg. Co.—Mdse..... | .50 |
| | Tower Elect. Co.—Mdse. & wiring..... | 27.13 |
| | Dierks Lumber & Coal Co.—cement & lime. | 13.75 |
| | Lincoln Hardware Co.—hardware ..... | 33.25 |
| | Cooper & Cole Bros.—fittings..... | 7.47 |
| | Advanced cash ..... | 2.80 |
| | Western Gas Construction Co. on contract... | 2,466.13 |
| | Lincoln Transfer Co.—drayage ..... | 16.25 |
| | Westover & Co.—beams, floor, etc..... | 134.71 |
| | Western Gas Construction Co. on contract.. | 18.00 |
| | Rudge & Guenzel—sundries..... | 8.60 |
| | Dierks Lumber Co.—lumber..... | 9.03 |
| | R. S. Young Bldg. Supply Co.—sand & cement ..... | 4.00 |
| | Rudge & Guenzel—mdse..... | .90 |

| | |
|---|---|
| Lincoln Pt. & Color Co.—sundries | 7.88 |
| Cooper & Cole—fittings | 33.24 |
| Rudge & Guenzel—mdse. | .40 |
| R. S. Young Bldg. Supply Co.—sand & cement | 6.50 |
| Cooper & Cole—fittings | 2.24 |
| Western Gas Const. Co.—Mo. P. Ry. freight | 91.35 |
| " " " " —C. B. & Q. freight | 137.17 |
| " " " " —Mo. P.R.R. freight | 49.00 |
| " " " " —Mo. P.R.R. freight | 49.42 |
| " " " " —C.B.&Q.R.R.freight | 149.33 |
| " " " " —C.B.&Q.R.R.freight | .40 |
| T. J. Schweibold erector—wages on contract. | 60.00 |
| " " " " . | 60.00 |
| " " " " . | 150.00 |
| " " " " . | 170.00 |
| Western Gas Const. Co.—C. R. I. & P. R. R. freight | 23.32 |
| Lincoln Transfer Co.—freight and dray | 5.89 |
| Total | $8,763.20 |

1152 *6'-6" Water Gas Set.*

| | |
|---|---|
| Amounts paid Western Gas Construction Co. as per records of company | $3,397.01 |
| | 536.67 |
| | 60.00 |
| | 100.00 |
| | 50.0 |
| | 75.00 |
| | 35.00 |
| | 225.00 |
| | 2,466.00 |
| | 91.35 |
| | 137.17 |
| | 49.00 |
| | 49.42 |
| | 149.33 |
| | .40 |
| | 60.00 |
| | 150.00 |
| | 170.00 |
| | 23.32 |
| | 5.89 |
| Total | $7,830.56 |
| Total amounts a/c construction of this item from records | $8,763.20 |

| | | |
|---|---|---|
| Lea allowed for machine & foundation exclusive for engine blower & floor | | $8,072.00 |
| Lea allowed for blower & engine—say ½ charged to this item blower | $272 | |
| Engine | 367 | |
| Approx. | $639 | 319.00 |
| | | $8,391.00 |
| Lea's shortage | | 372.00 |

1153 *Springer Process Water Gas Set.*

(25 years old.)

| | | |
|---|---|---|
| Item #1. Contract—price $9,000.00 and change of plans $100 making total contract agreement | | $9,100.00 |
| Item #2. Amounts paid by company a/c erection of above Springer process water gas set: | | |
| Freight | | 274.25 |
| Express on tool box | | 9.00 |
| C. B. & Q. R. R. Co.—freight | | 20.90 |
| 2 barrels lime | | 1.90 |
| Telegram | | 1.00 |
| C. B. & Q. R. R. Co.—freight | | 70.10 |
| Express on gauges | | 1.30 |
| Freight | | 4.20 |
| Payment on contract | | 3,000.00 |
| Express on tubes | | 1.80 |
| Express on package | | .75 |
| Freight on oil tank | | 51.00 |
| Express on slate | | 1.50 |
| Freight and express | | 10.95 |
| Freight on fire brick | | 36.00 |
| Cash to H. L. Madden | | 50.00 |
| Digging hole and filling around tank | | 56.80 |
| 9 barrels lime | | 8.55 |
| 11 loads sand | | 20.68 |
| 500 fire brick | | 30.00 |
| 1,000 fire brick bats | | 10.00 |
| 1½ barrels brick | | 4.00 |
| S. A. Brown Co. | | 20.42 |
| Paxton Vierling Iron Works | | 8.68 |
| Freight on tile | | .60 |
| B. & M. Ry. setting tank | | 21.48 |
| Freight on steam covering | | 4.40 |
| Express on oil cups | | .45 |
| Southwell brick | | 86.70 |

| | |
|---|---|
| R. L. Smith | 2.20 |
| Freight | .50 |
| Payment on contract | 2,039.89 |
| Freight on Omaha pipe | .45 |
| Korsmeyer Co. | 3.60 |
| Fisher & Westover | 34.89 |
| Freight on paint | .27 |
| Maggard settlement with costs | 123.35 |
| Freight on pump | 3.35 |
| Final payment on contract | 3,000.00 |
| Freight on brick | 168.31 |
| Total construction costs | $9,184.22 |

Nothing allowed for superintendence or work done by company's men.

1154 *Springer Water Gas Set.*

| | | |
|---|---|---|
| Amount paid out to the erecting company from records of company | | $9,184.22 |
| Lea allowed for same set including generator, superheater, wash box, scrubber and condenser, also foundation | $4,991.00 | |
| Lea allowed for operating floor for two machines $1,871.00 allowing one-half of this | 935.00 | |
| Total allowed by Lea | | $5,926.00 |
| Lea's shortage | | $3,258.22 |

1155 500 *M. Holder.*

(5 years old.)

| | |
|---|---|
| Item #1. Contract not in office. Price made for holder and tank erected on foundations | $37,500.00 |

Item #2. Amounts paid out by company a/c erection of holder:

| | |
|---|---|
| Company pay roll | $1.53 |
| C. N. W. R. R. Co.—freight | 618.71 |
| S. Koch, advance payment | 200.00 |
| C. & N. W. R. R. Co.—freight | 189.14 |
| City Garbage Co.—digging vault | 19.20 |
| C. & N. W. R. R. Co.—freight | 344.25 |
| C. B. & Q. R. R. Co.—freight | 911.65 |
| O. R. Mallat—photos | 1.50 |
| Star Publishing Co.—legal notice for erection | 3.00 |

| | | |
|---|---|---|
| | C. & N. W. R. R.—freight | 474.66 |
| | Pettit Cabinet & Fixture Co.—stakes | 3.00 |
| | Robert Malone—excavating | 191.00 |
| | Company pay roll | 65.43 |
| | S. Koch—advance payment | 100.00 |
| | " " " " | 50.00 |
| | " " " " | 50.00 |
| | Reimers & Kaufman, payment on foundation | 1,000.00 |
| | C. B. & Q. R. R. Co.—freight and demurrage | 203.02 |
| | G. P. Abel—survey and estimate | 10.00 |
| | Brown Lumber Co.—lumber | 18.39 |
| | State Journal Co.—blue print paper | 5.00 |
| | Company pay roll | 67.79 |
| | Transfer Voucher—water | 10.00 |
| | Transfer Voucher—1 yr. coll. notes | 19,000.00 |
| | Reimers & Kaufman, payment on foundation | 1,000.00 |
| | C. & N. W. R. R. Co.—freight | 189.95 |
| | Reimers & Kaufman—payment on foundation | 1,500.00 |
| | S. Koch—advance payment | 200.00 |
| | " " " " | 350.00 |
| | City of Lincoln—permit | 15.00 |
| | S. Koch—advance payment | 300.00 |
| | Incidental expenses of company | .90 |
| | O. V. P. Stout—consultation | 30.00 |
| | Western Glass & Paint Co.—glass | 6.75 |
| | State Journal Co.—blue print paper | 5.00 |
| | Company pay roll | 62.38 |
| | Transfer voucher—water | 15.00 |
| | S. Koch—advance payment | 600.00 |
| | " " " " | 600.00 |
| | " " " " | 275.00 |
| | " " " " | 300.00 |
| | O. R. Mallat—photos | 11.00 |
| | Reimers & Kaufman—payment on foundations | 802.37 |
| | Company pay roll | 7.90 |
| | Transfer voucher—steam for erectors engine | 39.90 |
| 1156 | S. Koch—advance payment | $600.00 |
| | " " " " | 300.00 |
| | " " " " | 375.00 |
| | " " " " | 275.00 |
| | " " " " | 275.00 |
| | Company pay roll | 1.36 |
| | Transfer Voucher (#616) | 22.80 |
| | S. Koch—advance payment | 250.00 |
| | " " " " | 250.00 |
| | " " " " | 200.00 |
| | Material from company stock | 30.48 |
| | S. Koch—advance payment | 150.00 |
| | Brown Lumber Co.—lumber | 22.02 |

| | |
|---|---|
| Nebraska Hardware Co.—miscellaneous hardware | 4.38 |
| Western Supply Co.—fittings | 73.80 |
| Material from company stock | 10.69 |
| Western Supply Co.—fittings | 84.75 |
| Company pay roll | 151.00 |
| Transfer voucher—coke | 29.00 |
| S. Koch—advance payment | 150.00 |
| Transfer Voucher—note | 9,000.00 |
| Western Gas Construction Co.—payment | 626.92 |
| Incidental expenses | 4.50 |
| R. S. Young—building material | 2.45 |
| Dahsen & Ress—machine work | 2.00 |
| Western Supply Co.—fittings | .30 |
| Company pay roll | 8.30 |
| Lincoln Water Works Dept.—water | 214.71 |
| American Metal Hose Co.—copper hose | 88.50 |
| Total | $43,051.38 |

*Credits.*

| | | |
|---|---|---|
| Material returned to Company stock | $14.16 | |
| Credit from W. G. Const. Co. | 91.70 | |
| Total credits | | $105.86 |
| Net cost | | $42,945.52 |
| Nothing allowed for painting which later cost company. | | 952.10 |
| Present total | | $43,897.62 |

1157 500 *M. Holder.*

Amounts paid Western Gas Construction Co. as per records of the company:

| |
|---|
| $200.00 |
| 100.00 |
| 50.00 |
| 50.00 |
| 19,000.00 |
| 200.00 |
| 350.00 |
| 300.00 |
| 600.00 |
| 600.00 |
| 275.00 |
| 300.00 |

| | | |
|---|---|---|
| | | 600.00 |
| | | 300.00 |
| | | 375.00 |
| | | 275.00 |
| | | 275.00 |
| | | 250.00 |
| | | 200.00 |
| | | 250.00 |
| | | 150.00 |
| | | 150.00 |
| | | 9,000.00 |
| | | 626.92 |
| Total | | $34,476.92 |
| Freight Paid: | $618.71 | |
| | 189.14 | |
| | 344.25 | |
| | 911.65 | |
| | 474.66 | |
| | 203.02 | |
| | 189.95 | |
| | $2,931.38 | 2,931.38 |
| Total above items | | $37,408.30 |
| Payments on foundations | $1,000.00 | |
| | 1,000.00 | |
| | 1,500.00 | |
| | 802.37 | |
| Total | $4,302.37 | |
| Payments on excavation | $191.90 | |
| Payments on painting | 952.10 | |
| Total foundation, excavation & painting | | 5,446.37 |
| Total above items | | $42,854.67 |
| Extras | | 1,042.95 |
| Total | | $43,897.62 |
| Lea allowed | $43,985.00 | |
| Lea overage | 87.38 | |

1158 200,000 *Cu. Ft. Holder.*

(23 yrs. old.)

| | |
|---|---|
| Item 1. Excavation contract—not to be found Masonry tank contract—not to be found Steel contract—not to be found but price made for steel work erected was | $12,630.00 |
| Item 2. Paid to Stacy Mfg. Co.: | |
| Freight | $24.61 |
| " | 59.00 |
| " | 54.26 |
| " | 18.00 |
| " | 104.01 |
| " | 131.92 |
| " | 1.12 |
| " | 196.97 |
| Geo. Wilcox—erector | 40.00 |
| Demurrage | 3.00 |
| Freight | 153.50 |
| Geo. Wilcox—erector | 142.00 |
| N. Y. draft on contract | 6,000.00 |
| Freight | 6.37 |
| " | 2.10 |
| Geo. Wilcox—erector | 145.00 |
| Express | 12.70 |
| Freight on paint | 2.35 |
| Barrel of paint | 44.00 |
| Geo. Wilcox—erector | 185.00 |
| Express | 3.80 |
| Unloading first car | 3.00 |
| Geo. Wilcox—erector | 195.00 |
| Humphrey Bros.—sundries | 10.29 |
| H. W. Brown—sundries | 35.85 |
| Freight | 134.35 |
| Geo. Wilcox—erector | 120.00 |
| Carveth Cartage Co. | .25 |
| Geo. Wilcox—erector | 136.50 |
| Fisher & Westover | 6.62 |
| Express on box bolts | 1.65 |
| N. Y. Draft | 2,500.00 |
| Geo. Wilcox—erector | 50.00 |
| B. & M. R. R.—washers | 2.05 |
| Geo. Wilcox—erector | 10.00 |
| Geo. Wilcox—erector | 15.00 |
| Western Mfg. Co. | 25.72 |
| C. E. Hedges | 7.25 |
| Humphrey Bros. | 3.30 |

| | | |
|---|---|---|
| | Rolland & Beck | 6.00 |
| | Freight on brackets | 5.25 |
| | Geo. Wilcox—erector | 15.00 |
| 1159 | R. L. Smith | $2.10 |
| | Geo. Wilcox—erector | 30.00 |
| | Express | 2.10 |
| | C. E. Hedges | 1.25 |
| | N. Y. draft | 1,981.76 |
| | | $12,630.00 |
| | Lea allowed for above items | $14,559.60 |
| | Lea's overage | $1,929.60 |

1160 50,000 *Cu. Ft. Holder.*

(31 yrs. old.)

Erected in 1881—Oct., Nov., and Dec.

Item 1. Contract—not able to find.

Item 2. Amounts paid by company to Stacy Mfg. Co. for the iron work and erection of 50,000 cu. ft. holder.

| | |
|---|---|
| Stacy Mfg. Co.—freight | $122.43 |
| " " " —payment | 2,000.00 |
| Wm. Ranshow—cash advanced | 30.00 |
| Stacy Mfg. Co.—cash advanced | 65.00 |
| Wm. Ranshow—cash advanced | 60.00 |
| American Express—express | 12.85 |
| Wm. Ranshow—cash advanced | 60.00 |
| B. & M. Ry. Co.—freight | 99.09 |
| Wm. Ranshow—cash advanced | 60.00 |
| Stacy Mfg. Co.—cash advanced | 65.00 |
| H. Carter—drayage | 3.00 |
| Stacy Mfg. Co.—C. L. Baum | 16.99 |
| Wm. Ranshow—cash advanced | 160.00 |
| Stacy Mfg. Co.—payment | 1,553.25 |
| Total | $4,307.61 |

| | | |
|---|---|---|
| Lea allowed for this item | $3,494.04 | |
| Lea's shortage | 813.57 | |
| Lea allowed for holder erected | 10,409.00 | |

1161 *East Lincoln District Holder.*

(— years.)

Item #1. Excavation contract—70¢ per cubic yard.
Masonry Tank—contract for $6,375.00 covering tank without excavation.
Steel Holder—contract for steel work $7,000.00.

Item #2. Amounts paid by company a/c. erection of 100 M. holder:

| | |
|---|---|
| Incidental expenses | $2.75 |
| State Journal Co.—blue print paper | 2.50 |
| Harry Porter—detail paper | .85 |
| W. S. Scott—surveying lots | 6.00 |
| M. P. R. R. Co.—freight | 147.02 |
| Hall Bros.—miscellaneous hardware | 1.25 |
| Tallie Surveying Inst. Co.—level with rod | 51.00 |
| Rudge & Guenzel—steel tape | 3.90 |
| Company pay roll | 29.08 |
| Lincoln Transfer Co.—freight and drayage | 12.00 |
| Western Supply Co.—fittings | 15.66 |
| Hall Bros.—miscellaneous hardware | 1.20 |
| Incidental expenses | 14.00 |
| M. P. R. R. Co.—demurrage | 1.00 |
| Transfer Voucher—partial payment on steel contract | 3,500.00 |
| Transfer Voucher—fittings | 5.19 |
| Clark Lumber Co.—lumber, paper, etc | 2.84 |
| Clark & Levi Co.—labor and material | 33.50 |
| Incidental Expenses | 5.70 |
| John Westover—reinforcing beams | 31.20 |
| Company pay roll | 15.90 |
| Robt. Malone—excavation | 2,900.00 |
| C. P. Hahn—masonry work | 1,000.00 |
| Nebraska Telephone Co.—phone service | 6.80 |
| Transfer Voucher—fittings | .18 |
| T. J. Thorpe—machine work | 2.80 |
| Company pay roll | 25.47 |
| Incidental expenses | 7.00 |
| M. P. R. R. Co.—freight | 254.14 |
| Henry Schremser—erector | 150.00 |
| C. P. Hahn—masonry work | 5,500.00 |
| Henry Schremser—erector | 200.00 |
| " " " | 275.00 |
| M. P. R. R. Co.—demurrage | 2.00 |
| Hall Bros.—miscellaneous hardware | .70 |
| Incidental expenses | 6.50 |
| Western Supply Co.—fittings | 1.50 |

| | | |
|---|---|---|
| | Company pay roll | 139.74 |
| | Transfer voucher—fittings and pipe | 56.03 |
| | Henry Schremser—erector | 275.00 |
| | " " " | 350.00 |
| 1162 | Nebraska Telephone Co.—phone service | $4.00 |
| | Clark Lumber Co.—lumber | 1.47 |
| | C. P. Hahn—masonry work | 183.27 |
| | Baker Hdw. Co.—miscellaneous hardware | 2.08 |
| | Hall Bros.—miscellaneous hardware | .70 |
| | Hardy Furniture Co.—bolts | .45 |
| | Korsmeyer Co.—miscellaneous electric supplies | 7.87 |
| | Lincoln Transfer Co.—freight and drayage | 5.36 |
| | T. J. Thorpe—machine work | 2.75 |
| | Incidental expenses | 3.50 |
| | Western Gas Construction Co.—fittings | 49.50 |
| | Western Glass & Paint Co.—red lead | 1.15 |
| | Western Supply Co.—fittings | .39 |
| | Reimers Kaufman Co.—labor and material | 8.80 |
| | Company Pay roll | 144.67 |
| | Material used from company stock | 15.75 |
| | " " " " | 147.17 |
| | Robert Malone—excavation | 27.95 |
| | M. P. R. R. Co.—freight | 177.18 |
| | Western Gas Construction Co.—payment on contract | 2,250.00 |
| | Hall Bros.—screen wire | 1.80 |
| | Keens & sharp—musling and paste | 6.45 |
| | Incidental expenses | 4.00 |
| | R. L. Smith—pulley | 1.35 |
| | Western Supply Co.—fittings | 17.16 |
| | John Westover—iron | 2.90 |
| | Company pay roll | 145.23 |
| | Material used from company stock | 128.88 |
| | " " " " " | 2.84 |
| | Lincoln Water Works Dept.—water | 233.83 |
| | Nebraska Material Co.—cement and sand | 25.84 |
| | Clark Lumber Co.—lumber | 6.25 |
| | Hall Bros. Co.—brushes and pails | 6.80 |
| | Incidental Expenses | .50 |
| | Material used from company stock | 3.99 |
| | Company pay roll | 25.04 |
| | Material used from company stock | 1.60 |
| | Company pay roll | 10.24 |
| | Western Brick & Supply Co.—sand and stone | 5.40 |
| | Company pay roll | 28.98 |
| | C. B. & Q. R. R. Co.—freight | 2.67 |
| | Griswold Seed Co.—seed | 6.97 |
| | Harrison's Select Nursery Co.—trees | 78.18 |
| | Company pay roll | 22.74 |
| | Hall Bros.—miscellaneous hardware | 9.65 |
| | Incidental Expenses | .40 |

| | | |
|---|---|---|
| | C. Wilson—cement | 160.00 |
| | Western Glass & Paint Co.—paint | 13.30 |
| | Nichols Roofing Co.—roof material | 70.80 |
| | C. P. Hahn—masonry work on governor house | 458.64 |
| | Material from company stock | 27.92 |
| | Western Supply Co.—pipe and fittings | 7.57 |
| 1163 | Transfer voucher—labor installing heaters | $9.88 |
| | " " " " " | 19.88 |
| | C. B. & Q. R. R. Co.—freight | 14.77 |
| | Korsmeyer Co.—miscellaneous repairs | 44.20 |
| | Hall Bros.—screws and bolts | .35 |
| | F. W. Brown Lbr. Co.—lumber | 1.28 |
| | T. J. Thorpe—cap screws | .20 |
| | Company pay roll | 33.48 |
| | Material from company stock | .30 |
| | " " " " | 1.92 |
| | Wm. Ress—miscellaneous repairs | 7.65 |
| | Western Gas Construction Co.—pipe and fittings | 135.73 |
| | Baker Hdw. Co.—washer | .20 |
| | Hall Bros. Co.—bolts and washers | 1.25 |
| | Nebraska Material Co.—material | 6.92 |
| | M. P. R. R. Co.—freight | 26.69 |
| | Clark Lumber Co.—lumber | 1.60 |
| | Rudge & Guenzel—bolts and pipe | 5.10 |
| | Western Supply Co.—pig lead | 5.88 |
| | B. F. Sturtevant Co.—blower and motor | 815.00 |
| | Chas. Olson—labor and material for manholes, heaters at district holder | 355.20 |
| | Rudge & Guenzel Co.—lawn mower and tools | 26.95 |
| | Western Gas Construction Co.—screws and nuts | 4.10 |
| | Western Supply Co.—fittings | 19.17 |
| | Lincoln Transfer Co.—freight and dravage | 5.56 |
| | " " " " " | 8.61 |
| | Connelly Iron Sponge & Governor Co.—pressure gauge | 300.00 |
| | Illinois Electric Co.—batteries | 55.50 |
| | Korsmeyer Co.—miscellaneous electric supplies | 1.80 |
| | Lincoln Drug Co.—blue vitriol | 7.00 |
| | Incidental expenses | 2.60 |
| | Riggs Pharmacy—paraffine | .25 |
| | Company pay roll | 24.07 |
| | Material from company stock | 2.69 |
| | Clark Lumber Co.—lumber | 6.72 |
| | Incidental expense | .50 |
| | Material from company stock | 2.54 |
| | Bristol Company—recording gauge | 36.00 |
| | Sunderland Supply Co.—belt | 8.45 |
| | | $21,803.26 |

| | | |
|---|---|---|
| Credit on material returned to company stock | $2.30 | |
| Credit on empty cement sacks returned | 19.20 | |
| Credit on dirt sold | 5.00 | |
| Credit on West. Gas Construction Co. | 660.34 | |
| Credit on material returned to company stock | .24 | |
| | | 687.08 |
| | | $20,904.28 |

1164 *East Lincoln Holder 100 M.*

| | | |
|---|---|---|
| Payments to Western Gas Const. Co. 1910 as per records of Company: | | |
| | $3,500 | |
| | 150 | |
| | 200 | |
| | 275 | |
| | 275 | |
| | 350 | |
| | 2,250 | |
| | | $7,000.00 |
| Payments to Malone as per records of Company for excavation: | | |
| | $2,900 | |
| | 27.96 | |
| | | $2,927.96 |
| Payments to Hahn as per records of Company a/c. brickwork, etc.: | | |
| | $1,000.00 | |
| | 5,500.00 | |
| | 183.27 | |
| | | $6,683.27 |
| Three items as above | | $16,611.23 |
| Booster house from records | $458.64 | |
| Exhauster & motor from records | 815.00 | |
| | | 1,273.64 |
| Manholes—Hahn | $355.20 | |
| Heaters | 27.92 | |
| Labor | 39.76 | |
| | | 423.32 |
| | | $1,696.96 |
| Total from above | $20,904.28 | |
| Deduction | 1,696.96 | |
| Net cost as above | $19,207.32 | |
| Lea allowed | $18,685.00 | |
| Lea's shortage | $522.32 | |

*Water Gas Machines.*

| Item. | Cost from company records. | Amounts allowed by Lea. | Difference. |
|---|---|---|---|
| 1—7′ 6″ Western Gas Set | $8,322.94 | $9,503.00 | ±$1,180.06 |
| 1—7′ 6″ " " " | 13,365.72 | 12,157.00 | —1,208.72 |
| 1—6′ 6″ " " " | 8,763.20 | 8,391.00 | — 372.00 |
| 1—6′ 6″ Springer set | 9,184.22 | 5,926.00 | —3,258.22 |
| | $39,636.08 | $35,977.00 | —$3,658.88 |

*Gas Holders.*

| | | | |
|---|---|---|---|
| 500,000 cu. ft. Western Gas Complete | $43,897.62 | $43,985.00 | + $87.38 |
| 200,000 cu. ft. Stacey—steel work erected | 12,630.00 | 14,559.60 | +1,929.60 |
| 50,000 cu. ft. steel work erected | 4,307.61 | 3,494.04 | — 813.57 |
| 100,000 cu. ft. Western Gas Complete | 19,207.32 | 18,685.00 | — 522.32 |
| | $80,042.55 | $80,723.64 | + $681.09 |

Lea's shortage on above groups ..... $2,977.79

1166 #8 *Sturtevant Turbo-Blower.*

(4 years old.)

Item #1. Contract:
Price made $1,056.00 F. O. B. factory.

Item #2. Amounts paid out a/c erection of above set.

| | |
|---|---|
| Baker Hardware Co.—miscellaneous hardware... | $2.02 |
| Incidental expense to company..... | .38 |
| Lincoln Transfer Co.—drayage and freight..... | 82.14 |
| Western Supply Co.—fittings ..... | 7.78 |
| Company pay roll ..... | 57.93 |
| Baker Hardware Co.—miscellaneous hardware.. | .20 |
| Nebraska Hardware Co.—pipe, fittings & labor.. | 56.82 |
| B. F. Sturtevant Co.—side blast gate..... | 28.05 |
| Western Glass & Paint Co.—plaster of paris..... | .30 |
| Sunderland Roofing Co.—globe valve..... | 4.95 |
| Lincoln Transfer Co.—freight and drayage..... | 1.70 |
| Company pay roll ..... | 13.71 |
| Nebraska Hardware Co.—piping ..... | 28.52 |
| Company pay roll ..... | 2.37 |
| Western Gas Construction Co.—first payment... | 1,050.00 |
| Total ..... | $1,336.87 |

Not including excavating, back-filling and foundation.

| | |
|---|---|
| Lea allowed for above..... | $1,435.06 |
| Lea's overage ..... | $98.19 |

1167 *Blower for Old Water Gas Machine.*

(Erected between Apr. & July, 1909.)

| | |
|---|---|
| Baker Hardware Co.—miscellaneous hardware..... | $.65 |
| B. F. Sturtevant Co.—one—#7 extra heavy gas blower. | 225.00 |
| Company pay roll ..... | 48.09 |
| Cooper & Cole Co.—fittings..... | .90 |
| Lincoln Transfer Co.—freight and drayage..... | 14.65 |
| C. P. Hahn—labor and brick..... | 76.05 |
| T. J. Thorpe—machine work..... | 6.30 |
| R. S. Young Co.—building material..... | 15.12 |
| Nebraska Material Co.—sand and stone..... | 6.17 |
| F. W. Brown Lbr. Co.—lumber..... | 4.52 |
| Baker Hardware Co.—miscellaneous hardware..... | 2.75 |
| Company pay roll ..... | 35.48 |
| Nichols Roofing Co.—tar, paper and pitch..... | 4.00 |
| Nebraska Hardware Co.—blower pipe and time..... | 23.86 |
| Total ..... | $463.54 |

1168 *No. 7 Gas Blower*—1909.

| | | |
|---|---|---|
| Amount paid B. F. Sturtevant Co. for blower from company's records | | $225.00 |
| Freight and drayage | | 14.65 |
| Total delivered at plant | | $239.65 |
| Pipe and fittings: | | |
| Baker Hardware Co. | $.65 | |
| Cooper & Cole | .90 | |
| Nebraska Hardware for blower pipe & time | 23.86 | |
| Baker Hardware Co. | 2.75 | |
| Total | | $28.16 |
| Building material: | | |
| C. P. Hahn, labor & brick | $76.05 | |
| R. S. Young,—material | 15.12 | |
| Nebraska Material Co. | 6.17 | |
| F. W. Brown—lumber | 4.52 | |
| Nichols Roofing Co. | 4.00 | |
| | | $105.86 |
| Miscellaneous items including company, labor | | $89.87 |
| Total | | $463.54 |
| Blower, pipe and fittings | | $267.81 |
| Lea allowed for blower and foundation complete | | $272.00 |
| This would allow us for labor connections and foundation above cost at plant | | $32.35 |

1169 *New Water Gas Exhauster.*

(Dec., 1908, to May, 1909.)

| | |
|---|---|
| Lincoln Transfer Co.—freight and drayage | $40.86 |
| John Westover—beams | 11.13 |
| Western Glass & Paint Co.—red lead | 1.00 |
| Western Supply Co.—fittings | 24.46 |
| Company pay roll | 96.40 |
| Western Gas Construction Co.—lumber | 25.00 |
| Nebraska Hardware Co.—miscellaneous hardware | .53 |
| B. F. Sturtevant Co.—one #6 exhauster & engine | 535.00 |
| R. S. Young Co.—building material | 6.86 |

| | |
|---|---|
| Lincoln Transfer Co.—freight and drayage—pipe..... | 9.34 |
| Nebraska Hardware Co.—miscellaneous hardware..... | 1.90 |
| Company payroll ..... | 20.07 |
| Western Gas Construction Co.—pipe, etc..... | 86.00 |
| Western Glass & Paint Co.—red lead..... | 1.00 |
| Company pay roll ..... | 57.18 |
| Material from company's stock..... | 11.80 |
| Cooper & Cole—fittings ..... | 9.94 |
| Lincoln Transfer Co.—freight and drayage—B. & E... | 28.48 |
| Material from company's stock..... | 8.00 |
| John Westover—iron work ..... | 2.00 |
| Lincoln Transfer Co.—freight and drayage—P. & F.... | .94 |
| | $977.89 |
| Credits: | |
| Western Supply Co.—material returned.. | 2.76 |
| Grand Total ..... | $975.13 |

1170 *New Water Gas Exhauster & Engine.*

(#6 exhauster) 1909.

| | | |
|---|---|---|
| Payments made to B. F. Sturtevant for exhauster and engine from records of the company..... | | $535.00 |
| Freight and drayage paid on same..... | | 28.48 |
| Price at plant ..... | | $563.48 |
| Pipe and fittings from records of company in the construction account— | | |
| Western Supply Co. ..... | $24.46 | |
| Nebraska Hardware Co. ..... | 1.90 | |
| Western Gas Const. Co..... | 86.00 | |
| Cooper & Cole..... | 9.94 | |
| | $122.30 | |
| Credit from Western Supply Co..... | 2.76 | |
| Net ..... | $119.54 | |
| Engine, blower pipe and fittings..... | | $683.02 |
| Foundation, labor connecting and setting and miscellaneous ..... | | $292.11 |
| Total ..... | | $975.13 |

| | |
|---|---|
| Engine, blower and labor from records | $855.59 |
| Lea allowed for engine and blower erected including foundations | $616.00 |
| This figure would allow us for labor, setting and for foundation above cost at plant | 52.52 |

1171 *New Blower at District Holder.*

(Erected between Nov., 1912, and present time.)

The following items do not include the price paid for the blower itself and motor:

| | |
|---|---|
| Western Gas Construction Co.—pipe and fittings | 135.73 |
| Baker Hardware Co.—washer | .20 |
| Hall Bros. Co.—bolts and washers | 1.25 |
| Nebraska Material Co.—material | 6.92 |
| Mo. Pac. R. R. Co.—freight | 26.69 |
| Clark Lumber Co.—lumber | 1.60 |
| Rudge & Guenzel Co.—bolts and pipe | 5.10 |
| Western Supply Co.—pig lead | 5.88 |
| C. B. & Q. R. R. Co.—freight | 14.47 |
| Korsmeyer Co.—miscellaneous electric | 44.20 |
| Company pay roll | 19.88 |
| Hall Bros. Co.—screws and bolts | .35 |
| Brown Lumber Co.—lumber | 1.28 |
| T. J. Thorpe Mch. Co.—cap screws | .20 |
| Company pay roll | 33.48 |
| Material used from company stock | 2.22 |
| Wm. N. Ress—miscellaneous repairs | 7.65 |
| | $307.10 |
| Credit: | |
| Material returned to company stock | .24 |
| Grand total | $306.86 |

1172 #5 *Blower at District Holder.*

| | |
|---|---|
| Amount charged by Sturtevant Co. for #5 blower and 25 H. P. 3 phase motor F. O. B. factory | $815.00 |
| Freight from company records | 41.16 |
| | $856.16 |

Pipe and fittings from company's records:

| | | |
|---|---|---|
| Western Gas Const. Co.—pipe | $135.73 | |
| Baker Hdw. Co.—washer | .20 | |
| Hall Bros.—bolts and washers | 1.25 | |
| Rudge & Guenzel—bolts and pipe | 5.10 | |
| Hall Bros.—screws and bolts | .35 | |
| Thorp—cap screws | .20 | |
| | | $142.83 |
| Miscellaneous items including erection foundation and labor | | $123.11 |
| Total | | $1,122.10 |
| Credit | | .24 |
| Net total | | 1,121.86 |
| Blower, motor and misc. items as above | | $979.27 |
| Lea allowed | | $633.00 |

1173 *Coal Gas Washer Scrubber.*

| | |
|---|---|
| Price made to company June 3rd, 1887 | $2,352.15 |
| Freight paid | 165.60 |
| " " | 13.45 |
| Total above items paid out by company not including erection | $2,531.20 |
| Lea allowed for washer scrubber including foundation | 2,121.00 |
| Lea's shortage | $410.20 |

1174 *Governor & Connection for 500 M.*

(4 years old.)

| | |
|---|---|
| Item #1. Contract—none; but price made on 12" governor alone | $360.00 |
| #8 Sturtevant exhauster | 450.00 |
| Item #2. Amounts paid out by company a/c connecting governor and building foundations and housing: | |
| Company pay roll | $7.00 |
| C. R. I. & P. Ry.—freight | 115.78 |

| | | |
|---|---|---|
| | C. B. & Q. Ry.—freight | 2.00 |
| | Company pay roll | 18.82 |
| | Incidental expense | .70 |
| | Lincoln Transfer Co.—freight and drayage | 45.85 |
| | Material from company stock | .80 |
| | B. F. Goodrich—gas bags | 66.00 |
| | Reynolds gas Regulator Co.—12" holder governor | 360.00 |
| | Brown Lumber Co.—lumber | 34.11 |
| | Western Glass & Paint Co.—lead | 1.00 |
| | Western Gas Construction Co.—pipe and valves | 1,044.90 |
| | Company pay roll | 193.37 |
| | Western Glass & Paint Co. | 2.00 |
| | D. D. Price—running levels | 5.00 |
| | Lincoln Transfer Co.—freight and drayage | 60.01 |
| | Nebraska Hardware Co.—miscellaneous hardware | 11.64 |
| | Western Supply Co.—fittings | 2.50 |
| | Material from company stock | 5.92 |
| | " " " " | 22.40 |
| | C. P. Hahn—bricks, sand, lime, lumber & labor | 294.38 |
| | C. R. I. & P. R. R. Co.—freight | 10.34 |
| | Material from company stock | 31.58 |
| | Incidental expense | .88 |
| | Brown Lumber Co.—lumber | 2.78 |
| | Dr. E. B. Finney—medical services | 1.80 |
| | Nebraska Hardware Co.—miscellaneous hardware | 8.45 |
| | Western Supply Co.—fittings | 2.50 |
| | Western Glass & Paint Co.—red & white lead | 2.00 |
| | R. S. Young Co.—sand, clay and cement | 70.66 |
| | Lincoln Transfer Co.—freight and drayage | 3.24 |
| | Western Gas Construction Co.—C. I. pipe & fittings | 476.80 |
| | Western Glass & Paint Co.—white lead | 1.00 |
| | Nebraska Hardware Co.—miscellaneous hardware | 2.97 |
| | R. S. Young—sand, clay and cement | 15.98 |
| | Company pay roll | 325.68 |
| | Material from company stock | 28.60 |
| | C. P. Hahn—brickworks, sand, etc | 79.71 |
| | Capital City Iron Works—casting | 23.85 |
| | John Westover—circle | 9.30 |
| | R. S. Young—building material | 245.00 |
| | Dahlsen & Ress—machine work | 13.80 |
| | Nebraska Hardware—miscellaneous hardware | 2.93 |
| | Western Supply Co.—fittings | 13.64 |
| 1175 | Western Glass & Paint Co.—white & red lead | $2.00 |
| | Company pay roll | 98.41 |
| | Transfer voucher | 32.62 |
| | Incidental expense—cash | .90 |
| | Dahlsen & Ress—machine work | 3.75 |
| | Western Gas Construction Co. | 12.00 |
| | Company pay roll | 5.63 |

| | |
|---|---|
| B. F. Sturtevant Co.—#8 gas exhauster | 450.00 |
| R. S. Young Co.—stone | 18.00 |
| Lincoln Transfer Co.—freight and drayage | 24.00 |
| Company pay roll | 14.58 |
| Material from company stock | 1.14 |
| Baker Hdw. Co.—miscellaneous hardware | 4.10 |
| Lincoln Transfer Co.—freight and drayage | 36.37 |
| Western Gas Construction Co.—ells, tees, plugs, etc. | 168.00 |
| Western Glass & Paint Co.—paint | .80 |
| R. S. Young & Co.—building material | 9.00 |
| Company pay roll | 107.98 |
| Material from company stock | 11.23 |
| Baker Hardware Co.—miscellaneous hardware | 1.40 |
| Crane Co.—3″ valve screwed | 7.50 |
| Lincoln Transfer Co.—freight and drayage | 5.40 |
| Western Glass & Paint Co.—lead and oil | 2.30 |
| Western Brick & Supply Co.—clay, sand and cement | 22.50 |
| Nichols Roofing pump | 1.65 |
| Company pay roll | 20.82 |
| Crane Co.—black pipe | 198.18 |
| B. F. Sturtevant—engine 7x6x5 and pulley | 317.50 |
| Western Supply Co.—fittings | 25.00 |
| H. W. Johns-Manville Co.—asbestos | 14.26 |
| Lincoln Transfer Co.—freight and drayage | 4.95 |
| Company pay roll | 40.63 |
| Brown Lumber Co.—lumber | 12.06 |
| Baker Hardware Co.—miscellaneous hardware | 2.15 |
| Lincoln Transfer Co.—freight and drayage | .65 |
| Rudge & Guenzel Co.—drilling | 2.25 |
| Sunderland Roofing Co.—leather belt | 26.21 |
| Western Supply Co.—fittings | 2.26 |
| Material used from company stock | 4.83 |
| Company pay roll | 70.36 |
| Nichols roofing Co.—asbestos | 30.00 |
| Rudge & Guenzel Co.—muslin | 1.65 |
| Western Brick & Supply Co.—clay, sand & cement | 6.50 |
| Company pay roll | 29.93 |
| Total | 5,519.15 |

Credits:

| | | |
|---|---|---|
| Western Gas Construction Co.—freight | $169.38 | |
| R. S. Young Co.—sacks returned | 21.80 | |
| Crane Co.—credit memo | 59.65 | |
| Western Supply Co.—credit memo | 1.05 | |
| | $251.88 | 251.88 |
| Net | | $5,267.27 |

1176 *Governor & Connection for 500 M Holder.*

| | | |
|---|---|---|
| Payments to Reynolds Gas Regulator Co. a/c 12" governor from company records..... | $360.00 | |
| Payments to B. F. Sturtevant Co. as per records of company— | | |
| #8 exhauster ..... | $450.00 | |
| 7x6 engine & pulley..... | 317.50 | |
| | | $1,127.50 |
| Payments to Western Gas Construction Co. as per records of the company— | | |
| Pipe & valves..... | $1,044.90 | |
| Pipe and fittings..... | 476.80 | |
| | 12.00 | |
| Ell, tees & plugs..... | 168.00 | |
| | $1,701.70 | |
| Credits a/c freight..... | 169.38 | |
| | | $1,532.32 |
| Payments to C. P. Hahn a/c building work from records of the company— | | |
| Brick, sand, lime, etc..... | $294.38 | |
| Brickwork, sand, etc. ..... | 79.71 | |
| Other building material from records of the company— | | |
| Lumber ..... | 34.11 | |
| " ..... | 2.78 | |
| Sand, clay, etc. ..... | 70.66 | |
| Sand, clay, etc. ..... | 15.98 | |
| Material ..... | 245.00 | |
| " ..... | 9.00 | |
| Lumber ..... | 12.06 | |
| | $763.68 | |
| Credits ..... | 21.80 | |
| | | $741.88 |
| Freight and drayage from records of company. | $115.78 | |
| | 2.00 | |
| | 45.85 | |
| | 60.01 | |
| | 10.34 | |
| | 3.24 | |
| | 24.00 | |
| | 36.37 | |
| | 5.40 | |
| | 4.95 | |
| | .65 | |
| | | $308.59 |

1177 COPY PLAINTIFF'S EXHIBIT "51."

*Ord. No.* 363.

An Ordinance establishing a unit of measure and a standard for manufactured gas, regulating the quality, purity, pressure, supply and use of gas; defining the duties of gas companies; creating the office of gas inspector, and defining his duties; providing for a reduction in the price to be paid for gas not meeting the required standard established herein; establishing penalties for the violation of the provision hereof, and repealing all ordinances in conflict herewith.

Be it ordained by the Mayor and Council of the city of Lincoln:

Section 1. Unit of Measure. The unit of measure for the sale by meter of manufactured gas used for illuminating or heating purposes, shall be the cubic foot of sixty two and 321/1000 pounds avoirdupois weight of distilled rain water, weighed in air of the temperature of 62° Fahrenheit scale, the barometer being at 30 inches.

Section 2. Standard. All gas manufactured and sold in the city of Lincoln for illuminating or heating purposes, shall be of the following standard: It shall have an illuminating power of not less than 18 English sperm candles when burned from a Suggs London Argand Burner No. 1, at the rate of five cubic feet per hour. It shall contain not less than 625 British Thermal Units per cubic foot, at a pressure of 14.7 pounds per square inch and a temperature of 60° Fahrenheit scale. It shall have sufficient odor to be readily detected by its smell. It shall contain not to exceed 20 grains of sulphur per one hundred cubic feet.

1178 It shall contain not to exceed 10 grains of am-onia per one hundred cubic feet, and shall contain no sulphuretted hydrogen. It shall have a pressure of not less than one and one-half inches nor more than five inches measured in a water *guage* at the place where tested as herein provided.

Section 3. Testing Room. The city council shall provide a suitable room in the city hall or elsewhere to be used as a testing room by the gas inspector, and shall install and maintain therein all necessary apparatus, chemicals, supplies, books and records for testing and recording the pressure, quality, purity, and illuminating and heating power of the gas supplied by any gas company to consumers in the city of Lincoln, and also all necessary apparatus, supplies, and records for testing, sealing and recording the accuracy of meters supplied and used by any gas company in said city. Said testing room shall be equipped with a Junker's Calorimeter, or a Calorimeter of standard make approved by the gas inspector; a bar photometer, or a photometer of a construction approved by the gas inspector, a self registering pressure *guage*, and all necessary apparatus, chemicals and supplies for making tests for the presence of sulphur, am-nia, and sulphuretted hydrogen, and a machine of standard make approved by the gas inspector for testing meters, with necessary ma-

terials and apparatus for marking and numbering each meter tested with the result of the test and its date, together with all necessary books and records for recording the results of all tests and keeping a permanent record thereof.

Section 4. Gas Inspector. The Water Commissioner is hereby made ex-officio Gas Inspector with authority to authorize the
1179 assistant superintendent of lighting plant, or any other competent person in his department, to act as assistant gas inspector.

Section 5. Duties of Gas Inspector. It shall be the duty of the gas inspector to inspect, test, and determine the pressure, quality, purity, heating, and illuminating power of the gas manufactured and furnished to consumers for illuminating and heating purposes by any gas company in the city of Lincoln, once each day and report in writing to the city council the results of said tests as to the pressure, quality, purity, heating and illuminating power. It shall be the duty of the gas inspector upon the written demand of any gas consumer and the payment of a fee of one dollar, together with the location of the meter he desires to have tested, to at once notify in writing the gas company owning said meter that a complaint has been filed and the time when he will send after such meter, whereupon the gas company shall, in the presence of the gas inspector or assistant, disconnect said meter, replacing it with another meter and deliver the old meter to the gas inspector to be tested by him, and if said meter shall be found to be correct, according to the standard hereinafter fixed, the one dollar paid by the gas consumer shall remain the property of the city. But if the meter is found to register more gas than consumed, within the standard hereinafter fixed, the fee of one dollar shall be paid by the gas company owning the meter and the gas inspector shall deliver to said gas consumer his certificate, showing that the meter has been found to register more gas
1180 than consumed and the fee of one dollar paid by said gas consumer shall be repaid to him by the city treasurer on production and delivery of such certificate. It shall be the duty of the gas inspector to record in a suitable book provided for that purpose the number of meters inspected and sealed or condemned by him with the date, and name of the manufacturer and the result of such test, and he shall make a monthly report to the mayor and city council of the results of such tests.

Section 6. Meters: Standard and Application. All meters registering within two per cent slow or three per cent fast in every one hundred cubic feet of gas registered at a pressure of not less than one and one-half inches or more than five inches, measured in a water guage, and when measuring the number of cubic feet per hour that the meter is designed to measure, shall be considered accurate. Inspection herein provided for shall be conclusive both upon the gas company and the consumer as to the amount of gas consumed during the three months previous to the month in which such meter shall be inspected.

Section 7. Monthly Reports. It shall be the duty of the gas inspector to report in writing monthly to the mayor and city council

the result of all tests of gas and meters made by him during said month, showing all moneys received by him, and to pay over to the city treasurer all money collected by him for testing meters and file his receipt therefor.

Section 8. Penalty for Violation of Standard. If the gas furnished by any gas company is found, on any test, to fail to meet the standard and requirements established by this ordinance, the gas in-
1181 spector shall at once notify the mayor and city council, and such gas company, and shall make daily tests thereafter until the gas is found to comply with the standard and requirements herein established. And if the gas of any gas company is found for three consecutive days to fall below the standard and requirements established by this ordinance, such gas company shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be subject to a fine of One Hundred Dollars for each day that the gas furnished by it, fails upon inspection, to meet the standard and requirements herein established, Provided, the penalty provided for herein shall not be enforced when the failure to furnish gas according to the standard and requirements herein established, is by reason of some unavoidable accident and was not caused through any negligence or fault of said gas company.

Section 9. Gas Below Standard Price. In case the gas furnished by any gas company to gas consumers within the city of Lincoln shall fall below the average of 625 British Thermal Units for the period of a month, beginning on the 20th of the month and ending on the 20th of the succeeding month, a reduction from the maximum amount allowed to be charged therefor by any gas company, under the ordinances of the city, shall be made to such gas consumers, of five cents for each ten British Thermal Units which the average of such gas as hereinabove set forth shall show below 625 Thermal Units.

Section 10. Application of Tests. The tests made by the Gas Inspector of the city for the purpose of determining the British Thermal Units shall be conclusive on all gas companies furnishing gas in the city of Lincoln, for the purpose of determining the price
1182 to be paid for such gas by the gas consumers as hereinabove set forth. It shall not be necessary for the gas inspector to make more than 15 tests for the purpose of determining the British Thermal Units on 15 separate days within any given month, and the average thereof shall be taken and deemed to be the average for the month for the purposes of determining the price to be paid therefor. If more than 15 tests are made the average shall be taken of all the tests so made.

Section 11. Inspection of Books and Records. The books and records of all gas companies shall be subject to inspection by the officers of the city of Lincoln for the purpose of determining the amount charged and received for gas by any such company during any particular month.

Section 12. Violations of Ordinance. If any person shall counterfeit or wilfully deface the seal placed upon any gas meter by the gas inspector, the person or persons so offending shall be guilty of a

misdemeanor and shall upon conviction thereof be fined not less than Twenty-five Dollars ($25.00) or more than One Hundred Dollars ($100.00). Any gas company, after receiving a written notice from the gas inspector, refusing to disconnect within twenty-four hours any meter of any consumer in the city of Lincoln and to deliver the same to the gas inspector to be tested shall be guilty of a misdemeanor and upon conviction thereof shall be fined in the sum of not less than Ten Dollars ($10.00) or more than One Hundred Dollars ($100.00).

Section 13. Application of Ordinance. The provisions of this Ordinance shall apply to all companies which manufacture or distribute gas for sale for illuminating or heating purposes; and
1183 the term "gas Company", shall include all persons, firms, corporations, or individuals who own or operate works for the manufacture and sale of gas for illuminating or heating purposes.

Section 14. Repealing Clause. All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

This Ordinance shall take effect and be in force from and after its passage, approval and publication according to law.

Introduced by John S. Bishop.

Passed April 9, 1906.

Approved April 16, 1906.

Approved Apr. 16, 1906.

F. W. BROWN, *Mayor.*

Attest:

THOS. H. PRATT,
*City Clerk.*

Endorsed on back: No. 363. An Ordinance. Gas Ordinance. Regulations etc. Read 1st time Mar. 26, 1906. Read 2nd Time Apr. 2, 1906. Read 3rd time Apr. 9, 1906. Passed Apr. 9, 1906. Approved Apr. 16, 1906. For Proof of Publication see Record 1895, Page —.

1184 (COPY OF EXHIBIT "52.")

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Defendant.

*Petition.*

The plaintiff a municipal corporation existing under the laws of the state of Nebraska as a city of the first class having more than 40,000 and less than 100,000 population brings this action against the defendant and for cause of action alleges:

1. The defendant is a corporation organized and existing under the laws of the state of Nebraska with its principal office in the city of Lincoln, Nebraska, and is now and has been for more than five years last past engaged in the business of manufacturing and furnishing gas to the inhabitants of such city.

2. That on the 10th day of December, 1906, the mayor and council of the city of Lincoln duly passed an ordinance whereby there was levied upon all gas companies manufacturing and furnishing gas to the inhabitants of said city an occupation tax in the sum and amount of two and one half per cent of the gross receipts of such companies derived from the business of manufacturing and furnishing gas as aforesaid, the same to be of force and take effect January 1, 1907: The said ordinance was duly approved by the mayor on December 13, 1906, and was on the same day duly published as required by law and thereupon the same became a legal and valid ordinance and in full force and effect; that the payment of
1185 said taxes was required by the provisions of said ordinance to be made monthly, the first payment became due on February 15, 1907 and the monthly payments thereafter became due and payable on the 15th day of each and every month and in case of default in such payment it was provided that such taxes should draw interest at the rate of one per cent per month and after six months' delinquency a penalty of five per cent was required to be added to the amount due; that said Gas Companies were further required by said ordinance to file with the city clerk of such city on the 16th day of each and every month a statement verified by the managing officer of said company, showing the gross receipts of the previous month. A copy of said ordinance is hereto attached marked exhibit "A" and made a part of this petition.

3. Plaintiff alleges that said ordinance has been in full force and effect since January 1st, 1907, and defendant has during all of said time been manufacturing and selling gas to the inhabitants of the city of Lincoln and the gross receipts derived by it therefrom have been at least the sum and amount of $18,000. per month; that defendant has wholly failed and refused to comply with the provisions of said ordinance or any of them and has refused to make and file with the city clerk of said city the verified statement as to its receipts derived from such business as required by the provisions of such ordinance and by reason thereof the plaintiff is unable to state the exact amount of such receipts.

Plaintiff alleges that there is now due and payable from defendant to the city of Lincoln the occupation taxes as aforesaid for the period commencing January 1st, 1907 and ending March 31, 1908
1186 the sum of at least $6,750.00 on which there is interest amounting to at least the sum of $450.00 and penalties of at least $200.00 aggregating more than $7,400.00 in all, all of which is due and payable from defendant to plaintiff.

Wherefore, the plaintiff prays that an account be taken of the amount due it from defendant as taxes, interest and penalties under said ordinance in the sum of $7,400.00 and for such other and further sum as may be found due on account of said taxes, interest and

penalties and for such other, further and different relief as be found to be just and equitable.

JOHN M. STEWART,
*Attorney for City of Lincoln.*

STATE OF NEBRASKA,
*County of Lancaster, ss:*

John M. Stewart, being first duly sworn deposes and says that he is the attorney for the plaintiff City of Lincoln, that he has read the foregoing petition and that the facts set forth therein are true as he verily believes.

JOHN M. STEWART.

Subscribed and sworn to before me this 26th day of May, 1908.

[SEAL.] DANIEL H. McCLANAHAN,
*Notary Public.*

EXHIBIT "A."

*Ordinance Number* 439.

An Ordinance providing for and assessing an occupation tax upon all gas companies manufacturing and furnishing gas to the inhabitants of the city of Lincoln, fixing the amount thereof, providing for the enforcement and collection thereof, and providing interest and penalties for non-payment when due and payable, and designating the funds to be credited with the amount so paid.

1187

Be it Ordained by the Mayor and Council of the City of Lincoln:

Section 1. That all gas companies manufacturing and furnishing gas to the inhabitants of the city of Lincoln are hereby required to pay an occupation tax, and the amount thereof as hereinafter specified is hereby assessed against said company or companies.

Section 2. That all gas companies manufacturing and furnishing gas to the inhabitants of the city of Lincoln are hereby required to pay to the City of Lincoln as an occupation tax the sum and amount of two and half per cent (2½%) of the gross receipts of said company derived from its business of manufacturing and furnishing gas to the inhabitants of the city of Lincoln, payment thereof to be made as follows: Beginning with January 1, 1907, said gas company or companies shall on the 15th day of each and every month thereafter pay the city of Lincoln two and one half per cent (2½%) of the gross receipts of said company for the preceding month, as hereinabove provided, as an occupation tax, and all deferred payments shall draw interest at the rate of one per cent (1%) per month, and after payment has been in default for six months a penalty of five per cent (5%) shall be added thereto in addition to the interest charge and shall be paid by said gas company or companies.

Section 3. All such gas companies on the 10th day of each month

as hereinabove provided, shall file with the city Clerk a full and complete detailed statement of the income and operating expenses and other charges of said gas company for the preceding month, and said statement shall be duly verified and sworn to by the managing officer of any such gas company or companies, and the city of
1188 Lincoln shall have the right at any and all times during business hours to inspect, through its officers, agents or representatives, the books and records of any such gas company or companies for the purpose of verifying such report or reports, Provided, however, that in case any such gas company or companies shall refuse, fail or neglect to furnish or file such report at the time or times specified, or shall refuse to permit the city of Lincoln through its officers, agents, or representatives, to inspect the books and records of any such company for the purpose of verifying such report or reports, then and in that event the occupation tax for the preceding month shall be and hereby is fixed and determined to be the sum and amount of one thousand dollars and said amount shall draw interest at the rate of one (1%) per month after due and payable, and in addition thereto a penalty of five per cent for failure to pay within six months.

Section 4. In case any such gas company or companies shall fail to make payment of the occupation tax *and* hereinbefore provided, and at the time or times hereinabove specified, the city of Lincoln shall have the right and may sue any such gas company or companies in any court of competent jurisdiction for the amount of the occupation tax due and payable under the terms and provisions of this ordinance, and may recover therein a judgment against any such gas company or companies for the amount so due, together with interest and penalties, and may have execution thereon.

Section 4½. Said occupation tax shall be paid to the City Treasurer of the City of Lincoln, at the time specified in this ordinance, and he shall issue and deliver a receipt therefor, upon the
1189 payment thereof, and the amount so paid shall be credited by the City Treasurer to the general fund of the city, unless otherwise directed by the mayor and council.

Section 5. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 6. This ordinance shall take effect on January 1, 1907, after its passage, approval and publication according to law.

Introduced by L. J. Dunn, John S. Bishop, W. C. Frampton, Wm. Schroeder.

Passed 12/10/06.

Approved Dec. 13, 1906.

F. W. BROWN, *Mayor.*

Attest:

THOMAS H. PRATT,
*City Clerk.*

[Endorsed on Back:] 40—38. In the District Court of Lancaster County. City of Lincoln, plaintiff, vs. Lincoln Gas & Electric Light

Company, defendant. Petition. Clerk's Office, District Court, Lancaster County, Nebraska. Filed. May 26, 1908. J. S. Baer, Clerk District Court.

1190 COPY PLAINTIFF'S EXHIBIT #53.

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Defendant.

*Answer.*

Comes now the defendant in the above entitled action and for its answer to the petition of the plaintiff herein avers:

1. Defendant admits that it is a corporation organized and existing under the laws of the State of Nebraska, with its principle office in the city of Lincoln, and that it is engaged in the business of manufacturing and furnishing gas to the inhabitants of said city.

2. Defendant admits that plaintiff is a municipal corporation organized under the laws of the state of Nebraska, and is a city of the first class having more than forty thousand and less than one-hundred thousand population.

3. Further answering defendant represents and shows unto the court that a city ordinance imposing an occupation tax on the gas business of defendant was passed by the mayor and council of the city of Lincoln on December 10th, 1906. That the Lincoln Traction Company, a corporation heretofore organized under the laws of the state of Nebraska, and having its principle place of business in the city of Lincoln, is at present, and was at and prior to the date of the passage of said occupation tax ordinance, in full use and enjoyment of franchise rights granted by ordinance of said city, to construct, operate, and maintain a plant for carrying on the
1191 business of furnishing electricity to the inhabitants of said city for use of light, heat, and power; and said Traction Company at the date of the passage of said ordinance had, and ever since said date has had, a fully equipped plant for said purposes in operation, and at all times since the passage of said ordinance has offered to, and is now offering to, and in fact supplying the public with light, heat and power, in direct and open competition with the gas business of defendant. That from the said 10th day of December, 1906. until the 11- day of March 1908, and while the said Lincoln Traction Company was furnishing electricity to the public for lighting, heating and power purposes, in open and direct competition with the gas business of defendant, the said Traction Company was not required by city ordinance or otherwise to pay an occupation tax on its electric light, heat or power business, and continued to furnish elec-

tricity for said purposes to the public without an occupation tax thereon until an ordinance imposing such tax was passed by the mayor and city council of Lincoln on the 16th day of March, 1908, Defen*f*ant further represents and shows unto the court that the said occupation tax ordinance passed December, 10th, 1906, by the mayor and council of the city of Lincoln, which imposed an occupation tax on this defendant is in the sum of two and one half per cent. of the gross receipts derived from the business of manufacturing and furnishing gas is partial, discriminatory, and excessive in this: it imposed upon the defendant an occupation tax based upon the gross receipts of defendant derived from the manufacture and sale of gas, and did not impose such tax upon other concerns who were engaged in the manufacture and sale of electricity in the city of Lincoln in open and direct competition with defendant; and said or-
1192 dinance operates to deprive defendant of the equal protection of the *loss* by imposing a discriminatory tax upon defendant not imposed thereby or in any other law upon defendant's competitor in business, and to deprive defendant of its franchise rights and privileges and of its property without due process of law.

4. Defendant alleges that said ordinance was intended by said city of Lincoln to discriminate against defendant in said lighting business and in favor of the said Lincoln Traction Company, and to deprive defendant of the right and power to compete in its gas department with said electric light, heat and power business of the said Traction Company; and, if enforced, will operate as such discrimination, to the pecuniary embarrassment and ruin of defendant's gas business. Defendant says that the said occupation tax sought to be imposed upon it is so burdensome and oppressive that it cannot comply therewith nor pay the sums therein and thereby imposed out of the revenues permitted by the ordinance of said city to be collected for the public services rendered by defendant; and said ordinance, if enforced, will be prohibitive upon defendant's continuance in business, and will operate to utterly destroy all of defendant's rights and privileges and franchises heretofore granted by the franchise ordinance of the city of Lincoln to this defendant, and will deprive defendant of the said contract rights and privileges and of its properties without due process of law.

5. Defendant alleges that said ordinance violates the fourteenth amendment to the Constitution of the United States, because
1193 it denies the defendant the equal protection of the law. It violates section 6 of Article 9 of the Constitution of Nebraska, because it imposes a tax that is not uniform as to the class specified. It violates section 1 or Article 9, of the Constitution of Nebraska, because it imposes a tax for revenue and the tax is not levied by valuation and in proportion to the value of defendant's property. The ordinance is void for the further reason that it imposes a double tax on the property of defendant in that it is in effect a tax on the franchise, the earnings being the princip*le* basis of the value of the franchise, and the franchise of defendant having already been taxed for state, and municipal purposes by valuation for the present fiscal year.

6. Defendant denies that it is indebted to plaintiff in the sum of $7,400., for occupation tax on its gas business as alleged by plaintiff, or in any sum whatsoever. Further answering defendant denies each and every allegation in plaintiff's petition contained not hereinbefore specifically admitted, qualified, or denied.

Wherefore, defendant asks judgment that plaintiff take nothing by this action, and that defendant have judgment for its costs and disbursements herein.

HALLECK F. ROSE,
*Attorneys for Defendant.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

Homer Honeywell, being first duly sworn, on oath says, that he is the manager of the Lincoln Gas & Electric Light Company, Nebraska; that said company is a corporation; that he has read the foregoing answer and knows the contents thereof, and that
1194 the facts stated therein are true, as he verily believes.

HOMER HONEYWELL.

Subscribed and sworn to before me this 23rd day of October, 1908.
J. B. STRODE, *Notary Public.*

[Endorsed on back:] District Court Lancaster County, Nebraska. City of Lincoln, plaintiff, vs. Lincoln Gas & Electric Light Company, a corporation, defendant. Answer. Clerk's office District Court Lancaster County, Nebraska. Filed Oct. 23, 1908. J. S. Baer, Clerk District Court.

1195 COPY OF PLAINTIFF'S EXHIBIT 54.

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS AND ELECTRIC LIGHT COMPANY, Defendant.

*Reply.*

Comes now the plaintiff and for reply to the answer of defendant denies each and every allegation therein contained except such as admit the allegations of plaintiff's petition.

JOHN M. STEWART,
T. F. A. WILLIAMS,
*Attorneys for Plaintiff.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

John M. Stewart, being first duly sworn, deposes and says that he is the attorney for the city of Lincoln, a Municipal corporation, that

he has read the foregoing reply and that the facts therein contained are true as he verily believes.

JOHN M. STEWART.

Subscribed in my presence and sworn to before me this 17th day of October, 1908.

DANIEL H. McCLENAHAN,
*Notary Public.*

1196 [Endorsed on Back:] In the District Court of Lancaster County, Nebraska. City of Lincoln, Plaintiff, vs. Lincoln Gas and Electric Light Company, Defendant. Reply. Clerk's office, District Court, Lancaster County, Nebraska. Filed October 17, 1908. J. S. Baer, Clerk of the District Court. John M. Stewart, Attorney for Plaintiff. Clerk's Office, District Court. Filed November 10, 1908. J. S. Baer, Clerk District Court.

1197 PLAINTIFF'S EXHIBIT 55.

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Supplemental Answer.* 40—38.

Comes now the defendant in the above entitled action, and for supplemental answer to the petition of the plaintiff:

1. Alleges that subsequent to the filing of its answer herein an adjudication has been had in the matters at issue in this case and between the parties herein in the case of Lincoln Gas & Electric Light Company, Complainant, vs. City of Lincoln, et al., in the Circuit Court of United States, for the District of Nebraska, in which case en- of the issues was the validity of the ordinance theretofore passed by the plaintiff herein and referred to as Exhibit "A" in Plaintiff's petition.

2. That on the 6th day of April, 1909, a decree was entered in said case in said Circuit Court of United States, perpetually enjoining the city of Lincoln from enforcing said occupation tax ordinance. a copy of said decree is hereto attached, marked Exhibit "A," and made a part hereof. That said decree and injunction is now in full force and effect and has never been appealed from and the adjudication herein alleged is a complete and final bar against any recovery on the part of the plaintiff to recover in the matters pleaded in its petition.

Wherefore, defendant prays that it may go hence without day,

and recover its costs; and for such other and further relief as
1198 is just and equitable.

LINCOLN GAS & ELECTRIC
LIGHT COMPANY,
By E. C. STRODE,
J. S. ROOT,
M. V. BEGHTOL, *Its Attorneys.*

STATE OF NEBRASKA,
*County of Lancaster, ss:*

E. C. Strode, being first duly sworn, deposes and says, that he is one of the attorneys for the defendant in the above entitled action; that defendant is a corporation; that he has read the foregoing supplemental answer; that he knows the contents thereof, and that the matters and facts therein stated are true, as he verily believes.

E. C. STRODE.

Subscribed in my presence and sworn to before me this 13th day of March, 1913.

AURA O. ZOOK, *Notary Public.*

In the Circuit Court of the United States for the District of Nebraska.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Complainant,

vs.

CITY OF LINCOLN, FRANCES W. BROWN, Mayor; EDMUND C. STRODE, City Attorney of said City of Lincoln, Defendants.

*Decree.*

This cause came on for hearing upon the pleadings and the evidence and the argument of counsel having heretofore been submitted to the court, and upon due consideration whereof the Court
1199 finds for the defendants and finds no equity in the bill of complaint, so far as the same relates to the ordinance of the city of Lincoln establishing a rate of charges for gas in such city, and the same is hereby dismissed and the restraining order heretofore granted against the enforcement of such ordinance is hereby dissolved, without prejudice to the commencement of a new action.

The Court further finds that the ordinance of the City of Lincoln levying an occupation tax against the complainant violates the constitution of the State of Nebraska and is for that reason illegal and void, and that the enforcement of the same as to complainant should be perpetually enjoined.

It is therefore adjudged and decreed that a permanent injunction be and the same is hereby granted perpetually enjoining the City of Lincoln from enforcing said occupation tax ordinance.

It is further adjudged that the complainant pay the costs of this action.

WM. H. MUNGER, *Judge.*

Clerk:

Enter this decree.

WM. H. MUNGER, *Judge.*

Endorsed on Back: District Court, Lancaster County, Nebraska. City of Lincoln, Plaintiff, vs. Lincoln Gas & Electric Light Company, Defendant. Supplemental answer. 4038. Strode, Root, Beghtol, attorneys for defendant. Clerk's office District Court, Lancaster County, Nebraska. Filed March 14, 1913. J. S. Baer, Clerk District Court.

1200 PLAINTIFF'S EXHIBIT "56."

In the District Court of Lancaster County, Nebraska.

STATE OF NEBRASKA on Relation of FRANK M. TYRRELL, County Attorney of Lancaster County, Nebraska, Relator,

vs.

LINCOLN GAS AND ELECTRIC LIGHT COMPANY, a Corporation, Defendant.

*Petition and Information.*

Comes now the State of Nebraska by Frank M. Tyrrell, County Attorney of Lancaster County, Nebraska, and alleges that he is the duly elected, qualified and acting County Attorney of Lancaster County, Nebraska, and as such on the complaint of the City of Lincoln, and on behalf of the State of Nebraska, he brings this action and alleges and shows to the court:

1. That the defendant is a corporation organized and existing under the laws of the State of Nebraska for the purpose of owning and operating a light and power system and to manufacture and sell gas and electric current and as such has its place of business in the City of Lincoln, Nebraska.

2. That the defendant is now occupying the streets and alleys and public grounds in the City of Lincoln, Nebraska, for its gas mains and pipes, electric light poles and wires and other equipment and appliances used in connection with its said light and power system and is furnishing by and through the same gas and electric current to a large number of the inhabitants of the city of Lincoln for lighting, heating and power purposes.

That defendant claims the right and privilege of so occupying the streets, alleys and public grounds of said city solely as a
1201 purchaser and assignee by *mense* transfers and conveyances ans as successor to the privileges and property rights of a

corporation known as the Lincoln Gas Company, to which last named corporation the mayor and council of the city of Lincoln on or about March 12, 1872, by ordinance assumed to grant a license and permission for twenty-one years only, to use and occupy the streets and alleys and public grounds of said city for the purpose of laying therein gas pipes and fixtures and to supply to the inhabitants of such city through such pipes gas for illuminating purposes.

3. Your relator avers that any right or privilege that may have been granted by said ordinance to said Lincoln Gas Company expired according to the terms thereof at the end of twenty one years after the date of passage, to-wit: March 12, 1893, and no right, privilege or franchise now exists thereunder or by virtue thereof.

This relator further avers that no right, privilege or franchise was ever granted to the defendant by the City of Lincoln to use or occupy its streets, alleys or public grounds for any purpose whatsoever and that defendant is now unlawfully and without right occupying the streets, alleys and public grounds of the said City of Lincoln for its gas pipes, mains and electric light poles and wires and other equipment and appliances connected therewith and is now usurping the rights and privileges and franchise of so using said streets, alleys and public grounds of the said city, and will continue such unlawful use and occupancy and will lay additional gas pipes and mains and erect additional electric light poles and wires unless ousted from such occupancy by this court.

Wherefore your relator prays that it be adjudged that
1202 defendant have no right, privilege or franchise to occupy said streets, alleys or public grounds or maintain therein its gas pipes, mains, electric light poles and wires or other equipment or appliances used in connection therewith and that a judgment of ouster be entered against the defendant commanding it to remove from the streets, alleys and public grounds of the City of Lincoln, its gas pipes, mains, electric light poles and wires and all equipment and appliances connected therewith.

FRANK M. TYRRELL,
*County Attorney, and*
JOHN M. STEWART,
*City Attorney.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

Frank M. Tyrrell being first duly sworn deposes and says that he is the county attorney of Lancaster County, Nebraska; that he has read the foregoing information and that the contents ther-of are true.

FRANK M. TYRRELL.

Subscribed and sworn to befor- me this 11 day of April, 1908.

J. S. BAER,
*Clerk of District Court.*

[Endorsed on Back:] 39-258. State Ex Rel. Tyrrell vs. Lincoln Gas & Electric light Company. Petition. Clerk's office District

Court, Lancaster County, Nebraska. Filed April 11, 1908. J. S. Baer, Clerk District Court. Frank M. Tyrrell and John M. Stewart, attorneys.

1203 PLAINTIFF'S EXHIBIT "57".

In the District Court of Lancaster County, Nebraska.

STATE OF NEBRASKA on Relation of FRANK M. TYRRELL, County Attorney of Lancaster County, Nebraska, Relator,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, a Corporation, Respondent.

*Answer.*

Comes now the respondent, the Lincoln Gas & Electric Light Company, and for its answer to the petition and information of the relator filed herein represents and shows unto the court:

1. Respondent admits that Frank M. Tyrrell, is the duly elected, qualified and acting County Attorney of Lancaster County, Nebraska.

2. Respondent admits that it is a corporation organized and existing under the laws of the state of Nebraska, for the purpose of owning and operating a light and power system and to manufacture and sell gass and electric current in the city of Lincoln, Nebraska; that it is now occupying the streets, alleys, and public grounds in the city of Lincoln, Nebraska, for its gas mains and pipes, electric light poles and wires and other equipments and appliances necessarily used in connection with its said light and power plant.

Respondent denies that it is unlawfully and without right occupying and using the streets, alleys, and public grounds of the city of Lincoln, and represents and shows unto the court that in the year 1872 the city of Lincoln granted by ordinance unto the
1204 predecessor of your respondent, The Lincoln Gas Company, certain franchises and privileges contained in the following ordinance, to-wit:

"An ordinance granting the use of the streets, lanes, alleys, public grounds, and sidewalks, in the city of Lincoln, to the Lincoln Gas Company.

Approved March 12, 1872.

Be it ordained by the Mayor and Councilmen of the city of Lincoln:

1. Lincoln Gas Company.—That license and permission be and the same are hereby given and granted to the Lincoln Gas Company, of Lincoln, Nebraska, to erect, construct, and complete, gas works within the corporate limits of the city of Lincoln aforesaid; and that said Company is hereby authorized and permitted to use and

occupy the streets, lanes, alleys, public grounds, and side walks of said city, for the purpose of laying down and repairing all pipes and other fixtures for conducting gas for light in and under the streets, lanes, alleys, public grounds, and sidewalks of said City, or any future addition which may be made thereto.

2. Exclusive Privilege to.—The Lincoln Gas Company shall have the exclusive right and privilege of furnishing illuminating gas in said city for a period of twenty-one years, from the 9th day of March, 1892 and of using and occupying the streets, lanes, alleys, public grounds, and sidewalks, for the purpose specified in the first section of this ordinance.

3. Duties of Company.—The said Lincoln Gas Company shall manufacture and constantly supply (unavoidable delays and accidents excepted) the city and inhabitants of Lincoln, on streets
1205 where gas main-pipes are laid with good quality of illuminating gas, at a price not to exceed five dollars per one thousand feet.

4. When to Take Effect.—This ordinance is to take effect and be in force from and after its publication according to law."

Said ordinance was passed containing the above grant and franchises within five years of the organization of Lincoln, as an incorporated village or city, and in order to secure the establishment of a gas plant and the investment of capital therein at that time when the public demand for such service in Lincoln was wholly inadequate and insufficient to warrant such investment, and exclusive franchise or grant for a period of twenty-one years was included in said ordinance, in addition to the perpetual grant therein contained. And respondent represents and shows unto the court that under said ordinance ther- was granted the Lincoln Gas Company a perpetual franchise, and said Company was ther-by authorized and permitted to occupy and use the public streets and grounds of said city for the purpose of laying therein gas mains and pipes, and other fixtures and appliances for conducting gas for light, and said grant was without limitation of time, and was perpetual; that in addition to said perpetual grant The Lincoln Gas Company was granted an exclusive franchise, or monopoly for al period of twenty-one years from March 9th, 1872, for making and supplying gas in said city; that said Lincoln Gas Company accepted the terms and conditions of said grants and entered ypon the streets and public grounds of said city persuant thereto, and established its gas plant in said city
1206 and invested therein large sums of money on the faith of the grants so made by said city.

3. That in June 1890, the city of Lincoln enacted another ordinance with respect to the franchises and grants of the Lincoln Gas Company, which was as follows; omitting the title and concluding section thereof.

"Be it ordained by the Mayor and Council of the City of Lincoln:

1. That section one of and ordi-ance entitled "An ordinance granting the use of the streets, lanes, alleys, public grounds, and

sidewalks, in the city of Lincoln, to the Lincoln Gas Company," approved March 12, 1872, be amended so as to read as follows:

1. That license and permission be, and the same are hereby given and granted to the Lincoln Gas Company of Lincoln, Nebraska, to erect, construct, and complete gas works within the corporate limits of the city of Lincoln aforesaid; and the said company is hereby authorized and permitted to use and occupy the streets, lanes, alleys, public grounds, and sidewalks, of the said city for the purpose of laying down and repairing all pipes and other fixtures, for conducting gas for light, fuel, and heat in and under the streets, lanes, alleys, public grounds, and sidewalks of said city, for any future addition which may be made thereto, and to establish, construct, acquire, maintain, own, and operate within the corporate limits aforesaid of said city of Lincoln, the necessary buildings, works, machinery, appliances, and structures for the purpose of furnishing and
1207 supplying electricity for the purpose of illumination and power for moving machinery and vehicles, and erect, acquire, own, and maintain within the corporate — aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalk space of said city, or any future addition which may be made thereto, wires or other conductors of electricity, for conducting electricity for illuminating or power purposes, and to erect, acquire, own, establish, and maintain within the corporate aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalk space of said city of future addition there to, posts, poles, towers, and other conductors of electricity. Provided, That such posts, poles, towers, and other structures, and appliances, including wires and conductors of electricity, shall be erected and placed, as not to obstruct the use of said streets, alleys, lanes, public grounds, and sidewalk space for the purpose of travel."

That by reason of said ordinance the grant, franchises and privileges of the Lincoln Gas Company were enlarged and extended so that said Company was granted a perpetual grant and franchise, for the erection and maintenance of gas and electric light works within the corporate limits of Lincoln, and authorized and permitted to use the streets and public grounds of said city for the purpose of laying gas mains, pipes and other fixtures for conducting gas for light, fuel and heat, and the use of the streets, public grounds for wires, poles, and other fixtures for conducting electricity for illuminating and powers purposes throughout the city; that said grants so made were without limitation of time and were perpetual.

1208 4. That in May of 1900 the city of Lincoln enacted another ordinance with respect to the franchise rights and grants of the Lincoln Gas Company its successors and assigns, which was as follows, omitting the title and concluding sections thereof:

"Be it ordained by the Mayor and City Council of the city of Lincoln:

Section 1. That section one of the ordinance, "An ordinance to "amend section one of and ordinance, intitled and ordinance granting the use of the streets, lanes, alleys, public grounds, and side-

walks, of the city of Lincoln to the Lincoln Gas Company," approved March 1872, "approved June 19, 1890, be amended so as to *e*read as follows:

1. That license and permission, and the same are hereby given and granted to the Lincoln Gas Company of Lincoln, Nebraska, its successors and assigns, to erect, construct, and complete gas works within the corporate limits of the city of Lincoln aforesaid, and the said company is hereby authorized and permitted to use and occupy the streets, lanes, alleys, public grounds, and sidewalks of said city, for the purpose of laying down and repairing all pipes, and other fixtures for conducting gas for light, fuel and heat, in and under streets, lanes, alleys, public grounds, and sidewalks of said city, or any future addition which may be made thereto, and to establish, construct, acquire, maintain, own, and operate within the corporate limits aforesaid, in said city of Lincoln the necessary building, works, machinery, appliances and structures for the purpose of furnishing and supplying electricity for the purpose of illuminating and power for moving machinery and vehicles, and erect, acquire, own, and maintain within the corporate limits aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalk space of said city, or any future addition which may be made thereto, wires, or other conductors of electricity for conducting electricity for illuminating or power purposes, and to erect, acquire, own, establish, and maintain within the corporate limits aforesaid, and in and upon the streets, lanes, alleys, public grounds, and sidewalk space of said city, or any future addition, posts, poles, towers, and other conductors of electricity, provided, that such posts, poles, towers, and other structures and appleances, including wires and conductors of electricity, shall be erected and placed as not to obstruct the use of said streets, lanes, alleys, public grounds, and sidewalk space, for the purpose of travel."

That said ordinance was enacted more than nine years after the expiration of the exclusive franchise included in the ordinance of 1872. The grants and franchises contained in section one of the ordinance of May, 1900, were without limitation of time and were perpetual, and The Lincoln Gas Company its successors and assigns was thereby granted the perpetual use of the public streets, and public grounds of said city for its gas mains, pipes and other fixtures, in supplying gas for light, fuel and heat, and for its poles, wires, and other appliances for supplying and conducting electricity for light and power throughout the city.

5. That by reason of said ordinances, and on the faith thereof the Lincoln Gas Company transferred assigned and delivered unto the Lincoln gas & Electric Light Company, its successors, all of its property, grants, franchises and privileges in the city of Lincoln, in 1901; that the Lincoln Gas & Electric Light Company since so acquiring said property, franchise, grants and privileges has extended said gas and electricity light plants throughout the city, and has invested large sums of money in the extention and in the maintainance of said plants; that said investments have been made upon the faith of the grants made by the city of Lincoln to the Lincoln Gas Com-

pany its successors and assigns, hereinbefore set forth. That the said city of Lincoln in all of its dealings and transactions with the respondent and its predecessor, The Lincoln Gas Company, since the passage of the ordinance of 1872, and construed and applied said ordinance as containing a perpetual grant and in addition thereto an exclusive grant expiring March 9th, 1893; that since the expiration of said exclusive grant the city of Lincoln has regulated by ordinance the rate to be charged by your respondent for gas and electricity light, for heat and power, and has by ordinance regulated the quality of gas to be furnished by your respondent since 1901, and has required you- respondent to pay an annual tax on the franchise and grants included in the ordinances herein set forth down to and including the year 1908, and your respondent relying upon the construction of the grants and franchises placed thereon by the
1211 city of Lincoln, has expended large sums of money in improving and extending said gas and electricity light plants, and your respondent submits that the city of Lincoln and the relator are estopped and concluded by the construction so placed on said grants, and are estopped and concluded from questioning the validity of the grants in perpetuity so made and extended to your respondent and its predecessor.

Wherefore your respondent prays that the application of the relator may be dismissed, and that the relator take nothing and that the respondent recover its costs.

HALLECK F. ROSE,
*Attorney for Respondent.*

STATE OF NEBRASKA,
*Lancaster County, ss*:

Homer Honeywell, being first duly sworn on oath, says that he is the manager of the Lincoln Gas & Electric Light Company at Lincoln, Nebraska; that he has read over the foregoing answer and knows the contents thereof; that the facts ther-in stated are true, as he verily believes.

HOMER HONEYWELL.

Subscribed in my presence and sworn to before me this 19th day of October, 1908.

[SEAL] J. B. STRODE, *Notary Public.*

1212 [Endorsed on Back:] 39-258. District Court, Lancaster County, Nebraska. State of Nebraska, on relation of Frank M. Tyrrell, County attorney of Lancaster County, Nebraska, relator, vs. Lincoln Gas & Electric Light Company, a corporation, Respondent. Answer. Clerk's office District Court, Lancaster County, Nebraska. Filed October 19, 1908. J. S. Baer, clerk District Court. Halleck F. Rose attorney for Respondent.

1213 PLAINTIFF'S EXHIBIT 58.

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Petition.*

Comes now the plaintiff, the City of Lincoln, in the above entitled case and for cause of action against the defendant represents and shows unto the court that the plaintiff is and was at all times hereinafter mentioned, a city of the first class, having more than forty thousand inhabitants and less than one *one* hundred thousand inhabitants, and was organized and exists under and by virtue of the laws of the State of Nebraska.

Plaintiff further alleges that the defendant, the Lincoln Gas and Electric Light Company, is and was a*l* all times hereinafter mentioned, a corporation organized and existing under and by virtue of the laws of the state of Nebraska, with its principal office in the City of Lincoln, Nebraska, and that it now is and has been at all times hereinafter mentioned engaged in the business of selling electricity and gas to a great number of the inhabitants of the city of Lincoln and within the corporate boundaries of said city.

Plaintiff further alleges that the Mayor and City Council of the City of Lincoln, duly and regularly acting, did on or about the 13th day of December, 1909, pass an ordinance providing for the levy and collection of an occupation tax upon the business of furnishing and selling gas and electric current for lighting and other
1214 purposes, to the inhabitants of the City of Lincoln; such tax to be in sum and amount of 3% of the gross receipts derived from selling electricity and gas by *s*uch person or company engaged in such business.

The ordinance further provided that such tax was to be paid monthly and was to become due on the 15th day of each and every month, and in case of default in the payment of such tax, it was provided that such tax draw interest at the rate of 1% per month, and after six months- delinquency a penalty of 5% required to be added to the amount due; and said ordinance further provided that the person or company engaged in the business of selling electricity and gas should on the 15th day of each and every month, file with the City Clerk, a full, complete and detailed statement of the income and gross receipts from such business of selling electricity and gas during the preceding month, such report to be duly verified and sworn to by the person in charge of such business. Said ordinance was duly approved and published and became effective according to law on January 13, 1910. A copy of said Ordinance, marked Exhibit "A", is attached hereto and made a part of this petition.

Plaintiff further alleges that said ordinance has been in full force and effect since the 13th day of January, 1910, and that the defendant during all of such time has manufactured and sold electricity and gas to the inhabitants of the City of Lincoln and within the corporate limits of said City, and plaintiff further says that the gross receipts from said business are in large amounts as hereinafter stated, but that said company has failed, refused and neglected to pay any occupation tax to the City of Lincoln as provided by the ordinance aforesaid.

1215 Plaintiff further says that the defendant has wholly failed, neglected and refused to make and file with the city clerk of said City of Lincoln, the verified statement or report required by the ordinance, showing the gross receipts of said defendant from its business of selling electricity and gas, as aforesaid, and that by reason thereof the plaintiff is unable to state the exact amount of such receipts.

Plaintiff further says that the said defendant the Lincoln Gas & Electric Light Company, from its business of furnishing and selling electricity and gas to the inhabitants of the city of Lincoln, has derived gross receipts in excess of the amount, it is believed by plaintiff, of $12,000 per month; the real amount, however, of such receipts is to the plaintiff unknown, and plaintiff has no means of ascertaining the same, except by an accounting in this suit; and plaintiff further says that under the terms and conditions of said ordinance the said defendant should have paid as an occupation tax to the said city of Lincoln certain sums plaintiff believes in amount to be about $360 each month during all the period of time from the first day of February, 1910, to the 30th day of November, 1910, and plaintiff further says that the said amounts of tax for each respective month during which such receipts were derived by said defendant company, and that all sums due and payable and unpaid draw interest at the rate of 1% per month until paid, under the terms and provisions of said ordinance.

Plaintiff further says that the taxes for the months of February, March, April and May have been due and delinquent for

1216 more than six months and draw penalties at the rate of 5% of said tax, and the plaintiff says that there is now due and payable from the defendant, the Lincoln Gas & Electric Light Company, to the plaintiff, the city of Lincoln, certain sums and interest, and penalties thereon the exact or approximate amount of which, the plaintiff does not know and is unable, except by this its suit for an accounting, to learn, but plaintiff believes that the whole amount so due aggregates about $3,900, all of which is due from the defendant to the plaintiff and no part of which has been paid.

And the plaintiff further says that the accounts and records of such receipts are all in possession of and under the control of the defendant company, and that the accounts are complicated and are made to be understood by defendant alone, and plaintiff cannot and could not, if access to said accounts were given, ascertain the amounts justly due from defendant to the plaintiff; and plaintiff has no adequate remedy at law.

Wherefore, the plaintiff prays that an account may be taken of the amount due from the defendant to the plaintiff as taxes, interest and penalties under said ordinances, and that for such sum as may be found to be due on account of said taxes, interest and penalties, the plaintiff may be awarded judgment against the defendant with costs of suit, and awarded such other, further and different relief as may be found to be just and equitable in the premises.

CITY OF LINCOLN,
By C. C. AND L. A. FLANSBURG,
*Its Attorneys.*

1217 STATE OF NEBRASKA,
*Lancaster County, ss:*

Leonard Flansburg, being first duly sworn, on oath deposes and says that he is one of the attorneys for the plaintiff, City of Lincoln, that he has read the above and foregoing petition, knows the contents thereof and that the allegations therein contained are true as he verily believes.

LEONARD A. FLANSBURG.

Subscribed in my presence and sworn to before me this 28th day of March, 1911.

[SEAL.] J. S. BAER,
*Cl'k Dist. Court,*
By W. C. BURCHAM, *Dep.*

EXHIBIT "A".

*Ordinance No.* 732.

An Ordinance providing for the levy and collection of an occupation tax upon the business of furnishing electric current and gas for lighting and other purposes and to repeal chapter- 64 and 66 of the Consolidated Ordinance of 1908.

Be it Ordained by the Mayor and Council of the City of Lincoln, Nebraska:

Section 1. Every person or corporation engaged in the business of selling electricity or gas in the city of Lincoln, Nebraska, is hereby assessed and required to pay as an occupation tax a sum and amount equal to three (3) per cent of the gross receipts arising from such business.

Section 2. Such payment shall be made on the 15th day of each month and be based and computed upon the gross receipts of such business for the preceding month and all payments shall
1218 draw interest at the rate of one per cent per month from and after the same becomes due and after payment has been in default for six months a penalty of five per cent shall be added thereto in addition to said interest.

Section 3. Such corporation shall on the 15th day of each month

file with the City Clerk a full, complete and detailed statement of the income and gross receipts of said business for the preceding month duly verified and sworn to by the person in charge of such business, and the city of Lincoln shall have right at any and all times during business hours through its proper officers or representatives to inspect books and records of any such corporation for the purpose of verifying such report.

Section 4. In case such corporation shall fail to make payment of said occupation tax, interest and penaltioes as herein provided, the City Treasurer is hereby authorized to issue distress warrant for the collection thereof and the officer to whom the same is delivered shall collect the amount of such tax by levy upon and sale of the personal property of the person or corporation owing the same, in like manner as provided by statute for the levy and sale under distress warrant issued for the collection of personal property tax. The city of Lincoln may also sue such corporation in any court of competent jurisdiction for the amount of said occupation tax and may recover therein a judgment against such corporation for the amount so due with interest and penalties and may have execution thereon.

Section 5. Said occupation tax shall be paid to the City Treasurer and he shall deliver his receipt therefor and the amount paid shall be credited to the general fund of said city.

1219 Section 6. Chapters sixty-four and sixty-six of the general revised and consolidated Ordinance of the City of Lincoln of 1908 providing for the levy of an occupation tax upon the electric light and gas companies of such city are hereby repealed. Provided, however, that such repeal and enactment of this Ordinance shall in no wise affect the liability for the payment of any occupation tax, interest and penalty levied under the provisions of such ordinance so repealed shall not in any wise affect the right of the City of Lincoln to commence or prosecute any actions or proceedings for the collection of any such tax.

Section 7. This ordinance shall take effect and be in force from and after its passage, approval and publication according to law.

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Endorsed on Back: 45-155. District Court. City of Lincoln vs. Lincoln Gas & Electric L'g't Company. Amended Petition. Clerk's Office District Court, Lancaster County, Nebraska. Filed Mar. 29, 1911. J. S. Baer, Clerk Dist. Court.

1220 COPY PLAINTIFF'S EXHIBIT "59".

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Amended Petition.*

Comes now the plaintiff, the City of Lincoln, in the above entitled case and for cause of action against the defendant, represents and shows unto the court, that the plaintiff is and was at all times hereinafter mentioned, a city of the first class, having more than forty thousand inhabitants and less than one hundred thousand inhabitants, and was organized and exists under and by virtue of the laws of the state of Nebraska.

Plaintiff further alleges that the defendant, the Lincoln Gas & Electric Light Company, is and was at all times hereinafter mentioned, a corporation organized and existing under and by virtue of the laws of the state of Nebraska, with its principal office in the city of Lincoln, Nebraska, and that it now is and has been at all times hereinafter mentioned engaged in the business of selling electricity and gas to a great number of the inhabitants of the City of Lincoln and within the corporate boundaries of said City.

Plaintiff further alleges that the Mayor and City Council of the City of Lincoln, duly and regularly acting, did, on or about the 13th day of December, 1909, pass an ordinance providing for the levy and collection of an occupation tax upon the business of furnishing and selling gas and electric current for lighting and other purposes, to the inhabitants of the city of Lincoln; such tax to be in sum and amount of three per cent. of the gross receipts derived
1221 from selling electricity and gas by such person or company engaged in such business.

The ordinance further provided that such tax was to be paid monthly and was to become due on the 15th day of each and every month and in case of default in the payment of such tax, it was provided that such tax draw interest at the rate of one per cent. per month, and after six months' delinquency, a penalty of five per cent. required to be added to the amount due; and said ordinance further provided that the person or company engaged in the business of selling electricity and gas should on the 15th day of each and every month, file with the City Clerk, a full, complete and detailed statement of the income and gross receipts from such business of selling electricity and gas during the preceding month; such report to be duly verified and sworn to by the person in charge of such business. Said Ordinance was duly approved and published and became effective according to law on January 13th, 1910. A copy of said Ordinance, marked exhibit "A" is attached hereto and made a part of this petition.

Plaintiff further alleges that said Ordinance has been in full force

and effect since the 13th day of January, 1910, and that the defendant during all of such time has manufactured and sold electricity and gas to the inhabitants of the City of Lincoln and within the corporate limits of said City, and plaintiff further says that the gross receipts from said business are in large amounts as hereinafter stated, but that said company has failed, refused and neglected to pay any occupation tax to the City of Lincoln as provided by the Ordinance aforesaid.

Plaintiff further says that the defendant has wholly failed,
1222 neglected and refused to make and file with the City Clerk of said City of Lincoln, the verified statement or report required by the Ordinance, showing the gross receipts of said defendant from its business of selling electricity and gas, as aforesaid, and that by the reason thereof the plaintiff is unable to state the exact amount of such receipts.

Plaintiff further says that the said defendant, the Lincoln Gas & Electric Light Company, from its business of furnishing and selling electricity and gas to the inhabitants of the City of Lincoln, has derived gross receipts in excess of the amount, it is believed by plaintiff, $12,000.00 per month; the real amount, however, of such receipts is to the plaintiff unknown, and plaintiff has no means of ascertaining the same, except by an accounting in this suit; and plaintiff further says that under the terms and conditions of said ordinance the said defendant should have paid as an occupation tax to the said City of Lincoln certain sums, plaintiff believes in amount, to be about $360.00 each month during all the period of time from the first day of February, 1910, to the 30th day of November, 1910, and plaintiff further says that the said amounts of tax for each respective month during which such receipts were derived by said defendant company, and that all sums due and payable and unpaid draw interest at the rate of one per cent. per month until paid, under the terms and conditions of said ordinance.

Plaintiff further says that the taxes for the months of February, March, April and May have been due and delinquent for more than six months and draw penalties at the rate of 5% of said tax, and the plaintiff says that there is now due and payable from the de-
1223 fendant, the Lincoln Gas & Electric Light Company, to the plaintiff, the City of Lincoln, certain sums and interest, and penalty thereon, the exact or approximate amount of which, the plaintiff does not know and is unable, except by this, its suit for an accounting, to learn, but plaintiff believes that the whole amount so due aggregates about $3,900.00 all of which is due from the defendant to the plaintiff and no part of which has been paid.

Plaintiff further alleges that the Mayor and City Council of the City of Lincoln, duly and regularly acting, did on or about the 16th day of March, 1908, pass an ordinance for the levy and collection of an occupation tax upon the business of furnishing and selling electric current for lighting and power purposes to the inhabitants of the city of Lincoln. Such tax being in the sum and amount of two per cent. of the gross receipts derived from selling electricity by such corporations engaged in such business.

The Ordinance further provided that such tax was to be paid monthly and to become due on the 15th day of each and every month, commencing on the 15th day of April, 1908, and in case of default in the payment of such tax, it was provided that such tax draw interest at the rate of one per cent. per month from the date when payable, and after six months' delinquency, a penalty of five per cent. to be added to the amount due, and said Ordinance further provided that the person or company engaged in the business of selling electricity, should on the 15th day of each and every month file with the City Clerk a full, complete and detailed statement of the income and gross receipts from such business of selling electricity during the preceding month; such statement to be verified
1224 and sworn to by the person in charge of such business. Said Ordinance was duly approved and published and became effective according to law on the 15th day of April, 1908. A copy of said Ordinance marked exhibit "B" is attached hereto and made a part of this petition.

Plaintiff alleges that the said Ordinance was in full force and effect from the 15th day of April, 1908, to the 15th day of January, 1910, when it was repealed by the Ordinance set out in exhibit "A" hereto attached and that said Repealing Ordinance specifically reserved all right of the City of Lincoln to commence or prosecute any actions or proceedings for the collection of any tax levied in the Ordinance so repealed; and that the defendant during all of such time has manufactured and sold electricity to the inhabitants of the City of Lincoln, and within the corporate limits of said City, and plaintiff further says that the gross receipts in said business are in large amounts, but that said company has failed, refused and neglected to pay any occupation tax to the City of Lincoln as provided by the Ordinance aforesaid, and has failed, refused and neglected to make any report of its gross receipts, as by said Ordinance required; that with interest and penalties there is now due from the defendant, the Lincoln Gas & Electric Light Company, to the plaintiff, the City of Lincoln, the sum and amount of approximately $10,000.00 the exact amount being unknown to the plaintiff for the reason that the accounts and records of such gross receipts are all in possession of defendant.

And the plaintiff further says that the accounts and records of such receipts are all in possession of and under the control of the defendant company, and that the accounts are complicated
1225 and are made to be understood by defendant alone, and plaintiff cannot and could not, if access to said accounts were given, ascertain the amounts justly due from defendant to the plaintiff; and plaintiff has no adequate remedy at law.

Wherefore, the plaintiff prays that an account may be taken of the amount due from the defendant to the plaintiff as taxes, interest and penalties under said Ordinances, and that for such sum as may be found to be due on account of said taxes, interest and penalties, the plaintiff may be awarded judgment against the defendant with

costs of suit, and awarded such other, further and different relief as may be found just and equitable in the premises.

CITY OF LINCOLN,
By F. C. FOSTER &
D. H. McCLANAHAN,
*Its Attorneys.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

Fred C. Foster, being first duly sworn, on oath deposes and says that he is one of the attorneys for the plaintiff, City of Lincoln; that he has read the above and foregoing petition, knows the contents thereof and that the allegations therein contained are true as he verily believes.

FRED C. FOSTER.

Subscribed in my presence and sworn to before me this 19th day of March, 1913.

DANIEL H. McCLANAHAN,
*Notary Public.*

1226 EXHIBIT "A".

*Ordinance No. 732.*

An Ordinance providing for the levy and collection of an occupation tax upon the business of furnishing electric current and gas for lighting and other purposes and to repeal chapters 64 and 66 of the Consolidated Ordinance of 1908.

Be it Ordained by the Mayor and Council of the City of Lincoln, Nebraska:

Section 1. Every person or corporation engaged in the business of selling electricity or gas in the City of Lincoln, Nebraska, is hereby assessed and required to pay as an occupation tax the sum and amount equal to three (3) per cent. of the gross receipts arising from such business.

Sec. 2. Such payment shall be made on the 15th day of each month and be based and computed upon the gross receipts of such business hours through its proper officers or representatives to interest at the rate of one per cent. per month from and after the same becomes due and after payment has been in default for six months, a penalty of five per cent. shall be added thereto in addition to said interest.

Sec. 3. Such corporation shall on the 15th day of each month file with the City Clerk a full, complete and detailed statement of the income and gross receipts of said business for the preceding month duly verified and sworn to by the person in charge of such business, and the City of Lincoln shall have right at any and all times during business hours through its proper officers or representatives to in-

spect books and records of any such corporation for the purpose of verifying such report.

1227 Sec. 4. In case such corporation shall fail to make payment of said occupation tax, interest and penalties as herein provided, the City Treasurer is hereby authorized to issue distress warrant, for the collection thereof and the officer to whom the same is delivered shall collect the amount of such tax by levy upon and sale of the personal property of the person or corporation owing the same, in like manner as provided by statute for the levy and sale under distress warrant issued for the collection of personal property tax. The City of Lincoln may also sue such corporation in any court of competent jurisdiction for the amount of said occupation tax and may recover therein a judgment against such corporation for the amount so due with interest and penalties and may have execution thereon.

Sec. 5. Said occupation tax shall be paid to the City Treasurer and he shall deliver his receipt therefor and the amount paid shall be credited to the General Fund of said City.

Sec. 6. Chapters Sixty-four and Sixty-six of the General Revised and Consolidated Ordinance of the City of Lincoln for 1908, providing for the levy of an occupation tax upon the electric light and gas companies of such City are hereby repealed. Provided, however, that such repeal and enactment of this Ordinance shall in no wise affect the liability for the payment of any occupation tax, interest and penalty levied under the provisions of such Ordinance so repealed and shall not in any wise affect the right of the City of Lincoln to commence or prosecute any actions or proceedings for the collection of any such tax.

Sec. 7. This Ordinance shall take effect and be in force from and after its passage, approval and publication according to law.

1228 EXHIBIT "B".

*Ordinance No. 570.*

An Ordinance providing for and assessing an occupation tax on corporations engaged in the sale of electricity for light or power purposes in the city of Lincoln, fixing the amount thereof, providing for the collection and enforcement thereof, and repealing all ordinances and parts of ordinances in conflict herewith. Be it ordained by the Mayor and Council of the City of Lincoln, Nebraska:

Section 1. That every corporation engaged in the sale of electricity for light or power purposes in the city of Lincoln is required to pay an occupation tax and the amount thereof as hereinafter specified is hereby assessed against said corporation.

Sec. 2. All such corporations are hereby required to pay to the City of Lincoln as an occupation tax the sum and amount of 2% per cent. of the gross receipts arising from such business.

Sec. 3. Such corporation shall on the 15th day of April, 1908, and

on the 15th day of each and every month thereafter, pay to the City of Lincoln two per cent. of the gross receipts of said business for the preceding month and all deferred payments shall draw interest at the rate of one per cent. per month from the date when payable and after payment has been in default for six months a penalty of five per cent. shall be added thereto in addition to the interest charged and shall be paid by said corporation.

Sec. 4. Such corporation shall on the 15th day of each month file with the City Clerk a full, complete and detailed statement of the income and gross receipts of said business, duly verified and sworn to by the person in charge of such business, and the City
1229 of Lincoln shall have the right at any and all times during business hours through its proper officers or representatives to inspect the books and records of any such corporation for the purpose of verifying such report. And in the event that such corporation shall fail or refuse to file such report at the time specified the occupation tax for the preceding month shall be and the same is hereby fixed and determined to be the sum and amount of $500. and said amount shall be paid on the 15th day of the month as provided for the payment of the 2 per cent. of gross receipts in sections 2 and 3 hereof, subject to the same interest and penalties above specified.

Sec. 5. In case such corporation shall fail to make payment of said occupation tax as herein provided, the City of Lincoln shall have the right and may sue such corporation in any court of competent jurisdiction for the amount of said occupation tax and may recover therein a judgment against said corporation for the amount so due with interest and penalties and may have execution thereon.

Sec. 6. Said occupation tax shall be paid to the City Treasurer and he shall deliver his receipt therefor and the amount paid shall be credited to the General Fund of said City.

Sec. 7. All Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

Sec. 8. This Ordinance shall take effect and be in force on April 1st, 1908, after its passage, approval and publication according to law.

Introduced by B. A. George, Councilman.
Passed March 16th, 1908.
Approved March 18th, 1908.
[SEAL.] F. W. BROWN, *Mayor.*

Attest:
THOS. H. PRATT, *City Clerk.*

1230 Endorsed on back: 45,155. In the District Court of Lancaster County, Nebraska. City of Lincoln, plaintiff, vs. Lincoln Gas & Electric Light Company, defendant. Amended Petition #3. Clerk's Office District Court Lancaster County, Nebraska. Filed Mar. 19, 1913. J. S. Baer, Clerk District Court.

1231 COPY PLAINTIFF'S EXHIBIT "60."

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Reply.*

Comes now the plaintiff and for reply to the defendant's answer and for answer to defendant's plea in abatement therein set up:

1. Admits all of paragraph two contained in defendant's plea in abatement except the last sentence, and denies said last sentence therein, and all of paragraph 3, and for further answer thereto, alleges that the ordinance mentioned in paragraph 2, fixing the price of gas in the City of Lincoln at $1.00 net per thousand cubic feet sold, is a valid and legal ordinance and that the rate in the City of Lincoln during the existence of the ordinance set out in exhibit "A" attached to the plaintiff's petition is $1.00 net per thousand cubic feet of gas sold, and on which basis the plaintiff now requests the court to compel the defendant to account for occupation taxes as heretofore prayed in plaintiff's amended petition.

For further reply to defendant's answer, separate and apart from defendant's plea in abatement, the plaintiff denied each and every allegation therein contained except such as specifically admit the allegations of plaintiff's petition.

CITY OF LINCOLN,
By FRED C. FOSTER AND
D. H. McCLANAHAN,
*Its Attorneys.*

1232 STATE OF NEBRASKA,
*County of Lancaster, ss:*

Fred C. Foster, being first duly sworn on oath, says that he is the duly elected, qualified and acting Attorney for the City of Lincoln; that he has read the foregoing reply, knows the contents thereof, and that the allegations therein contained are true as he verily believes.

FRED C. FOSTER.

Subscribed in my presence and sworn to before me this 14th day of March, 1913.

J. S. BAER,
*Clerk Dist. Court,*
By W. C. BURCHAM,
*Deputy.*

[Seal.]

Endorsed on back: 45-155. In the District Court of Lancaster County, Nebraska, City of Lincoln, plaintiff, vs. Lincoln Gas & Elec-

tric Light Company, defendant. Reply. Clerk's Office District Court, Lancaster County, Nebraska. Filed Mar. 14, 1913. J. S. Baer, Clerk District Court.

1232½ COPY OF PLAINTIFF'S EXHIBIT "61."

In the District Court of Lancaster County, Nebraska.

THE CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Reply of Intervenors.*

Come now intervenors herein and for reply to defendant's answer, deny each and every allegation therein contained except as herein admitted; and for further reply say that the ordinance referred to in defendant's answer fixing the rate of charges for gas in the city of Lincoln at one dollar per thousand cubic feet was and is a legal and valid ordinance, the enforcement of which has been temporarily enjoined; and these intervenors join with the City of Lincoln and pray an accounting and judgment in favor of the plaintiff under the occupation tax ordinances set out in the petition of the plaintiff and of intervenors on the basis of $1.00 per thousand cubic feet of gas sold by the defendant.

A. S. TIBBETS,
STEWART, BURR & EDGERTON,
*Attorneys for Intervenors.*

Endorsed on Back: 45-155. City of Lincoln v. Lincoln Gas & El. Lt. Co. Reply of Intervenors. Clerk's Office District Court Lancaster County, Nebraska. Filed March 14, 1913. J. S. Baer, Clerk Dist. Court.

1233 COPY PLAINTIFF'S EXHIBIT "62."

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Answer.*

Comes now the defendant and for answer to the amended petition of the plaintiff filed herein, and by way of plea in abatement thereto and as a defense to the present maintainance of this action:

1. Admits paragraphs 1 and 2 of said petition; and admits that the plaintiff through its Mayor and City Council did on or about the

13th day of December, 1909, pass an ordinance providing for the levy and collection of an occupation tax as alleged in said petition.

2. Alleges that on or about the 19th day of November, 1906, the plaintiff, through its Mayor and City Council, passed an ordinance to become effective December 1, 1906, entitled: "An Ordinance regulating the price of manufactured gas, establishing penalties for the violation of the provisions of this Ordinance, and repealing all Ordinances in conflict herewith;" a copy of which ordinance is hereto at-ached, marked exhibit "A" and made a part hereof. That said Ordinance provides that no gas company shall charge more than the sum of $1.00 net per one thousand cubic feet of gas sold. That subsequently thereto, to-wit: on the — day of —, 1906, The United States District Court for the District of Nebraska Lincoln Division granted a temporary injunction, enjoining the plaintiff herein from enforcing said ordinance, exhibit "A" in an action entitled: "The Lincoln Gas & Electric Light Company vs. The City of Lin-
1234 coln et al., which action was tried by said District Court, and by said court dismissed. That an appeal thereof was taken to the Supreme Court of the United States, where the judgment of the aforesaid court was reversed and said cause remanded to the United States District Court for the District of Nebraska, Lincoln Division, for further proceedings, where said cause is now pending undetermined. That during all of said time since the granting of said injunction, it has been in full force and effect, by reason of the nature of said order and by reason of the allowance of supersedeas bonds to supersede the dissolution thereof. That at all times mentioned herein and at the present time the rate charged for gas in the city of Lincoln, has been and is the sum of $1.20 per one thousand cubic feet of gas sold.

3. That by reason of the aforesaid matters it is not possible to determine the amount of gross receipts of the defendant herein from the 13th day of January, 1910, to the present time, nor will it be possible to so determine what said gross receipts may have been until the aforesaid cause is finally determined in the courts of the United States. That by reason thereof, this defendant or the court cannot determine what its gross receipts during said period have been, nor can a determination be had of the amount on which to base the levy of any occupation tax, if valid, of any nature until the question of the rate which might be legally charged during said period is adjudicated.

Wherefore, defendant prays that this court may abate this action until the final determination of the cause of the Lincoln Gas & Electric Light Company v. The City of Lincoln, et al., now pending in the courts of the United States, and that the action herein may be continued until the matters in the petition, as stated herein,
1235 are finally adjudicated.

Further for its answer to the petition of the plaintiff filed herein, separate and distinct from its plea in abatement above stated, defendant.

1. Admits paragraphs 1, 2 and — of said petition.

2. Denies each and every other allegation therein contained.

3. Further answering, defendant alleges that said ordinance is void and invalid for the reason that said occupation tax sought to be imposed upon the defendant is so burdensome and oppressive that it cannot comply therewith nor pay the sums therein and thereby imposed out of the revenues permitted by the ordinances of said city to be collected for the public services rendered by defendant; and said ordinance if enforced, will be prohibitive upon defendant's continuance in business and will directly operate to utterly destroy all the defendant's rights, privileges and franchises heretofore granted by the franchise ordinances of the plaintiff to this defendant, and will deprive defendant of vested contract rights and privileges and of its property without due process of law.

4. Further answering this defendant alleges that said ordinance is invalid and void for the reason that it violates Section 1 of Article 9 of the Constitution of Nebraska, because it levies a tax for a revenue under purported authority from the Legislature of Nebraska, granted to the plaintiff, which tax is not in proportion to the value of the property or franchises of this defendant.

5. Further answering, this defendant alleges that said or-
1236 dinance is void, for the reason that it is discrin*mna*tory and discriminates against this defendant in this; that it places a burden upon the gross receipts of this defendant derived from the sale of electric currents and gas for heat, light and power purposes, or without any ordinance of the city placing a like burden upon the competitors of this defendant in furnishing a like service by other means than electric current or gas; that said ordinance is indiscrimnatory and invalid for the reason that neither by the terms of said ordinance, nor by any other ordinance of the city is a like burden placed upon the City of Lincoln in the maintenance and operation of the Municipal Electric Light Plant operating directly in competition with this defendant in said city, in furnishing electric current for light, heat and power purposes; that said ordinance is invalid for the reason that — attempts to levy an additional tax burden upon this defendant at a time and in a manner prohibited by the Charter of the City of Lincoln, and for the years 1910 11-12. Further — is an attempt to levy a tax in excess of the amount authorized by Section 76, Chapter 13, Article 1, Statutes of Nebraska for the year 1911. That the said ordinance is invalid for the reason that it is an attempt on the part of the city of Lincoln to impose penalties and interest on deferred payments in excess of the amount authorized by the law and such excessive penalties and interest charges are invalid and in violation of Section 16, of Article 1, of the Constitution of Nebraska, and Section 9 of Article 1 of the Constitution of the United States, and were an inducement to the passage of the ordinance by reason thereof, said ordinance is invalid; that said ordinance is invalid for
the reason that it attempts to require this defendant to pay a
1237 tax on its gross receipts derived from the sale of gas and electric currents, outside of the city of Lincoln, and not within the jurisdiction of said city. Therefore the said ordinance is void in that it violates Section 1 of Article 9 of the Constitution; in that it imposes a tax for revenue and is not uniform.

Wherefore, the defendant prays that it may go hence without day and recover its cost and for such other relief as may to the court seem just and equitable.

LINCOLN GAS & ELECTRIC
LIGHT COMPANY, *Defendant,*
By E. C. STRODE,
JESSE L. ROOT,
M. V. BEGHTOL,
*Its Attorneys.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

E. C. Strode, being first duly sworn, deposes and says that he is one of the attorneys for the defendant in the above entitled action, and that the said defendant is a corporation; that he has read the foregoing answer and that the facts and allegations therein set forth are true, as he verily believes.

E. C. STRODE.

Subscribed in my presence and sworn to before me this 12- day of March, 1913.

[SEAL.] AURA O. ZOOK, *Notary Public.*

1238 Endorsed on Back: 45-155. In the District Court of Lancaster County, Nebraska. City of Lincoln, plaintiff—Lincoln Gas & Electric Light Company, defendant. Plea in Abatement. Clerk's office District Court, Lancaster County, Nebraska. Filed Mar. 12, 1913. J. S. Baer, Clerk Dist. Court.

1239 COPY PLAINTIFF'S EXHIBIT "63."

In the District Court of Lancaster County, Nebraska.

45-155. In Equity.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Petition of Elliott Lowe and Fred L. Knight to Intervene as Plaintiffs in the Above-entitled Cause.*

Comes now Elliott Lowe and Fred L. Knight, and file herein on behalf of themselves and all others similarly situated, their petition in intervention, and as grounds for intervening allege:

1. That they are now and have been for many years last past residents and taxpayers of the city of Lincoln, and for that reason interested in the collection of the taxes due and owing by the defendant to the plaintiff, for which judgment is prayed in this action.

2. Your intervenors further allege that the petition of the plaintiff was filed herein December 17, 1910, in which petition it is sought to recover from the defendant the occupation taxes due and owing by defendant under an ordinance duly enacted by the mayor and council of the city of Lincoln on the 13th day of December, 1909, requiring it to pay as such taxes a sum equal to 3% of its gross receipts for gas and electricity sold; and thereafter, on March 29th, 1911, an amended petition was filed by the plaintiff, and on October 7th, 1911, a demurrer was filed to such amended petition, which was shortly thereafter submitted for hearing to this court, but no action of any kind has been taken in this case for more than a year last past, and the duly constituted officers of the city of Lincoln
1240 have failed, neglected and refused to prosecute this action, although the claim for such taxes is legal and valid and beyond successful controversy, and now amounts in the aggregate to more than $44,000.

Your intervenors further allege that under an ordinance duly enacted by the city of Lincoln on or about March 15th, 1908, the defendant herein was required to pay as occupation taxes the sum of two per cent upon its gross receipts for all electrical current sold by it, and under such ordinance there is now due, with interest and penalties, the sum of about $8,000. which taxes are legal and valid; yet the mayor, and a majority of the council, and the city attorney of the city of Lincoln, have neglected and refused to bring any suit, or make any attempt to collect such last named taxes. And your petitioners further allege that on or about the 10th day of December, 1906, the mayor and council of the city of Lincoln duly enacted an ordinance whereby there was levied an occupation tax in amount equal to two and one-half per cent upon the gross receipts for gas manufactured and furnished to the inhabitants of said city. That the defendant herein failed, neglected and refused to pay such taxes and the said City of Lincoln, on March 26th, 1908, brought suit against the defendant therefor, and thereafter, and on or about the 15th day of March, 1909, said suit was duly tried and submitted to this court, but no judgment has been rendered therein. That thereafter, and on or about April 6, 1909, in an action then pending
1241 between the defendant Lincoln Gas and Electric Light Company and the City of Lincoln in the District Court of the United States for the district of Nebraska, the collection of the taxes under said ordinance was by said court enjoined; but there after, on appeal to the supreme court of the United States, said decree was reversed and said injunction, as your interveners are informed and believe, was thereby vacated and dissolved, and your interveners allege that said claim for taxes involved in said ordinance of 1906 is a legal and valid claim against the defendant herein and now amounts in the aggregate to more than $25,000.

3. Your interveners further allege that the mayor and council of the city of Lincoln in violation of Sec. 4 of Art. 9 of the constitution of this state, which forbids the release, discharge or commutation of any taxes, and for the purpose of avoiding the further prosecution of this action, wrongfully and without legal right or authority

under the constitution and laws of this state, as your interveners are informed and believe, caused to be submitted to the electors of this city the question of compromising the taxes herein involved, and other similar taxes, amounting in the aggregate to about $75,000. and to accept from the defendant herein the sum of $20,000. in full payment and satisfaction of said amount. And your interveners further allege that the defendant herein has issued bonds and secured the payment of the same by mortgage on all its property to the amount of about $1,250,000. which is largely in excess of the value of its property, and by reason of the neglect and refusal of the duly constituted officers of the city of Lincoln to prosecute this action, said large amount of taxes have accumulated, and on
1242 account of the financial condition of the defendant, its collection has been and is being jeopardized and rendered uncertain and doubtful.

4. Your interveners, for cause of action against the defendant here-in, to avoid repetition, adopt all the allegations and statements made in the amended petition of the plaintiff heretofore filed herein. And for further cause of action allege that on or about the 15th day of March 1908 the mayor and council of the city of Lincoln duly enacted an ordinance levying an occupation tax in amount equal to two per cent of the gross receipts of every corporation engaged in the sale of electricity for light and power purposes in the city of Lincoln arising from such business. A copy of such ordinance is hereto attached, marked exhibit "A" and made a part of this petition of intervention. That under said ordinance the defendant was required to make to the city clerk monthly detailed statements of its income and gross receipts of its said business, duly verified and sworn to, and to pay such taxes on the 15th day of April, 1908, and on the 15th day of each and every month thereafter, and in default to pay such amount to pay interest at the rate of one per cent per month, and in case of default for six months, a further penalty of five per cent. And your intervenors allege that said ordinance continued in full force and effect until about January 1st, 1910. That during the entire time of the existence of said ordinance the defendant herein was engaged in the sale of electricity for light and power purposes in the city of Lincoln, but failed and refused to report monthly to the city clerk a statement of its income and gross receipts required by said ordinance, and failed and refused
1243 to pay any of such taxes. That your intervenors do not know the exact amount of such gross receipts of defendant during the aforesaid period but allege that they amount to more than $250,000. upon which there is now due to the city of Lincoln from defendant for taxes, interest and penalties, the sum of more than $8,000.

Wherefore your intervenors pray that an immediate account may be taken of the amount due from the defendant to the plaintiff as taxes, interest and penalties under the aforesaid ordinance, and that for such sum as may be found to be due on account of said taxes, interest and penalties the plaintiff may be awarded judgment against

the defendant, with costs of suit, and for such other further or different relief as may be just and equitable.

JOHN M. STEWART,
A. S. TIBBETS,
GEO. W. BERGE,
F. G. EDGERTON,
*Attorneys for Intervenors.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

Elliott Lowe, being first duly sworn, on oaths says he is one of the intervenors in the above entitled petition in intervention; that he has read the foregoing petition, and that the facts therein set forth are true as he believes.

ELLIOTT LOWE.

Subscribed and sworn before me this 18th day of December 1912.

J. A. BROWN,
*Notary Public.*

1244 Endorsed on back: 45-155. City of Lincoln v. Lincoln Gas & Elct. Lt. Co. Petition in Intervention. Clerk's Office District Court, Lancaster County, Nebraska. Filed Dec. 18, 1912. J. S. Baer, Clerk Dist. Court.

1245 COPY PLAINTIFF'S EXHIBIT "64."

In the District Court of Lancaster County, Nebraska.

45-155.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Answer.*

Comes now the defendant, the Lincoln Gas & Electric Light Company, and for its answer to the petition of intervention by Elliott Lowe and Fred L. Knight,

1. Incorporates herein and makes a part hereof all of its plea in abatement, objecting to the present maintenance of this action alleged and set up in its answer to the amended petition of the plaintiff heretofore filed, and makes said plea in abatement a part of this answer as fully as if incorporated herein.

2. Denies each and every other allegation in said petition of Intervention contained.

Wherefore, defendant prays that it may go hence without day and

recover its costs, and for such other and further relief as is just and equitable.

LINCOLN GAS & ELECTRIC
LIGHT CO.,
By STRODE, ROOT & BEGHTOL,
*Its Att'ys.*

STATE OF NEBRASKA,
*County of Lancaster, ss:*

E. C. Strode, being first duly sworn deposes and says that he is one of the attorneys for the defendant; that the defendant is a corporation; that affiant has read the foregoing answer, knows the contents thereof, and that the matters and facts therein stated are true, as he verily believes.

E. C. STRODE.

1245½ Subscribed in my presence and sworn to before me this 13th day of March, 1913.

[SEAL.] AURA O. ZOOK,
*Notary Public.*

Endorsed on back: District Court, Lancaster County, Nebraska. City of Lincoln, Plaintiff, vs. Lincoln Gas & Electric Light Company, Defendant. Answer. 45-155. Clerk's Office, District Court, Lancaster County, Nebraska. Filed Mar. 14, 1913. J. S. Baer, Clerk Dist. Court.

1246 COPY PLAINTIFF'S EXHIBIT "64½."

In the District Court of Lancaster County, Nebraska.

CITY OF LINCOLN, Plaintiff,

vs.

LINCOLN GAS & ELECTRIC LIGHT COMPANY, Defendant.

*Reply to Defendant's Amended Answer.*

Comes now the plaintiff and for reply to the plea in abatement contained in defendant's amended answer, admits the passage of the ordinance set out in exhibit "A" attached thereto, being entitled "An Ordinance regulating the price of manufactured gas, establishing penalties for the violation of the provisions of this ordinance and repealing all ordinances in conflict herewith," and that said ordinance provides that no gas company shall charge more than the sum of $1.00 net per 1,000 cu. ft. of gas sold. Plaintiff further admits that the United States District Court for the District of Nebraska, Lincoln Division, granted a temporary injunction enjoining the plaintiff from enforcing said ordinance; that an appeal thereof was taken to the Supreme Court of the United States where the judgment of the aforesaid Court was reversed and said cause remanded for

further proceedings, where the same is now pending, undetermined. Plaintiff admits that an injunction was granted in said cause and that same has been maintained in force by reason of the allowance of a supersedeas bond to supersede the dissolution thereof; and for further answer to the defendant's plea in abatement, plaintiff denies each and every allegation therein contained, not herein specifically admitted. Plaintiff alleges that said ordinance is a valid and legal ordinance and that the legal rate to be charged for gas in the city of

Lincoln during all the times mentioned in plaintiff's petition
1247 is the sum of $1.00 net per 1,000 cu. ft. of gas sold.

Further, for reply to defendant's answer separate and distinct from its plea in abatement, admits that no summons have been served upon the defendant since the filing of plaintiff's second amended petition, but alleges that defendant has made voluntary appearance herein, and admits that its cause of action in said amended petition is based upon an ordinance passed December 13, 1909, and upon an ordinance passed March 16, 1908, but denies each and every allegation in defendant's answer separate and apart from its plea in abatement contained, not herein specifically admitted.

Wherefore, the plaintiff prays as in its petition more fully set out, for an accounting upon the basis of the gross receipts collected by the defendant at the rate of $1.00 net per cu. ft. of gas sold, and the penalties of 10 cents per 1,000 cu. ft. on all bills not paid within six days after rendition, and for such other relief as to the court may seem just and equitable.

CITY OF LINCOLN,
By FRED C. FOSTER &
D. H. McCLANAHAN,
*Its Att'ys.*

STATE OF NEBRASKA,
*County of Lancaster, ss:*

Fred C. Foster, being first duly sworn, deposes and says that he is one of the attorneys for the plaintiff in the above entitled action; that the plaintiff is a municipal corporation; that he has read the foregoing reply and that the facts therein set forth are true as he verily believes.

FRED C. FOSTER.

Subscribed in my presence and sworn to before me this 19th day of March, 1913.

[SEAL.] DANIEL H. McCLANAHAN,
*Notary Public.*

1248 Endorsed on back: 45-155. In the District Court of Lancaster County, Nebraska. City of Lincoln, plaintiff, vs. Lincoln Gas & Electric Light Company, defendant. Reply to defendant's amended answer. Clerk's Office, District Court. Lancaster County, Nebraska. Filed Mar. 20, 1913. J. S. Baer, Clerk Dist. Court.

VALUATION

of

Gas Plant Buildings

Lincoln, Nebraska

DOHERTY OPERATING COMPANY
SIXTY WALL STREET
NEW YORK

1249

VALUATION OF GAS PLANT BUILDINGS

Summary and Comparison

| Building | Net Construction Costs | | | Reproduction Costs | | |
|---|---|---|---|---|---|---|
| | Lee | Brodnax | Difference | Lee | Brodnax | Difference |
| Purifying House | $ 16620 | $ 18426 | $ 1806 | $ 19279 | $ 21374 | $ 2095 |
| Generator House | 3739 | 3902 | 163 | 4337 | 4526 | 189 |
| Retort House | 7689 | 8340 | 651 | 8919 | 9674 | 755 |
| Meter Shop, Etc. | 2616 | 2846 | 230 | 3035 | 3301 | 266 |
| Coal Shed | 1793 | 1901 | 108 | 2080 | 2205 | 125 |
| Oil Tank House | 1558 | 1700 | 142 | 1807 | 1972 | 165 |
| Oxide Shed | 60 | 63 | 3 | 70 | 73 | 3 |
| Stable, etc. | 818 | 899 | 81 | 949 | 1043 | 94 |
| Booster House At Dist. Holder | 721 | 691 | 30 | 836 | 802 | 34 |
| Totals | $ 35614 | $ 38768 | $ 3154 | $ 41312 | $ 44970 | $ 3658 |

Note:- An overhead charge of 16 % has been added to the Net Construction Costs to give the Reproduction Costs.

Lincoln Gas and Electric Light Company

VALUATION OF GAS PLANT BUILDINGS

Jan. 1, 1913

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| **Purifier House** | | | | | |
| 37'3" x 176'3" x 21'3" Foundation, Stone; Walls, Brick; Roof, Corrugated Iron on Wood Frame; Floors, Concrete and Wood. | | | | | |
| Excavation | 4536.0 | Cu. Yds. | $ .75 | $ 3402 | |
| Foundations:- | | | | | |
| Stone - Cement Mortar | 505.9 | Cu. Yds. | 8.00 | 4047 | |
| Backfilling and Removing Surplus Material | 4536.0 | Cu. Yds. | .50 | 2268 | |
| Walls:- | | | | | |
| Scaffolding:- | | | | | |
| For Brick Walls(Wall Area) | 9859. | Sq. Ft. | .02 | 197 | |
| Brick | 187.343 | M | 16.90 | 3175 | |
| Pilasters:- | | | | | |
| Brick | 4.452 | M | 19.40 | 86 | |
| Cornice:- | | | | | |
| Brick - Fancy | 5.860 | M | 21.90 | 128 | |
| Framing:- | | | | | |
| Wood - Rough | .186 | M'BM | 43.00 | 8 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 259. | Sq. Ft. | .06 | 16 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Wood - Dressed | 8.102 | M'BM | 45.00 | 365 | |
| Wood - Rough | .069 | M'BM | 45.00 | 3 | |
| Steel | 834. | Lbs. | .04 | 33 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 8449. | Sq. Ft. | .06 | 507 | |
| Wood - Rough - 1" | 98. | Sq. Ft. | .046 | 5 | |
| Corrugated Iron # 24 | 97.16 | Squares | 6.60 | 641 | |
| Tar Felt | 9.75 | Squares | 2.50 | 24 | |
| Floors:- | | | | | |
| Concrete - 8" | 3465. | Sq. Ft. | .20 | 693 | |
| Framing:- | | | | | |
| Wood - Rough | 7.738 | M'BM | 40.00 | 310 | |
| Cast Iron | 805. | Lbs. | .028 | 23 | |
| Steel | 3009. | Lbs. | .04 | 120 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 3502. | Sq. Ft. | .057 | 200 | |
| Wood - Rough - 2" | 88. | Sq. Ft. | .077 | | 1251 |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Stairways:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 1.129 | M'BM | $ 90.00 | $ 102 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 56. | Sq. Ft. | .057 | 3 | |
| Doors:- | | | | | |
| Single Panel Hinged | 147. | Sq. Ft. | .45 | 66 | |
| Double Panel Hinged | 975. | Sq. Ft. | .38 | 371 | |
| Single Batten Hinged | 439. | Sq. Ft. | .35 | 154 | |
| Double Batten Hinged | 49. | Sq. Ft. | .28 | 14 | |
| Windows:- | | | | | |
| Double Sash Box:- | | | | | |
| Plain | 144. | Sq. Ft. | .52 | 75 | |
| Mullioned | 126. | Sq. Ft. | .50 | 63 | |
| Storm Type | 462. | Sq. Ft. | .75 | 347 | |
| Double Sash Jamb:- | | | | | |
| Plain | 37. | Sq. Ft. | .38 | 14 | |
| Storm Type | 272. | Sq. Ft. | .75 | 204 | |
| Gutters:- | | | | | |
| Galvanized Iron - U - 8" | 50. | Lin. Ft. | .25 | 13 | |
| Downspouts:- | | | | | |
| Galvanized Corrugated Iron-4" | 30. | Lin. Ft. | .18 | 5 | |
| Plaster:- | | | | | |
| On Brick | 1940. | Sq. Ft. | .025 | 49 | |
| Painting:- | | | | | |
| Water - On Brick | 9348. | Sq. Ft. | .008 | 75 | |
| Water - On Wood | 8546. | Sq. Ft. | .009 | 77 | |
| Plumbing:- | | | | | |
| Toilets - Complete | 2. | Each | 40.00 | 80 | |
| Electric Wiring:- | | | | | |
| Copper Wire:- | | | | | |
| Weatherproof # 14 | 420. | Lin. Ft. | .014 | 6 | |
| Rubber Covered # 14 | 740. | Lin. Ft. | .02 | 15 | |
| Lamp Cord | 216. | Lin. Ft. | .015 | 3 | |
| Conduit - 1/2" | 215. | Lin. Ft. | .128 | 28 | |
| Outlets | 37. | Each | .20 | 7 | |
| Miscellaneous:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .296 | M'BM | 43.00 | 13 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 801. | Sq. Ft. | .06 | 48 | |
| Wood - Rough - 1" | 499. | Sq. Ft. | .046 | 23 | |
| Wood - Rough - 2" | 556. | Sq. Ft. | .077 | 43 | |
| Contractor's Profit (10 %) (On all items other than Excavation, Backfilling, Stone, Brick, Concrete and Lumber) | | | | 270 | |
| Total for Purifier House | | 1252 | | | $ 18426 |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Generator House | | | | | |
| 35'0" x 51'0" x 30'6" Foundations, Concrete: Walls, Brick and Tile: Roof, Corrugated Iron on Steel Frame; Floor Concrete. | | | | | |
| 17'9" x 26'3" x 13'6" Foundations, Concrete: Walls, Brick and Tile: Roof, Tar Felt on Wood Frame; Floor, Concrete. | | | | | |
| 9'3" x 16'6" x 33'0" Foundation, Concrete: Walls, Corrugated Iron on Wood Frame: Roof, Tar Felt on Wood Frame; Floor, Dirt. | | | | | |
| Excavation | 247.9 | Cu. Yds. | $ 1.00 | $ 248 | |
| Foundations:- | | | | | |
| Forms - Wood | 2.425 | M'BM | 65.00 | 158 | |
| Concrete | 82.5 | Cu. Yds. | 7.00 | 578 | |
| Backfilling and Removing Surplus Material | 247.9 | Cu. Yds. | .50 | 124 | |
| Walls:- | | | | | |
| Scaffolding:- | | | | | |
| For Brick Walls (Wall Area) | 6042. | Sq. Ft. | .02 | 121 | |
| Tile - Hollow | 13.270 | M | 16.90 | 224 | |
| Brick | 39.179 | M | 16.90 | 662 | |
| Pilasters:- | | | | | |
| Brick | 2.799 | M | 19.40 | 54 | |
| Framing:- | | | | | |
| Wood - Rough | 1.583 | M'BM | 43.00 | 68 | |
| Covering:- | | | | | |
| Corrugated Iron # 24 | 16.41 | Squares | 6.60 | 108 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Steel | 9479. | Lbs. | .04 | 379 | |
| Wood - Rough | .811 | M'BM | 45.00 | 36 | |
| Covering:- | | | | | |
| Corrugated Iron # 24 | 22.54 | Squares | 7.58 | 171 | |
| Wood - Rough - 1" | 616. | Sq. Ft. | .046 | 28 | |
| Tar Felt | 6.16 | Squares | 2.50 | 15 | |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Generator House (Continued) | | | | | |
| Louvers:- | | | | | |
| Wood - 5 Slat | 130. | Sq. Ft. | $ .40 | $ 52 | |
| Floor:- | | | | | |
| Concrete - 4" | 1942. | Sq. Ft. | .12 | 233 | |
| Doors:- | | | | | |
| Single - Batten - Slide | 60. | Sq. Ft. | .35 | 24 | |
| Double - Batten - Slide | 136. | Sq. Ft. | .28 | 38 | |
| Single - Panel - Hinged | 27. | Sq. Ft. | .45 | 12 | |
| Windows:- | | | | | |
| Double Sash Box:- | | | | | |
| Plain | 368. | Sq. Ft. | .52 | 191 | |
| Mullioned | 231. | Sq. Ft. | .50 | 116 | |
| Gutters:- | | | | | |
| Galvanized Iron - Box - 6" | 51. | Lin. Ft. | .37 | 19 | |
| Downspouts:- | | | | | |
| Galvanized Corrugated Iron-6" | 30. | Lin Ft. | .23 | 7 | |
| Plaster:- | | | | | |
| On Tile | 1136. | Sq. Ft. | .025 | 28 | |
| Platform:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .901 | M'BM | 43.00 | 39 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 357. | Sq. Ft. | .077 | 27 | |
| Electric Wiring:- | | | | | |
| Copper Wire:- | | | | | |
| W. P. # 14 | 460. | Lin. Ft. | .014 | 6 | |
| Lamp Cord | 71. | Lin. Ft. | .015 | 1 | |
| Outlets | 21. | Each | .20 | 4 | |
| Miscellaneous:- | | | | | |
| Wood - Matched - 1" | 71. | Sq. Ft. | .06 | 4 | |
| Wood - Rough - 1" | 52. | Sq. Ft. | .046 | 2 | |
| Wood - Rough - 2" | 18. | Sq. Ft. | .077 | 1 | |
| Contractor's Profit (10 %) (On all items other than Excavation, Concrete, Brick and Lumber) | | | | 124 | |
| Total for Generator House | | | | | 3902 |

1254

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| **Retort House** | | | | | |
| 32'9" x 47'3" x 26'9" 33'6" x 70'0" x 19'6" Foundations, Stone: Walls, Brick; Roof, Corrugated Iron on Steel Frame; Floors, Concrete. | | | | | |
| Excavation | 1244.5 | Cu. Yds. | $ 1.00 | $ 1245 | |
| Foundations:- | | | | | |
| Stone - Cement Mortar | 206.4 | Cu. Yds. | 8.00 | 1651 | |
| Backfilling and Removing Surplus Material | 1244.5 | Cu. Yds. | .50 | 622 | |
| Walls:- | | | | | |
| Scaffolding:- | | | | | |
| For Brick Walls (Wall Area) | 8091. | Sq. Ft. | .02 | 162 | |
| Brick | 157.381 | M | 16.90 | 2660 | |
| Pilasters:- | | | | | |
| Brick | .848 | M | 19.40 | 16 | |
| Cornice:- | | | | | |
| Brick - Fancy | 2.311 | M | 21.90 | 51 | |
| Framing:- | | | | | |
| Wood - Rough | .008 | M'BM | 43.00 | - | |
| Covering:- | | | | | |
| Wood - Matched 1" | 84. | Sq. Ft. | .06 | 5 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Steel | 14523. | Lbs. | .043 | 624 | |
| Wood - Rough | .022 | M'BM | 45.00 | 1 | |
| Covering:- | | | | | |
| Corrugated Iron # 24 | 51.87 | Squares | 7.58 | 393 | |
| Wood - Matched 1" | 52. | Sq. Ft. | .06 | 3 | |
| Tar Felt | .52 | Squares | 2.50 | 1 | |
| Floors:- | | | | | |
| Concrete - 8" | 3390. | Sq. Ft. | .20 | 678 | |
| Framing:- | | | | | |
| Wood - Rough | .020 | M'BM | 40.00 | 1 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 36. | Sq. Ft. | .077 | 3 | |
| Doors:- | | | | | |
| Single Batten Slide | 54. | Sq. Ft. | .35 | 19 | |
| Single Panel Hinged | 33. | Sq. Ft. | .45 | 15 | |
| Wood - Galv. Iron Sheathed | 41. | Sq. Ft. | .35 | 14 | |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Retort House (Continued) | | | | | |
| Electric Wiring:- | | | | | |
| Copper Wire | | | | | |
| Weatherproof - # 14 | 190. | Lin. Ft. | $ .014 | $ 2 | |
| Weatherproof - # 10 | 165. | Lin. Ft. | .019 | 3 | |
| Rubber Covered - # 14 | 300. | Lin. Ft. | .02 | 6 | |
| Rubber Covered - # 12 | 160. | Lin. Ft. | .022 | 4 | |
| Lamp Cord | 35. | Lin. Ft. | .015 | 1 | |
| Conduit - 1/2" | 145. | Lin. Ft. | .128 | 19 | |
| Outlets | 30. | Each | .20 | 6 | |
| Miscellaneous:- | | | | | |
| Wood - Matched - 1" | 125. | Sq. Ft. | .06 | 8 | |
| Contractor's Profit (10 %) (On all items other than Excavation, Backfilling, Stone Brick, Concrete and Lumber) | | | | 127 | |
| Total for Retort House | | | | | $ 8340 |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| **Meter Shop and Repair House** | | | | | |
| 22'9" x 42'3" x 13'6"<br>15'9" x 22'6" x 10'6"<br>Foundations, Concrete: Walls, Brick: Roof, Tar Felt and Gravel on Wood Frame; Floor Concrete. | | | | | |
| 10'9" x 14'6" x 4'0"<br>Foundations, Brick: Walls, Brick: Roof, Wood Shingles on Wood Frame; Floors, Concrete and Wood. | | | | | |
| 9'3" x 14'0" x 7'6"<br>Foundations, Wood: Walls, Wood on Wood Frame: Roof, Tar Felt on Wood Frame; Floor, Dirt. | | | | | |
| Excavation | 386.0 | Cu. Yds. | $ 1.00 | $ 386 | |
| Foundations:- | | | | | |
| Forms - Wood | 2.409 | M'BM | 65.00 | 157 | |
| Concrete | 38.0 | Cu. Yds. | 7.00 | 266 | |
| Brick | 6.439 | M | 19.50 | 126 | |
| Backfilling and Removing Surplus Material | 386.0 | Cu. Yds. | .50 | 193 | |
| Walls:- | | | | | |
| Scaffolding:- | | | | | |
| For Brick Walls (Wall Area) | 2674. | Sq. Ft. | .02 | 53 | |
| Brick | 44.162 | M | 16.90 | 746 | |
| Cornice:- | | | | | |
| Brick - Fancy | .527 | M | 21.90 | 12 | |
| Framing:- | | | | | |
| Wood - Rough | .155 | M'BM | 43.00 | 7 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 279. | Sq. Ft. | .06 | 17 | |
| Building Paper | 279. | Sq. Ft. | .01 | 3 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 2.018 | M'BM | 45.00 | 91 | |
| Covering:- | | | | | |
| Wood - Rough - 1" | 1429. | Sq. Ft. | .046 | 66 | |
| Wood - Matched - 1" | 436. | Sq. Ft. | .06 | 26 | |
| Tar Felt and Gravel | 11.90 | Squares | 4.00 | 46 | |
| Tar Felt | 1.57 | Squares | 2.50 | 4 | |
| Wood - Shingles | 2.79 | Squares | 8.00 | 22 | |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Meter Shop, etc. (Continued) | | | | | |
| Floors:- | | | | | |
| Concrete - 4" | 856. | Sq. Ft. | $ .12 | $ 103 | |
| Concrete - 8" | 156 | Sq. Ft. | .20 | 31 | |
| Concrete - 10" | 354. | Sq. Ft. | .24 | 85 | |
| Framing:- | | | | | |
| Wood - Rough | .993 | M'BM | 40.00 | 40 | |
| Covering:- | | | | | |
| Wood - Rough - 1" | 294. | Sq. Ft. | .046 | 14 | |
| Wood - Rough - 2" | 243. | Sq. Ft. | .077 | 19 | |
| Doors:- | | | | | |
| Single Batten Slide | 35. | Sq. Ft. | .35 | 12 | |
| Single Batten Hinged | 19. | Sq. Ft. | .35 | 7 | |
| Single Panel Hinged | 42. | Sq. Ft. | .45 | 19 | |
| Windows:- | | | | | |
| Double Sash Box:- | | | | | |
| Plain | 259. | Sq. Ft. | .52 | 135 | |
| Mullioned | 47. | Sq. Ft. | .50 | 24 | |
| Single - Sash Jamb:- | | | | | |
| Plain | 32. | Sq. Ft. | .33 | 11 | |
| Gutters:- | | | | | |
| Galvanized Iron Box - 6" | 42. | Lin. Ft. | .37 | 16 | |
| Downspouts:- | | | | | |
| Galvanized Corrugated Iron-4" | 13. | Lin. Ft. | .18 | 2 | |
| Ventilators:- | | | | | |
| "Star" - 14" | 1. | Each | 5.25 | 5 | |
| Plaster:- | | | | | |
| On Brick | 132. | Sq. Ft. | .025 | 3 | |
| Painting:- | | | | | |
| Water - On Brick | 2443. | Sq. Ft. | .008 | 20 | |
| Oil - On Wood | 279. | Sq. Ft. | .022 | 6 | |
| Platform:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .095 | M'BM | 43.00 | 4 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 50. | Sq. Ft. | .077 | 4 | |
| Electric Wiring:- | | | | | |
| Copper Wire:- | | | | | |
| Weatherproof - # 14 | 75. | Lin. Ft. | .014 | 1 | |
| Weatherproof - # 10 | 30. | Lin. Ft. | .019 | 1 | |
| Rubber Covered - # 14 | 175. | Lin. Ft. | .02 | 4 | |
| Lamp Cord | 102. | Lin. Ft. | .015 | 2 | |

1258

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Meter Shop, etc. (Continued) | | | | | |
| Outlets | 16. | Each | $ .20 | $ 3 | |
| Miscellaneous:- | | | | | |
| Wrought Iron Pipe - 1-1/4" | 49. | Lin. Ft. | .07 | 3 | |
| Framing:- | | | | | |
| Wood - Rough | .001 | M'BM | 43.00 | - | |
| Covering:- | | | | | |
| Wood - Rough - 1" | 8. | Sq. Ft. | .046 | - | |
| Wood - Rough - 2" | 88. | Sq. Ft. | .077 | 7 | |
| Wood - Dressed - 1" | 141. | Sq. Ft. | .046 | 6 | |
| Contractor's Profit (10 %) (On all items other than Excavation, Backfilling, Concrete, Brick and Lumber) | | | | 38 | |
| Total for Meter Shop, etc. | | | | | $ 2846 |

1259

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Coal Shed | | | | | |
| 20'0" x 111'0" x 16'0" Foundations, Stone and Brick: Walls, Roof and Floor, Wood. | | | | | |
| Excavation | 146.4 | Cu. Yds. | $ 1.00 | $ 146 | |
| Foundation:- | | | | | |
| Stone - Cement Mortar | 63.1 | Cu. Yds. | 8.00 | 505 | |
| Brick | 3.593 | M | 19.50 | 70 | |
| Backfilling and Removing Surplus Material | 146.4 | Cu. Yds. | .50 | 73 | |
| Walls:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 3.532 | M'BM | 43.00 | 152 | |
| Covering:- | | | | | |
| Wood - Rough - 1" | 2488. | Sq. Ft. | .046 | 114 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 3.993 | M'BM | 43.00 | 172 | |
| Covering:- | | | | | |
| Wood - Rough - 1" | 2775. | Sq. Ft. | .046 | 128 | |
| Floor:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 7.168 | M'BM | 43.00 | 308 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 2220. | Sq. Ft. | .077 | 171 | |
| Runway:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 1.009 | M'BM | 43.00 | 43 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 34. | Sq. Ft. | .077 | 3 | |
| Wood - Matched - 1" | 144. | Sq. Ft. | .057 | 8 | |
| Tar Felt | .48 | Squares | 2.50 | 1 | |
| Electric Wiring:- | | | | | |
| Copper Wire:- | | | | | |
| Weatherproof - # 14 | 300. | Lin. Ft. | .014 | 4 | |
| Outlets | 9. | Each | .20 | 2 | |
| Contractor's Profit (10 %) (On all items other than Excavation, Backfilling, Stone Brick and Lumber) | | | | 1 | |
| Total for Coal Shed | | | | | $ 1901 |

1260

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Oil Tank House | | | | | |
| 22'9" x 15'3" x 1'0" Foundations, Stone; Walls, Brick: Roof, Corrugated Iron on Wood and Steel Frame; Floors, Concrete and Wood. | | | | | |
| Excavation | 428.9 | Cu. Yds. | $ 1.00 | $ 429 | |
| Foundation:- | | | | | |
| Stone Cement Mortar | 65.5 | Cu. Yds. | 8.00 | 524 | |
| Backfilling and Removing Surplus Material | 428.9 | Cu. Yds. | .50 | 214 | |
| Walls:- | | | | | |
| Brick | 5.851 | M | 16.90 | 99 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Steel | 1514. | Lbs. | .04 | 61 | |
| Wood - Rough | .180 | M'BM | 45.00 | 8 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 1124. | Sq. Ft. | .06 | 67 | |
| Corrugated Iron # 26 | 12.93 | Squares | 7.32 | 95 | |
| Floor:- | | | | | |
| Concrete - 10" | 642. | Sq. Ft. | .24 | 154 | |
| Framing:- | | | | | |
| Wood - Rough | .108 | M'BM | 40.00 | 4 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 219. | Sq. Ft. | .077 | 17 | |
| Doors:- | | | | | |
| Single Panel Hinged | 21. | Sq. Ft. | .45 | 9 | |
| Windows:- | | | | | |
| Single Sash Jamb:- | | | | | |
| Plain | 5. | Sq. Ft. | .33 | 2 | |
| Electric Wiring:- | | | | | |
| Copper Wire:- | | | | | |
| Weather proof - # 14 | 10. | Lin. Ft. | .014 | - | |
| Outlets | 1. | Each | .20 | - | |
| Contractor's Profit (10 %) (On all items other than Excavation, Backfilling, Stone, Brick, Concrete and Lumber) | | | | 17 | |
| Total for Oil Tank House | | | | | $ 1700 |

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VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Oxide Shed | | | | | |
| 5'6" x 15'0" x 7'6" Foundations and Walls, Wood; Roof, Corrugated Iron on Wood Frame; Floors, Wood and Dirt. | | | | | |
| Walls:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .719 | M'BM | $ 43.00 | $ 9 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 134. | Sq. Ft. | .077 | 26 | |
| Wood - Matched - 1" | 80. | Sq. Ft. | .06 | 5 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .023 | M'BM | 43.00 | 1 | |
| Covering:- | | | | | |
| Wood - Rough - 1" | 90. | Sq. Ft. | .046 | 4 | |
| Wood - Matched - 1" | 28. | Sq. Ft. | .06 | 2 | |
| Corrugated Iron # 24 | 1.07 | Squares | 6.60 | 7 | |
| Floor:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .069 | M'BM | 43.00 | 3 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 83. | Sq. Ft. | .06 | 5 | |
| Contractor's Profit (10 %) (On Corrugated Iron) | | | | 1 | |
| Total for Oxide Shed | | | | | $ 63 |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| **Stable and Blacksmith Shop** | | | | | |
| 18'3" x 36'3" x 10'0" | | | | | |
| 15'3" x 25'3" x 8'3" | | | | | |
| 24'0" x 45'6" x 11'0" | | | | | |
| 8'0" x 10'6" x 7'6" | | | | | |
| 5'0" x 10'6" x 9'3" | | | | | |
| Foundations, Wood: Walls, Wood on Wood Frame; Floors, Wood and Dirt. | | | | | |
| Walls:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 1.937 | M'BM | $ 43.00 | $ 83 | |
| Covering:- | | | | | |
| Wood - Shiplap - 1" | 1314. | Sq. Ft. | .06 | 79 | |
| Wood - Rough - 1" | 3352. | Sq. Ft. | .06 | 201 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | 1.518 | M'BM | 43.00 | 65 | |
| Covering:- | | | | | |
| Wood - Shingles | 4.02 | Squares | 8.00 | 32 | |
| Wood - Rough - 1" | 3028. | Sq. Ft. | .046 | 139 | |
| Tar Felt | 22.64 | Squares | 2.50 | 57 | |
| Floor:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .741 | M'BM | 43.00 | 32 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 1142. | Sq. Ft. | .077 | 88 | |
| Doors:- | | | | | |
| Single Batten Slide | 53. | Sq. Ft. | .35 | 19 | |
| Single Batten Hinged | 56. | Sq. Ft. | .35 | 20 | |
| Windows:- | | | | | |
| Single Sash Jamb:- | | | | | |
| Plain | 81. | Sq. Ft. | .33 | 27 | |
| Painting:- | | | | | |
| Oil - On Wood | 1310. | Sq. Ft. | .022 | 29 | |
| Electric Wiring:- | | | | | |
| Copper Wire:- | | | | | |
| Weatherproof - # 14 | 80. | Lin. Ft. | .014 | 1 | |
| Rubber Covered - # 14 | 275. | Lin. Ft. | .02 | 5 | |
| Lamp Cord | 104. | Lin. Ft. | .015 | 2 | |
| Outlets | 22. | Each | .20 | 4 | |
| Contractors Profit (10 %) (On all items other than Lumber) | | | | 16 | |
| Total for Stable, etc. | | 1263 | | | $ 899 |

VALUATION OF GAS PLANT BUILDINGS

(Continued)

| Item | Quantity | Unit | Unit Cost | Sub-Total | Total |
|---|---|---|---|---|---|
| Booster House at Storage Plant | | | | | |
| 17'6" x 21'3" x 12'6" Foundations and Walls, Brick: Roof Tar Felt and Gravel on Wood Frame; Floors, Concrete and Wood. | | | | | |
| Excavation | 155.4 | Cu. Yds. | $ 1.00 | $ 155 | |
| Foundations:- | | | | | |
| Brick | 5.829 | M | 19.50 | 114 | |
| Backfilling and Removing Surplus Material | 155.4 | Cu. Yds. | .50 | 78 | |
| Walls:- | | | | | |
| Scaffolding:- | | | | | |
| For Brick Walls (Wall Area) | 1008. | Sq. Ft. | .02 | 20 | |
| Brick | 10.307 | M | 16.90 | 174 | |
| Roof:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .451 | M'BM | 45.00 | 20 | |
| Covering:- | | | | | |
| Wood - Matched - 1" | 316. | Sq. Ft. | .06 | 19 | |
| Tar Felt and Gravel | 3.16 | Squares | 4.00 | 13 | |
| Floors:- | | | | | |
| Concrete - 4" | 163. | Sq. Ft. | .12 | 20 | |
| Framing:- | | | | | |
| Wood Rough | .174 | M'BM | 40.00 | 7 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 126. | Sq. Ft. | .077 | 10 | |
| Doors:- | | | | | |
| Single Batten Hinged | 26. | Sq. Ft. | .35 | 9 | |
| Windows:- | | | | | |
| Double Sash Slide Mullioned - Wire Glass | 100. | Sq. Ft. | .40 | 40 | |
| Electric Wiring:- | | | | | |
| Copper Wire:- | | | | | |
| Weatherproof - # 14 | 40. | Lin. Ft. | .014 | 1 | |
| Lamp Cord | 30. | Lin. Ft. | .015 | - | |
| Outlets | 4. | Each | .20 | 1 | |
| Miscellaneous:- | | | | | |
| Framing:- | | | | | |
| Wood - Rough | .020 | M'BM | 43.00 | 1 | |
| Covering:- | | | | | |
| Wood - Rough - 2" | 14. | Sq. Ft. | .077 | 1 | |
| Contractor's Profit (10 %) (On all items other than Excavation, Backfilling, Brick Concrete and Lumber) | | 1264 | $ | 125 8 | |
| Total for Booster House | | | | | $ 691 |

*Valuation Gas Mains in Lincoln.*

As of Jan. 1, 1913.

By G. L. Campen.

1267 *Valuation Gas Mains.*

Lincoln, Nebraska.

| Size. | Kind. | Length feet. | Paving. | Cost mains laid. | Cost to remove and replace paving. | Total cost. |
|---|---|---|---|---|---|---|
| 1¼" | W. I. | 289 | Asphalt on Concrete | $53.71 | $186.32 | $240.03 |
| | | 192 | Brick on Concrete | 35.68 | 103.42 | 139.10 |
| | | 1,259 | Brick Double Course | 233.97 | 378.10 | 612.07 |
| | | 518 | Unpaved | 96.26 | ..... | 96.26 |
| | | 2,258 | | $419.62 | $667.84 | $1,087.46 |
| 2" | W. I. | 1,330 | Wood Blocks on Concrete | $309.48 | $441.27 | $750.75 |
| | | 54,317 | Asphalt on Concrete | 12,638.48 | 35,018.17 | 47,656.65 |
| | | 17,591 | Brick on Concrete | 4,093.08 | 9,475.38 | 13,568.46 |
| | | 24,281 | Brick, Double Course | 5,649.70 | 7,291.58 | 12,941.28 |
| | | 218,189 | Unpaved | 50,768.24 | ..... | 50,768.24 |
| | | 315,708 | | $73,458.98 | $52,226.40 | $125,685.38 |
| 3" | C. I. | 406 | Brick, Double Course | $173.01 | $137.12 | $311.13 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4″ | C. I. | 19,281 | Asphalt on Concrete | $11,010.99 | $13,280.75 | $24,291.74 |
| | | 19,526 | Brick on Concrete | 11,150.90 | 11,194.26 | 22,345.16 |
| | | 22,217 | Brick, Double Course | 12,687.68 | 7,558.22 | 20,245.90 |
| | | 33,254 | Unpaved | 18,990.69 | ..... | 18,990.69 |
| | | 94,278 | | $53,840.26 | $32,033.23 | $85,873.49 |
| 6″ | C. I. | 431 | Wood on Concrete | $348.00 | $175.59 | $523.59 |
| | | 3,360 | Asphalt on Concrete | 2,713.21 | 2,628.36 | 5,341.57 |
| | | 9,129 | Brick on Concrete | 7,371.70 | 5,856.71 | 13,228.41 |
| | | 6,354 | Brick, Double Course | 5,130.87 | 2,542.54 | 7,673.41 |
| | | 6,598 | Unpaved | 5,327.91 | ..... | 5,327.91 |
| | | 25,872 | | $20,891.69 | $11,203.20 | $32,094.89 |

1268

*Valuation Gas Mains.*

Lincoln, Nebraska.

(Continued.)

| Size. | Kind. | Length feet. | Paving. | Cost mains laid. | Cost to remove and replace paving. | Total cost. |
|---|---|---|---|---|---|---|
| 8″ | C. I. | 1,741 | Asphalt on Concrete | $1,876.14 | $1,361.90 | $3,238.04 |
| | | 102 | Brick on Concrete | 109.92 | 66.48 | 176.40 |
| | | 1,974 | Brick, Double Course | 2,127.22 | 760.68 | 2,887.90 |
| | | 751 | Unpaved | 809.29 | ..... | 809.29 |
| | | 4,568 | | $4,922.57 | $2,189.06 | $7,111.63 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 10″ | C. I. | 1,842 | Asphalt on Concrete | $2,590.02 | $1,527.93 | $4,117.95 |
| | | 457 | Brick on Concrete | 662.62 | 309.50 | 972.12 |
| | | 964 | Brick, Double Course | 1,355.56 | 387.67 | 1,743.23 |
| | | 6,547 | Unpaved | 9,206.26 | ..... | 9,206.26 |
| | | 9,810 | | $13,814.46 | $2,225.10 | $16,039.56 |
| 12″ | C. I. | 162 | Asphalt on Concrete | $288.34 | $141.80 | $430.14 |
| | | 325 | Brick on Concrete | 578.47 | 231.03 | 809.50 |
| | | 1,644 | Brick, Double Course | 2,926.16 | 688.75 | 3,614.91 |
| | | 1,482 | Unpaved | 2,637.81 | ..... | 2,637.81 |
| | | 3,613 | | $6,430.78 | $1,061.58 | $7,492.36 |
| 16″ | C. I. | | | | | |
| 16″ | C. I. | 533 | Brick on Concrete | $1,378.51 | $395.49 | $1,774.00 |
| | | 330 | Brick, Double Course | 853.49 | 143.88 | 997.37 |
| | | 406 | Unpaved | 1,050.04 | ..... | 1,050.04 |
| | | 1,269 | | $3,282.04 | $539.37 | $3,821.41 |

1269

*Valuation Gas Mains.*

Lincoln, Nebraska.

(Continued.)

| Size. | Kind. | Length feet. | Paving. | Cost mains laid. | Cost to remove and replace paving. | Total cost. |
|---|---|---|---|---|---|---|
| 20″ | C. I. | 1,472 | Unpaved | $5,183.96 | ..... | $5,183.96 |
| | Contract Cost of Mains | | | $182,417.37 | $102,283.90 | $284,701.27 |

Cost Data.

*Summary of Unit Costs.*

| Size of pipe. | Width of trench. | Per Linear Foot of Pipe. | | | | |
|---|---|---|---|---|---|---|
| | | | Paving Costs. | | | |
| | | Pipe laid in unpaved street. | Cedar on concrete. | Asphalt on concrete. | Brick on concrete. | Brick double course. |
| W. I.: | | | | | | |
| 1¼" | 18" | $.18584 | $.332 | $.645 | $.538 | $.300 |
| 2" | 18" | .23262 | .332 | .645 | .538 | .300 |
| C. I.: | | | | | | |
| 3" | 20" | .42615 | .358 | .689 | .573 | .340 |
| 4" | 20" | .57108 | .358 | .689 | .573 | .340 |
| 6" | 24" | .80750 | .407 | .782 | .641 | .385 |
| 8" | 24" | 1.07762 | .407 | .782 | .641 | .385 |
| 10" | 26" | 1.40618 | .433 | .829 | .677 | .402 |
| 12" | 28" | 1.77992 | ..... | .876 | .711 | .419 |
| 16" | 30" | 2.58632 | ..... | .... | .742 | .436 |
| 20" | 32" | 3.51492 | ..... | .... | .... | .... |

1271 Lincoln, Nebraska.

Gas Mains.

*2" Wrought Iron Pipe.*

| | | Cost data. |
|---|---|---|
| Pipe | | $9.58 |
| Dipping | | .31 |
| Fittings | | .02 |
| Pipe Cement | | .03 |
| | | $9.94 |
| +4% of Material | | $.40 |
| Total Material | | $10.34 |
| Hauling 361.7 Lbs. @ $1.00 Ton | | $.180 |
| Digging 18" Ditch: | | |
| 10 Months in year | $4.50 | |
| 2 " " " | 9.00 | |
| Average | | $5.250 |
| Backfilling: | | |
| 10 Months in year | $2.00 | |
| 2 " " " | 4.00 | |
| Average | | $2.330 |
| Laying Pipe: | | |
| 10 Months in year | $.50 | |
| 2 " " " | .75 | |
| Average | | $.625 |
| Foreman | | $.660 |
| Total Labor | | $9.045 |
| Total Cost per 100 Feet Laid | | $19.385 |
| + 20% | | $3.877 |
| Total | | $23.262 |

1272 Lincoln, Nebraska.

Gas Mains.

*3" Cast Iron Pipe.*

| | Cost data. |
|---|---|
| Weight = 13.9 Lb. Per Foot, 13.9 | 13.9 |
| Specials One to every 800 Ft. = .15 Lb. Per Ft. | .15 |
| Total | 14.05 |
| Pipe 1,390 Lbs. @ $30.00 Ton | 20.850 |
| Specials 15 Lbs. @ .035 Lbs. | .525 |
| 9 Joints Lead 4.4 @ 39.6 Lbs. @ $.06½ Delivered | $2.574 |

| | | |
|---|---|---|
| 9 " | Oakum @ .18 Lbs. = 1.62 Lbs. .04½ " .... | .073 |
| 9 " | Coal for Melting Lead @ 1.75 Lbs. = 15.75 @ $6.00 Ton..... | .047 |
| | | $24.069 |
| | + 4% Material..... | .964 |
| | Total cost of Material..... | $25.033 |
| Hauling 1,405 Lbs. @ $1.00 Per Ton..... | | .703 |
| | Digging 20" Ditch: | |
| 10 Months in year..... | $4.50 | |
| 2 " " " ..... | 9.00 | |
| | Average ..... | 5.250 |
| | Backfilling: | |
| 10 Months in year..... | $2.00 | |
| 2 " " " ..... | 4.00 | |
| | Average ..... | 2.330 |
| Laying Pipe and Digging Bell Holes..... | | 1.537 |
| | Foreman ..... | .660 |
| | Total Labor..... | 10.480 |
| | Total Cost Per 100 Ft. Laid..... | 35.513 |
| | + 20% ..... | 7.102 |
| | Total ..... | 42.615 |

1273 Lincoln, Nebraska.

Gas Mains.

*4" Cast Iron Pipe.*

| | | | Cost data. |
|---|---|---|---|
| Per 100 Ft. Weight 20 Lbs. per foot | @..... | $.01½ = | $30.00 |
| Per Ft. .18 Lbs. Specials | @..... | .03½ | .630 |
| 9 Joints Lead 5.5 Lbs. = 49.5 Lbs. | @..... | .06½ | 3.218 |
| 9 " Oakum .21 " = 1.89 " | @..... | .04½ | .085 |
| 9 " Coal 2.22 " = 19.98 " | @..... | .003 | .060 |
| | | | $33.993 |
| | 4% of Material..... | | 1.360 |
| | Total Material..... | | $35.353 |
| Hauling 2,018 Lbs. @ $1.00 per Ton..... | | | $1.009 |
| | Digging 20" Ditch: | | |
| 10 Months in year..... | | $4.80 | |
| 2 " " " ..... | | 9.60 | |
| | Average ..... | | 5.633 |

| | | |
|---|---|---|
| Backfilling: | | |
| 10 Months in year | $2.50 | |
| 2 " " " | 5.00 | |
| Average | | 3.00 |
| Laying Pipe and Digging Bell Holes | | 1.845 |
| Foreman | | .750 |
| Total Labor | | $12.237 |
| Total cost per 100 feet laid | | $47.590 |
| + 20% | | 9.518 |
| Total | | $57.108 |

1274 Lincoln, Nebraska.

Gas Mains.

*6" Cast Iron Pipe.*

| | Cost data. |
|---|---|
| 6" Pipe .308 per Ft. = 3,080 Lbs. @ $28.00 Per Ton | $43.120 |
| 25 Lbs. Specials @ $.03½ | .875 |
| 9 Joints Lead 8 Lbs. = 72 Lbs. @ $.06½ | 4.680 |
| 9 " Oakum .32 Lbs. = 2.88 Lbs. .04½ | .130 |
| 9 " Coal 3.23 " = 29.07 " @ $6.00 Ton | .0872 |
| | $48.892 |
| + 4% of Material | 1.956 |
| Total Material | $50.848 |
| Hauling 3,105 Lbs. @ $1.00 per Ton | 1.553 |
| Digging 24" Ditch: | |
| 10 Months in year $6.00 | |
| 2 " " " 12.00 | |
| Average | 7.000 |
| Backfilling and Tamping: | |
| 10 Months in year $4.00 | |
| 2 " " " 8.00 | |
| Average | 4.666 |
| Laying Pipe and Digging Bell Holes | 2.475 |
| Foreman | .750 |
| Total Labor | 16.444 |
| Total Cost per 100 Feet laid | $67.292 |
| + 20% | $13.458 |
| Total | $80.750 |

1275 Lincoln, Nebraska.

Gas Mains.

*1¼" Wrought Iron Pipe.*

| | | Cost data. |
|---|---|---|
| Pipe | | $5.960 |
| Dipping | | .260 |
| Fittings | | .010 |
| Pipe Cement | | .030 |
| | | $6.260 |
| + 4% of Material | | .250 |
| Total Material | | $6.510 |
| Hauling 224.3 Lbs. @ $1.00 Ton | | $.112 |
| Digging 18" Ditch: | | |
| 10 Months in year | $4.50 | |
| 2 " " " | 9.00 | |
| Average | | $5.250 |
| Refilling: | | |
| 10 Months in year | $2.00 | |
| 2 " " " | 4.00 | |
| Average | | $2.330 |
| Laying Pipe: | | |
| 10 Months in year | $.50 | |
| 2 " " " | .75 | |
| Average | | $.625 |
| Foreman | | $.660 |
| Total Labor | | $8.977 |
| Total Cost Per 100 Feet Laid | | $15.487 |
| + 20% | | 3.097 |
| Total | | $18.584 |

1276 Lincoln, Nebraska.

Gas Mains.

*8" Cast Iron Pipe.*

| | Cost data. |
|---|---|
| 100 Ft. @ 42.9 = 4,290 Lbs. @ $28.00 per Ton | $60.06 |
| Specials 36 Lbs. @ .03½ | 1.260 |

| | |
|---|---|
| 9 Joints 11½ Lbs. Lead = 103.5 Lbs. .06½ | 6.728 |
| 9 " .44 Lbs. Oakum = 3.96 " .04½ | .178 |
| Coal for 9 Joints 4.55 Lbs. = 40.95 " @ $6.00 per Ton | .123 |
| | $68.349 |
| + 4% of Material | 2.734 |
| Total Material | $71.083 |
| Hauling 4,326 Lbs. @ $1.00 Per Ton | 2.163 |
| Digging 24" Ditch: | |
| 10 Months in year $6.00 | |
| 2 " " " 12.00 | |
| Average | 7.000 |
| Backfilling and Tamping: | |
| 10 Months in year $4.00 | |
| 2 " " " 8.00 | |
| Average | 4.666 |
| Laying Pipe and Digging Bell Holes | 3.840 |
| Foreman | .750 |
| Hauling One Load | .30 |
| Total Cost Labor | $18.719 |
| Total cost per 100 Feet Laid | $89.802 |
| + 20% | $17.960 |
| Total | $107.762 |

1277 Lincoln, Nebraska.

Gas Mains.

10" *Cast Iron Pipe.*

| | Cost data. |
|---|---|
| 100 Ft. 10" Pipe = 100 x 57.1 Lbs. = 5,710 Lbs. | |
| 5,710 Lbs. @ $28.00 Per Ton | $79.940 |
| 51 Lbs. Specials @ $.03½ Lbs. | 1.785 |
| 9 Joints Lead 14.5 Lbs. = 130.5 Lbs. @ $.06½ | 8.483 |
| 9 " Oakum .53 " = 4.77 " @ .04½ | .215 |
| Coal for 9 Joints 5.88 Lbs. = 52.92 Lbs. @ $6.00 Per Ton | .159 |
| | $90.582 |
| + 4% of Material | 3.624 |
| Total Material | $94.206 |
| Hauling 5,761 Lbs. @ $1.00 per Ton | 2.880 |

| | | |
|---|---|---|
| Digging 26″ Ditch: | | |
| 10 Months in year | $6.50 | |
| 2 " " " | 13.00 | |
| Average | | 7.600 |
| Backfilling | | 4.666 |
| Laying Pipe and Digging Bell Holes | | 6.480 |
| Foreman | | .750 |
| Hauling 2 Loads Dirt @ .30 | | .600 |
| Total Cost Labor | | $22.976 |
| Total cost per 100 feet laid | | $117.182 |
| + 20% | | $23.436 |
| Total | | $140.618 |

1278 Lincoln, Nebraska.

Gas Mains.

*12″ Cast Iron Pipe.*

| | Cost data. |
|---|---|
| 100 Ft. of 12″ Pipe @ 72.5 Lbs. = 7,250 Lbs. | |
| 7,250 Lbs. @ 14.00 per 1,000 Lbs. | $101.500 |
| Specials .70 per Ft. = 70 @ $.03½ | 2.450 |
| 9 Joints Lead = 18 Lbs. = 162 Lbs. @ $ .06½ | 10.530 |
| 9 " Oakum .61 " = 5.49 " @ .04½ | .247 |
| 9 " Coal 7.14 " = 64.26 " @ $6.00 per Ton | .193 |
| | $114.920 |
| + 4% of Material | 4.597 |
| Total Material | $119.517 |
| Hauling 7,320 Lbs. @ $1.00 per Ton | 3.660 |
| Digging 28″ Ditch: | |
| 10 Months in year $7.20 | |
| 2 " " " 14.40 | |
| Average | 8.400 |
| Backfilling: | |
| 10 Months in year $4.00 | |
| 2 " " " 8.00 | |
| Average | 4.660 |

| | |
|---|---|
| Laying Pipe and Digging Bell Holes | 10.440 |
| Foreman | .750 |
| Hauling 3 Loads Dirt @ $.30 | .90 |
| Total Cost Labor | $28.810 |
| Total cost per 100 Feet laid | $148.327 |
| + 20% | 29.665 |
| Total | $177.992 |

1279 Lincoln, Nebraska.

Gas Mains.

*16" Cast Iron Pipe.*

| | Cost data. |
|---|---|
| 100 Ft. of 16" Pipe @ 108.3 = 10,830 Lbs. | |
| 10,830 Lbs. Pipe @ $28.00 per Ton | $151.620 |
| Specials for 100 Ft. = 115 Lbs. @ .03½ | 4.025 |
| 9 Joints Lead @ 24 Lbs. = 216 Lbs. $.06½ | 14.040 |
| 9 " Oakum @ .94 Lbs. = 8.46 Lbs. .04½ | .381 |
| Coal for 100 Ft. 90 Lbs. @ $6.00 per Ton | .270 |
| | $170.336 |
| + 4% of Material | 6.813 |
| Total Material | $177.149 |
| Hauling 10,945 Lbs. @ $1.00 per Ton | 5.473 |
| Digging 30" Ditch: | |
| 10 Months in year $8.00 | |
| 2 " " " 16.00 | |
| Average | 9.330 |
| Backfilling: | |
| 10 Months in year $4.20 | |
| 2 " " " 8.40 | |
| Average | 4.900 |
| Laying Pipe and Digging Bell Holes | 16.425 |
| Foreman | .750 |
| Hauling 5 Loads Dirt @ $.30 | 1.50 |
| Total cost Labor | $38.378 |
| Total cost per 100 Feet laid | $215.527 |
| + 20% | $43.105 |
| Total | 258.632 |

1280 Lincoln, Nebraska.

Gas Mains.

*20″ Cast Iron Pipe.*

| | Cost data. |
|---|---|
| 100 Ft. 20″ Pipe 150 Lb-. = 15,000 Lbs. | |
| 15,000 Lbs. @ $28.00 per Ton..... = | $210.00 |
| 156 Lbs. Specials @ $.03½..... | 5.46 |
| 9 Joints Lead 31.5 Lbs. = 2,835 Lbs. @ $ .06½.... | 18.428 |
| 9 " Oakum 1.25 " = 11.25 " @ .04½.... | .506 |
| 9 " Coal 12.50 " = 112.5 " @ $6.00 per Ton ..... | .338 |
| + 4% of Material..... | $234.732 |
| | 9.389 |
| Total of Material..... | 244.121 |
| Hauling 15,156 Lbs. @ $1.00 per Ton..... | 7.578 |
| Digging 32″ Ditch: | |
| 10 Months in year..... $10.20 | |
| 2 " " " ..... 20.40 | |
| Average ..... | 11.866 |
| Backfilling: | |
| 10 Months in year..... $5.112 | |
| 2 " " " ..... 10.224 | |
| Average ..... | 5.945 |
| Laying Pipe and Digging Bell Holes..... | 20.250 |
| Foreman ..... | .750 |
| Hauling 8 Loads Dirt @ $.30..... | 2.400 |
| Total cost Labor..... | $48.789 |
| Total cost per 100 Feet Laid..... | $292.910 |
| + 20% ..... | $58.582 |
| Total ..... | 351.492 |

(Here follow tables, marked pages 1281 and 1282.)

# United States Cast Iron Pipe and Foundry Company

## Water, Gas, Sewer, Culvert and Flange Pipe, Pipe Fittings, Flexible-Joint Pipe
## Heavy Castings to Special Designs

COST IN CENTS PER LINEAL FOOT OF BELL AND SPIGOT CAST IRON PIPE

| Price per Ton | $21.00 | | | | $22.00 | | | | $23.00 | | | | $24.00 | | | | $25.00 | | | | $26.00 | | | | $27.00 | | | | $28.00 | | | | $29.00 | | | | $30.00 | | | | Price per Ton |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Class | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D | Class |
| 3" | 15.2 | 17.0 | 17.9 | 18.9 | 15.9 | 17.8 | 18.8 | 19.8 | 16.7 | 18.6 | 19.7 | 20.7 | 17.4 | 19.4 | 20.5 | 21.6 | 18.1 | 20.2 | 21.4 | 22.5 | 18.8 | 21.1 | 22.2 | 23.4 | 19.6 | 21.9 | 23.1 | 24.3 | 20.3 | 22.6 | 23.9 | 25.2 | 21.0 | 23.5 | 24.8 | 26.1 | 21.7 | 24.3 | 25.6 | 27.0 | 3" |
| 4 | 21.0 | 22.8 | 24.5 | 26.2 | 22.0 | 23.9 | 25.6 | 27.5 | 23.0 | 24.9 | 26.8 | 28.8 | 24.0 | 26.0 | 28.0 | 30.0 | 25.0 | 27.1 | 29.1 | 31.2 | 26.0 | 28.2 | 30.2 | 32.5 | 27.0 | 29.3 | 31.4 | 33.7 | 28.0 | 30.4 | 32.6 | 35.0 | 29.0 | 31.5 | 33.8 | 36.2 | 30.0 | 32.5 | 34.9 | 37.5 | 4 |
| 6 | 32.3 | 35.0 | 37.6 | 40.2 | 33.9 | 36.7 | 39.4 | 42.1 | 35.4 | 38.3 | 41.2 | 44.0 | 37.0 | 40.0 | 43.0 | 46.0 | 38.5 | 41.6 | 44.7 | 47.9 | 40.0 | 43.3 | 46.5 | 49.8 | 41.6 | 44.9 | 48.3 | 51.7 | 43.1 | 46.6 | 50.1 | 53.6 | 44.7 | 48.3 | 51.9 | 55.5 | 46.2 | 50.0 | 53.7 | 57.4 | 6 |
| 8 | 45.0 | 49.8 | 54.7 | 58.6 | 47.1 | 52.2 | 57.3 | 61.4 | 49.3 | 54.6 | 59.9 | 64.1 | 51.5 | 57.0 | 62.5 | 66.9 | 53.7 | 59.4 | 65.1 | 69.7 | 55.8 | 61.8 | 67.7 | 72.5 | 57.9 | 64.1 | 70.3 | 75.3 | 60.0 | 66.5 | 72.9 | 78.1 | 62.2 | 68.9 | 75.5 | 80.9 | 64.3 | 71.2 | 78.1 | 83.7 | 8 |
| 10 | 60.0 | 67.0 | 74.3 | 80.5 | 62.8 | 70.2 | 77.9 | 84.4 | 65.6 | 73.4 | 81.4 | 88.2 | 68.5 | 76.6 | 84.9 | 92.0 | 71.3 | 79.8 | 88.4 | 95.8 | 74.2 | 82.9 | 92.0 | 99.7 | 77.0 | 85.9 | 95.6 | 103 | 79.9 | 88.9 | 99.1 | 107 | 82.8 | 92.3 | 103 | 111 | 85.6 | 95.7 | 106 | 115 | 10 |
| 12 | 76.1 | 86.2 | 96.3 | 105 | 79.8 | 90.3 | 101 | 110 | 83.4 | 94.4 | 106 | 115 | 87.0 | 98.5 | 110 | 120 | 90.6 | 103 | 114 | 125 | 94.2 | 107 | 119 | 130 | 97.6 | 111 | 124 | 135 | 101 | 115 | 128 | 140 | 104 | 119 | 135 | 145 | 109 | 123 | 137 | 150 | 12 |
| 14 | 94.1 | 108 | 122 | 136 | 98.6 | 113 | 128 | 142 | 102 | 115 | 130 | 146 | 108 | 123 | 139 | 155 | 113 | 128 | 146 | 161 | 116 | 133 | 152 | 168 | 121 | 138 | 157 | 174 | 125 | 143 | 163 | 181 | 130 | 149 | 169 | 186 | 134 | 154 | 175 | 194 | 14 |
| 16 | 114 | 131 | 151 | 161 | 119 | 137 | 158 | 164 | 125 | 143 | 165 | 177 | 130 | 150 | 172 | 190 | 136 | 156 | 179 | 198 | 141 | 162 | 187 | 206 | 146 | 168 | 194 | 214 | 152 | 175 | 201 | 222 | 157 | 181 | 208 | 229 | 162 | 188 | 216 | 237 | 16 |
| 18 | 136 | 157 | 184 | 201 | 142 | 165 | 192 | 211 | 148 | 173 | 201 | 220 | 155 | 180 | 210 | 230 | 161 | 187 | 218 | 239 | 168 | 195 | 227 | 249 | 175 | 202 | 236 | 258 | 181 | 210 | 245 | 268 | 187 | 217 | 254 | 278 | 194 | 225 | 262 | 288 | 18 |
| 20 | 157 | 178 | 218 | 241 | 165 | 188 | 229 | 252 | 173 | 196 | 240 | 263 | 180 | 210 | 250 | 275 | 187 | 219 | 260 | 287 | 195 | 227 | 271 | 298 | 205 | 236 | 281 | 309 | 215 | 245 | 292 | 321 | 217 | 254 | 302 | 332 | 225 | 262 | 312 | 344 | 20 |
| 24 | 214 | 245 | 293 | 322 | 225 | 257 | 307 | 337 | 235 | 268 | 321 | 352 | 245 | 280 | 335 | 368 | 253 | 296 | 349 | 383 | 265 | 303 | 363 | 399 | 276 | 315 | 377 | 414 | 286 | 327 | 391 | 429 | 296 | 338 | 405 | 445 | 306 | 350 | 419 | 460 | 24 |
| 30 | 306 | 350 | 420 | 473 | 321 | 367 | 440 | 495 | 335 | 383 | 460 | 520 | 350 | 400 | 480 | 546 | 365 | 417 | 500 | 565 | 379 | 433 | 520 | 585 | 394 | 450 | 540 | 607 | 408 | 467 | 560 | 630 | 423 | 483 | 580 | 652 | 437 | 500 | 600 | 675 | 30 |
| 36 | 411 | 477 | 573 | 656 | 431 | 500 | 600 | 687 | 450 | 522 | 627 | 718 | 470 | 545 | 655 | 750 | 490 | 568 | 682 | 781 | 509 | 590 | 709 | 812 | 529 | 613 | 738 | 844 | 548 | 636 | 764 | 875 | 568 | 659 | 791 | 907 | 587 | 681 | 819 | 937 | 36 |
| 42 | 538 | 621 | 750 | 866 | 564 | 651 | 788 | 907 | 589 | 680 | 824 | 948 | 615 | 710 | 860 | 990 | 641 | 740 | 896 | 1032 | 666 | 769 | 932 | 1072 | 692 | 799 | 967 | 1114 | 717 | 828 | 1003 | 1155 | 743 | 858 | 1039 | 1196 | 769 | 883 | 1075 | 1238 | 42 |
| 48 | 700 | 787 | 954 | 1108 | 733 | 825 | 999 | 1155 | 767 | 862 | 1044 | 1207 | 800 | 900 | 1090 | 1260 | 833 | 938 | 1135 | 1313 | 867 | 975 | 1181 | 1365 | 900 | 1012 | 1226 | 1437 | 933 | 1050 | 1272 | 1510 | 967 | 1087 | 1317 | 1522 | 1000 | 1125 | 1362 | 1575 | 48 |
| 60 | 962 | 1159 | 1409 | 1662 | 1008 | 1215 | 1476 | 1742 | 1054 | 1215 | 1476 | 1742 | 1100 | 1325 | 1610 | 1900 | 1146 | 1380 | 1677 | 1979 | 1192 | 1435 | 1744 | 2058 | 1237 | 1491 | 1811 | 2137 | 1283 | 1546 | 1878 | 2217 | 1329 | 1601 | 1945 | 2296 | 1375 | 1656 | 2013 | 2375 | 60 |

PLAINTIFF'S EXHIBIT 69 BROCK & BRACK

*Address all inquiries to nearest sales office*

CHICAGO
The Rookery

**THE MASSILLON IRON AND STEEL CO.**
**MASSILLON, OHIO**

PITTSBURGH
Bessemer Building

BELL AND SPIGOT PIPE TO LAY TWELVE FEET

Standard Thicknesses and Weights Adopted by the American Water Works Association

| Class | Head Feet | Pressure Pounds | Nominal Inside Diam., Inches | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 30 | 36 | 42 | 48 | 60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 100 | 43 | Wt. per length... | 175 | 240 | 370 | 515 | 665 | 870 | 1075 | 1300 | 1550 | 1800 | 2450 | 3500 | 4700 | 6150 | 8000 | 11000 |
| | | | Wt. per foot ... | 14.5 | 20.0 | 30.8 | 42.9 | 57.1 | 72.5 | 89.6 | 108.3 | 129.2 | 150.0 | 204.2 | 291.7 | 391.7 | 512.5 | 666.7 | 916.7 |
| | | | Thickness, inches | .39 | .42 | .44 | .46 | .50 | .54 | .57 | .60 | .64 | .67 | .76 | .88 | .99 | 1.10 | 1.26 | 1.39 |
| B | 200 | 86 | Wt. per length... | 194 | 260 | 400 | 570 | 765 | 985 | 1230 | 1500 | 1800 | 2100 | 2800 | 4000 | 5450 | 7100 | 9000 | 13250 |
| | | | Wt. per foot ... | 16.2 | 21.7 | 33.3 | 47.5 | 63.8 | 82.1 | 102.5 | 125.0 | 150.0 | 175 | 233.3 | 333.3 | 454.2 | 591.7 | 750.0 | 1104.2 |
| | | | Thickness, inches | .42 | .45 | .48 | .51 | .57 | .62 | .68 | .70 | .75 | .80 | .89 | 1.03 | 1.15 | 1.28 | 1.42 | 1.67 |
| C | 300 | 130 | Wt. per length... | 205 | 280 | 430 | 625 | 850 | 1100 | 1400 | 1725 | 2100 | 2500 | 3350 | 4800 | 6550 | 8600 | 10900 | 16100 |
| | | | Wt. per foot .... | 17.1 | 23.3 | 35.8 | 52.1 | 70.8 | 91.7 | 116.7 | 143.8 | 175.0 | 208.3 | 279.2 | 400.0 | 545.8 | 716.7 | 908.3 | 1341.7 |
| | | | Thickness, inches | .45 | .48 | .51 | .56 | .62 | .68 | .74 | .80 | .87 | .92 | 1.04 | 1.20 | 1.36 | 1.54 | 1.71 | 2.00 |
| D | 400 | 173 | Wt. per length... | 216 | 300 | 460 | 670 | 920 | 1200 | 1550 | 1900 | 2300 | 2750 | 3680 | 5400 | 7500 | 9900 | 12900 | 19000 |
| | | | Wt. per foot .... | 18.0 | 25.0 | 38.3 | 55.8 | 76.7 | 100.0 | 129.2 | 158.3 | 191.7 | 229.2 | 306.7 | 450.0 | 625.0 | 825.0 | 1050.0 | 1583.3 |
| | | | Thickness, inches | .48 | .52 | .55 | .60 | .68 | .75 | .82 | .89 | .96 | 1.03 | 1.16 | 1.37 | 1.56 | 1.78 | 1.96 | 2.38 |
| Nominal inside diam., inches | | | | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 30 | 36 | 42 | 48 | 60 |
| Approx. lbs. Lead in Joint 2 in. deep | | | | 6 | 7½ | 10½ | 13¼ | 16 | 19 | 22 | 30 | 33¼ | 37 | 44 | 54½ | 64¼ | 75½ | 85½ | 108¼ |
| Approx. pounds Hemp per Joint | | | | .18 | .21 | .31 | .44 | .53 | .61 | .81 | .94 | 1.00 | 1.25 | 1.50 | 2.06 | 3.00 | 3.62 | 4.37 | 8.25 |

SUMMARY OF WEIGHT CLAUSE IN STANDARD SPECIFICATION.

Pipe 16 inches and less, 5% variation allowed. Total weight to be paid for not to exceed Standard over 2%.
Pipe 18 inches and larger, 4% variation allowed. Total weight to be paid for not to exceed standard over 2%.

PLAINTIFF'S EXHIBIT 70

EXHIBIT 70

O
1282

2821

1283 & 1284 Doherty Operating Company,
Sixty Wall Street, New York.

1285 Answered Aug. 7, 1908. H. H. S. Received Filing Room Aug. 10, 1908.

Subject:

1. Blower Lincoln System.
2. Distribution " "

Lincoln Gas & Elec. Lt. Company.

Subject: Proposed District Gas Blower.

By S. W. Cheney.

Date July 22, 1908.

The blower or "booster" which we propose to install is for the purpose of raising the pressure during the "peak" in that portion of the City of Lincoln commonly designated as B 3-4-2, "East Lincoln," and the object of this report is to give data showing the necessity for same.

East Lincoln lies principally east of 20th st. and north of "O" st. It is a choice residential district and is building up very fast, in fact probably faster than any other similar area.

With the distribution system as it is at present, it becomes more and more difficult each year to give service in this district at night, particularly during the winter months.

In endeavoring to get gas to these consumers we have raised the pressure at the plant until we are troubled with high pressure in the western and southern portion of the city. A city ordinance limits our pressure at any appliance to 50/10, but last winter we carried 100/10 at the works giving us 86/10 to 90/10 at 9th and "M" sts.

Appended to this report is a copy of our skeleton map of the distribution system, a table showing pressures taken different days at several locations, and prints of various pressure gauge charts.

The map shows sizes of mains, valve locations and chart locations. The charts are numbered and will be referred to separately. The street names and numerals are shown on the margins of the map and the key to scale and symbols is shown at the top. The sizes of some of the principal mains have been marked on them so that they may be more readily distinguished and also furnish ready guide to the ones unmarked.

1286 It will be seen on the map that the route the gas probably takes to reach East Lincoln is across "M" st. to 18th or around the "loop," that is south on 9th and 10th to "C" St. across "C" to 18th and north on 18th to "M" st. probably most of the gas goes across "M" st.

The accompanying table of pressures was compiled from data taken on four different days in November and December over the night

cooking peak. It shows pressure at the works and along "M" st. and north on 18th st. to "R" st. Readings were taken every five minutes from 5:45 P. M. to 6:15 P. M., inclusive. The vertical columns show location and the horizontal columns show time of day. The values given are inches of water pressure. At some of the locations we were unable to get readings each day.

The small charts numbered 1, 2, 3, 4, etc., were taken in different parts of the city during the months of November, December and January.

The larger charts numbered 1*w*, 2*w*, 3*w*, 4*w*, etc., were taken at the works on the days respectively corresponding to the days on which the smaller ones were taken.

Charts numbers 3*w* and 4*w*, were taken on vacuum gauge blanks because the proper blanks had run out temporarily. They are, however, recalibrated as closely as possible.

Charts numbers 1, 3, 7, 9, and 10 show the pressure in the western and southern parts of the city and the rest of them show the conditions in East Lincoln.

Charts numbers 1, 3, and 4 were taken in outlying districts on the days when the first three sections of the table of pressures were taken.

In order to meet the condition of affairs as shown by the data given above and at the same time avoid an expenditure of $10,000.00
1287 or $12,000.00 for larger main we propose the following scheme:

To close or partially close the following valves already in place, 9th and "M" north side, 10th and "M" north side, 18th and "N," 17th and "O," 18th and "P," 18th and "Q."

To install valves which will be wholly or partially closed at the following locations: 10th and "M" south side, 11th and "M" north side and south side and at 17th and "M" north and south sides, all 4" valves, also a 10" valve at 18th and "M" south side.

To install at 9th and "M" sts. a motor driven booster of the centrifugal fan type, capable of handling 25000 cu. ft. of gas per hour received at a pressure of 64 tenths of an inch of water and delivered at a pressure of 144 tenths.

The distance from 9th to 18th st. is about 3600 feet. 25000 cu. ft. of gas received at 9th and "M" st. at 144 tenths will be delivered at 18th and "M" st. about 64 tenths pressure. This is 15 tenths higher than we were able to get last winter and with this increase we should be able to get about 10 tenths increase at the extremities of the mains in East Lincoln.

By proper adjustment of the present and proposed valves the 8 inch main on "M" st. can be made practically a transmission main alone, also the main running north on 18th st. from "M" st. to "R" St.

The 8" main on "M" st. is on the south side of the street and is paralleled from 11th to 17th st. by a 4 inch main on the north side of the street. The services on the north side are fed from this and this in turn may be fed from the 6 inch main on "O" st., via 11th st., or if necessary the valve at 11th and "M," north side, can be
1288 opened slightly.

The services on the south side of "M" st. may be fed from the 8" main by placing a house governor on each one.

The valve at 9th and "M" north side may be closed or nearly so and "N" st. and "O" st., to 18th st. and section north may be fed from 10 inch main on 6th street.

The valve at 9th and "M" south side may be left open to feed the south part of town, the valves at 10th and "M," 11th and "M" and 17th and "M" both north and south sides may be closed or nearly so, the valve at 18th and "M" south side may be closed or nearly so in order that when the pressure is raised the gas will not flow south unless needed to keep up pressure.

The adjustment of the several valves can be determined by trial when we find out where the pressures are high or low.

Our estimate of the cost of this installation is as follows:

| | Material. | Labor. |
|---|---|---|
| 5 4" valves | $40.00 | $40.00 |
| 1 8" valve | 20.00 | 20.00 |
| 1 10" valve | 32.00 | 30.00 |
| 1 Sturtevant Blower | 265.00 | 75.00 |
| Piping, valves, etc., for same | 250.00 | 200.00 |
| 2 H. P. Motor, belt, etc | 70.00 | 50.00 |
| Blower house | 40.00 | 45.00 |
| 85 Governors ($1.65 each, setting, $2.00 each) | 141.00 | 170.00 |
| | $858.00 | $630.00 |
| | | 858.00 |
| Total | | $1,488.00 |

Of these amounts we have the 85 governors in stock unused.

Figures given by B. F. Sturtevant Co. show that it will take about two H. P. to run the booster. Running five hours a day would make a consumption of 10 H. P. hours or allowing for extra say 10
1289 K. W. hours per day or 3650 K. W. hours per year. Charging this at 3c. per K. W. hour the cost of power would be $109.00. Interest and depreciation on investment of $1488.00 at 15% would be $223.00. The rent on lot for blower house would be about $150.00 per year. Total cost per year $482.00. The interest alone on an investment of $10,000.00 at 6% for one year would be $600.00.

The above scheme, we calculate, will meet requirements probably for two winters but not more. At the end of that time it will be necessary to make some extensive changes and additions to the distribution system.

1290

## Gas Pressures.

*All Values Indicated Are in Inches of Water.*

| Time, P. M. | Plant. | 7th & "M." | 9th & "M." | 11th & "M." | 14th & "M." | 18th & "M." | 18th & "R." |
|---|---|---|---|---|---|---|---|
| 5.45 | 8.5 | 7.3 | 6.9 | 6.1 | .. | .. | 3.8 |
| 5.50 | 8.5 | 7.4 | 7.1 | 6.0 | .. | .. | 3.6 |
| 5.55 | 8.5 | 7.4 | 7.2 | 5.9 | .. | .. | 3.6 |
| 6.00 | 8.5 | 7.6 | 7.4 | 5.9 | .. | .. | 3.4 |
| 6.05 | 8.5 | 7.4 | 7.3 | 6.0 | .. | .. | 3.6 |
| 6.10 | 8.5 | 7.4 | 7.3 | 6.0 | .. | .. | 3.6 |
| 6.15 | 8.5 | 7.3 | 7.3 | 6.1 | .. | .. | 3.8 |
| | | | | Above for Tuesday—Nov. 12, '07. | | | |
| 5.45 | 10.0 | .. | 8.9 | 7.6 | 6.5 | 4.9(?) | 3.8 |
| 5.50 | 10.0 | .. | 8.9 | 7.4 | 6.5 | 5.0(?) | 3.8 |
| 5.55 | 10.0 | .. | 8.8 | 7.3 | 6.5 | 6.2 | 3.8 |
| 6.00 | 10.0 | .. | 8.8 | 7.5 | 6.5 | 6.0 | 3.8 |
| 6.05 | 10.0 | .. | 8.9 | 7.5 | 6.5 | 6.0 | 4.0 |
| 6.10 | 10.0 | .. | 8.8 | 7.7 | 6.7 | 5.9 | 4.2 |
| 6.15 | 10.0 | .. | 8.8 | 7.6 | 6.7 | 6.0 | 4.2 |
| | | | | Above for Tuesday—Nov. 19, '07. | | | |
| 5.45 | 10.0 | .. | .. | 7.5 | 6.7 | 4.8 | 4.0 |
| 5.50 | 10.0 | .. | .. | 7.4 | 6.7 | 4.9 | 3.8 |
| 5.55 | 10.0 | .. | .. | 7.3 | 6.6 | 4.9 | 3.8 |
| 6.00 | 10.0 | .. | .. | 7.3 | 6.5 | 5.0 | 3.8 |
| 6.05 | 10.0 | .. | .. | 7.3 | 6.5 | 4.9 | 3.8 |
| 6.10 | 10.0 | .. | .. | 7.5 | 6.6 | 4.9 | 3.6 |
| 6.15 | 10.0 | .. | .. | 7.5 | 6.8 | 4.9 | 4.0 |
| | | | | Above for Saturday—Nov. 23, '07. | | | |
| 5.45 | 10.0 | 9.1 | 8.6 | 7.5 | 6.6 | 4.6 | 3.2 |
| 5.50 | 10.0 | 9.3 | 8.8 | 7.5 | 6.8 | 4.7 | 3.2 |
| 5.55 | 10.0 | 9.0 | 8.7 | 7.4 | 6.5 | 4.7 | 3.4 |
| 6.00 | 10.0 | 9.2 | 8.8 | 7.3 | 6.8 | 4.9 | 3.2 |
| 6.05 | 10.0 | 9.4 | 8.9 | 7.3 | 7.0 | 4.9 | 3.6 |
| 6.10 | 10.0 | 9.1 | 8.9 | 7.3 | 7.0 | 5.1 | 3.8 |
| 6.15 | 10.0 | 8.7 | 8.7 | 7.3 | 6.7 | 5.1 | 3.6 |
| | | | | Above for Tuesday—Dec. 3, '07. | | | |

[Endorsed:] No. 744. Lincoln Gas & Electric Light Co. v. The City of Lincoln et al.

(Here follow diagrams marked pages 1291 to 1312, inclusive.)

BLUEPRINT

TOO

LARGE

FOR

FILMING

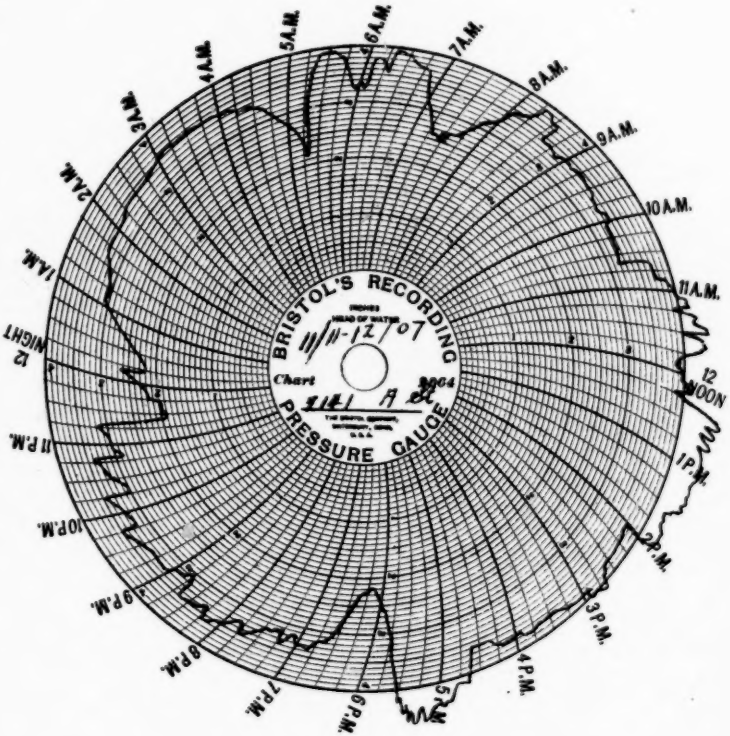



CHART No 1 DATE 11/11-12/07

LOCATION 1141 "A" ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

Page 1292

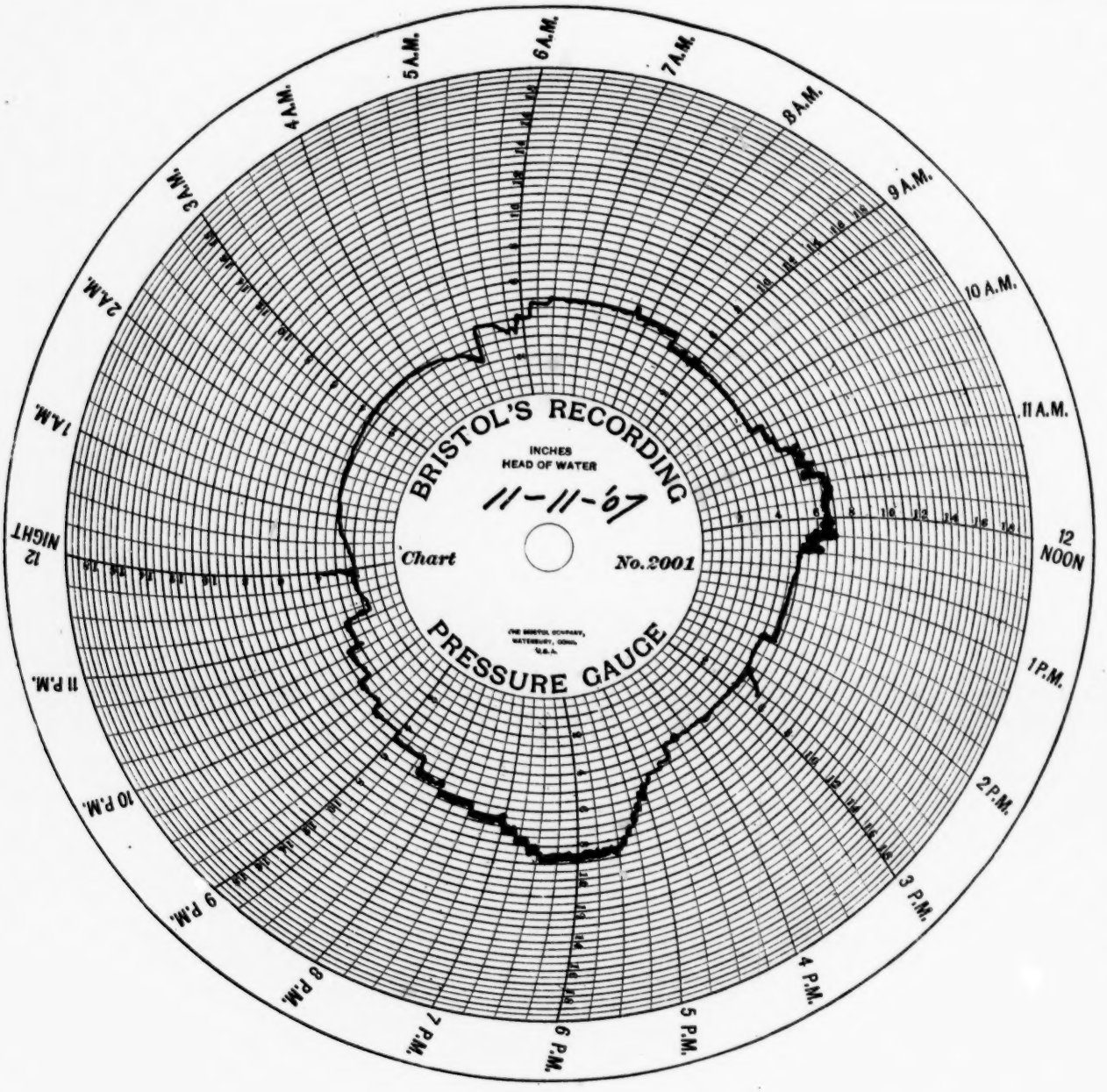



CHART NO. 1W

DATE 11/11/'07

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

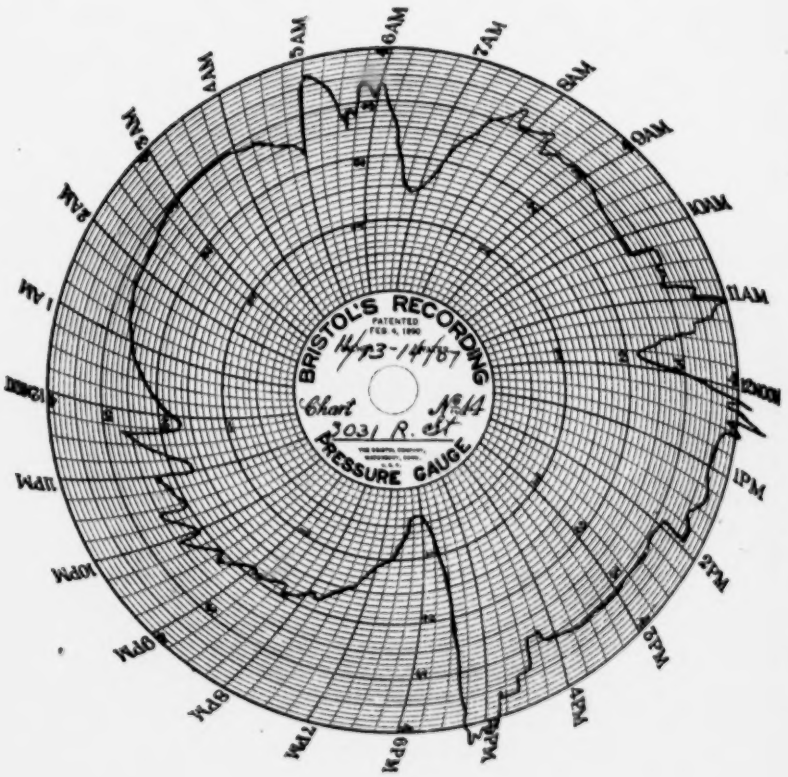



CHART No 2 DATE 11/13-14/07

LOCATION — 3031 "R" ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

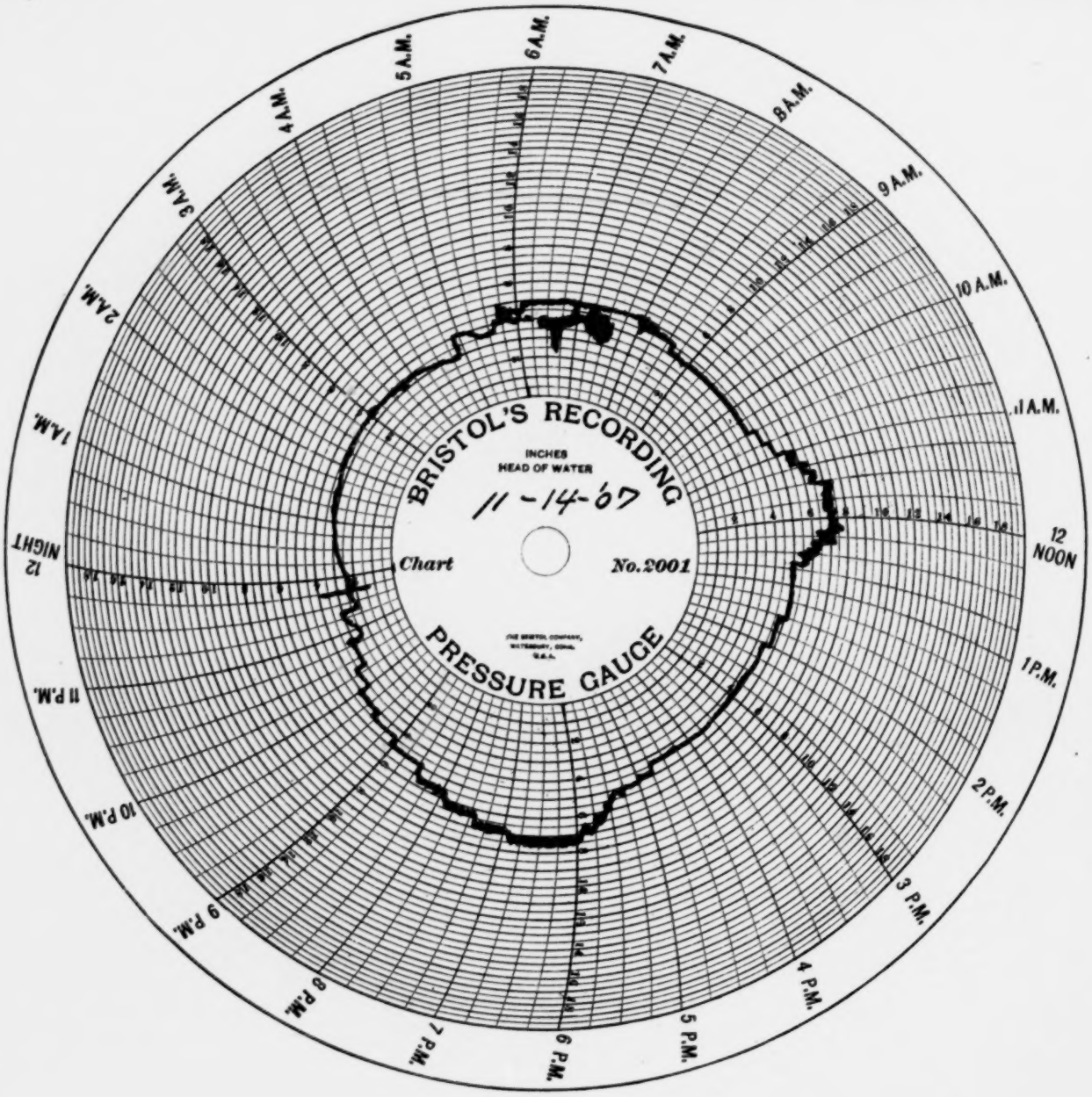



CHART No. 2 W.

DATE 11-14-'07.

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

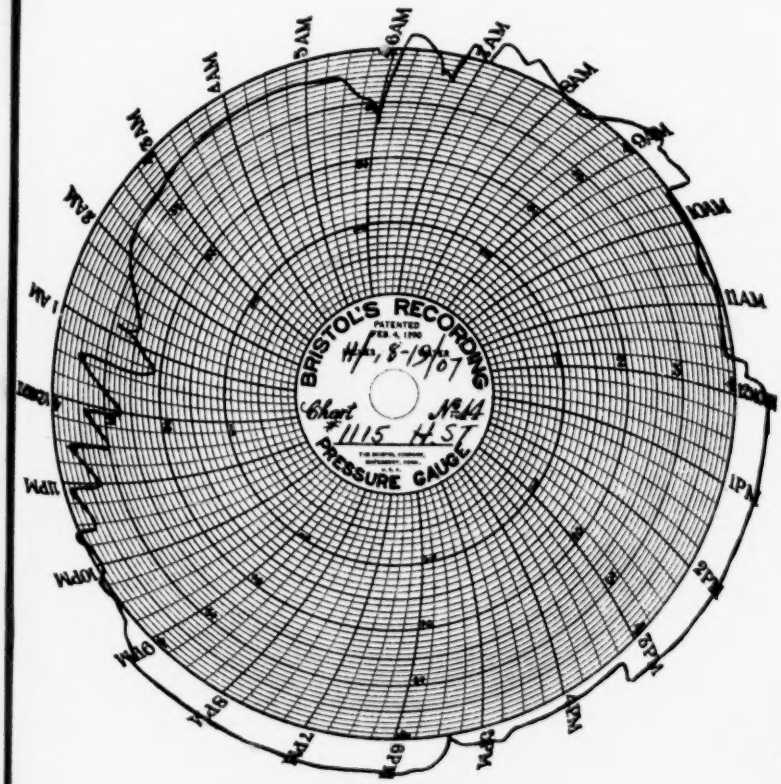



CHART No 3 DATE 11/18-19/07

LOCATION 1115 "H" ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

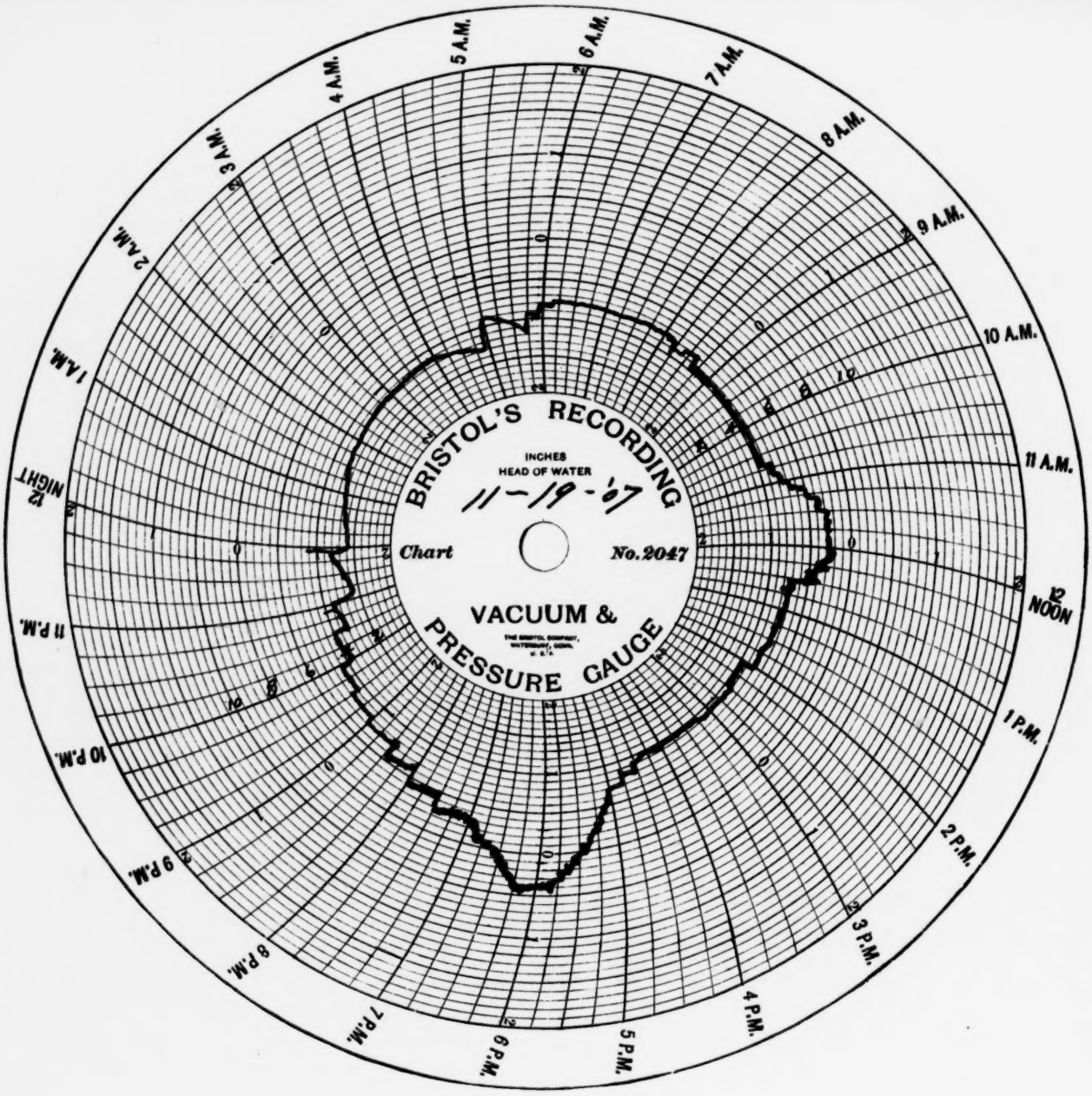



CHART No. 3W

DATE 11-19-'07

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

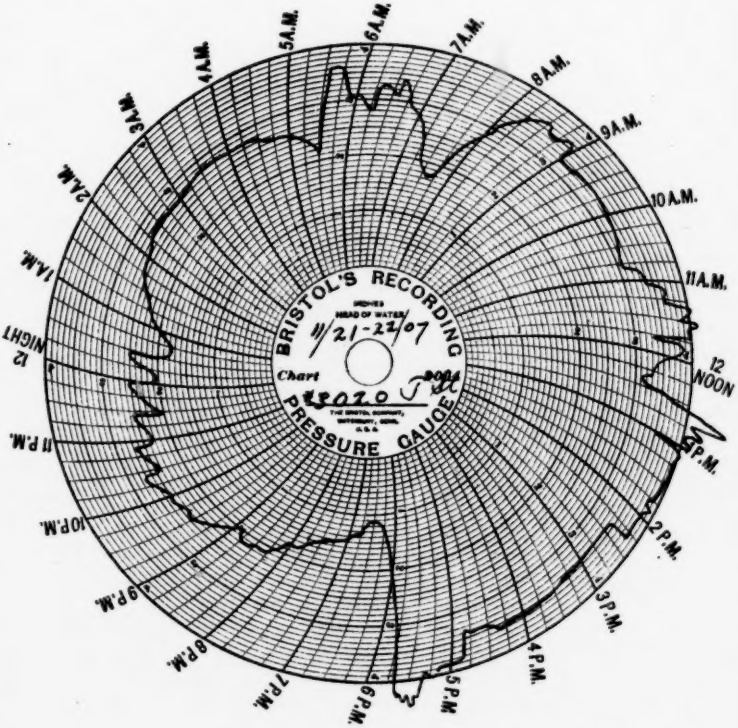



CHART No 4 DATE 11/21-22/07

LOCATION 3020 "T" ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

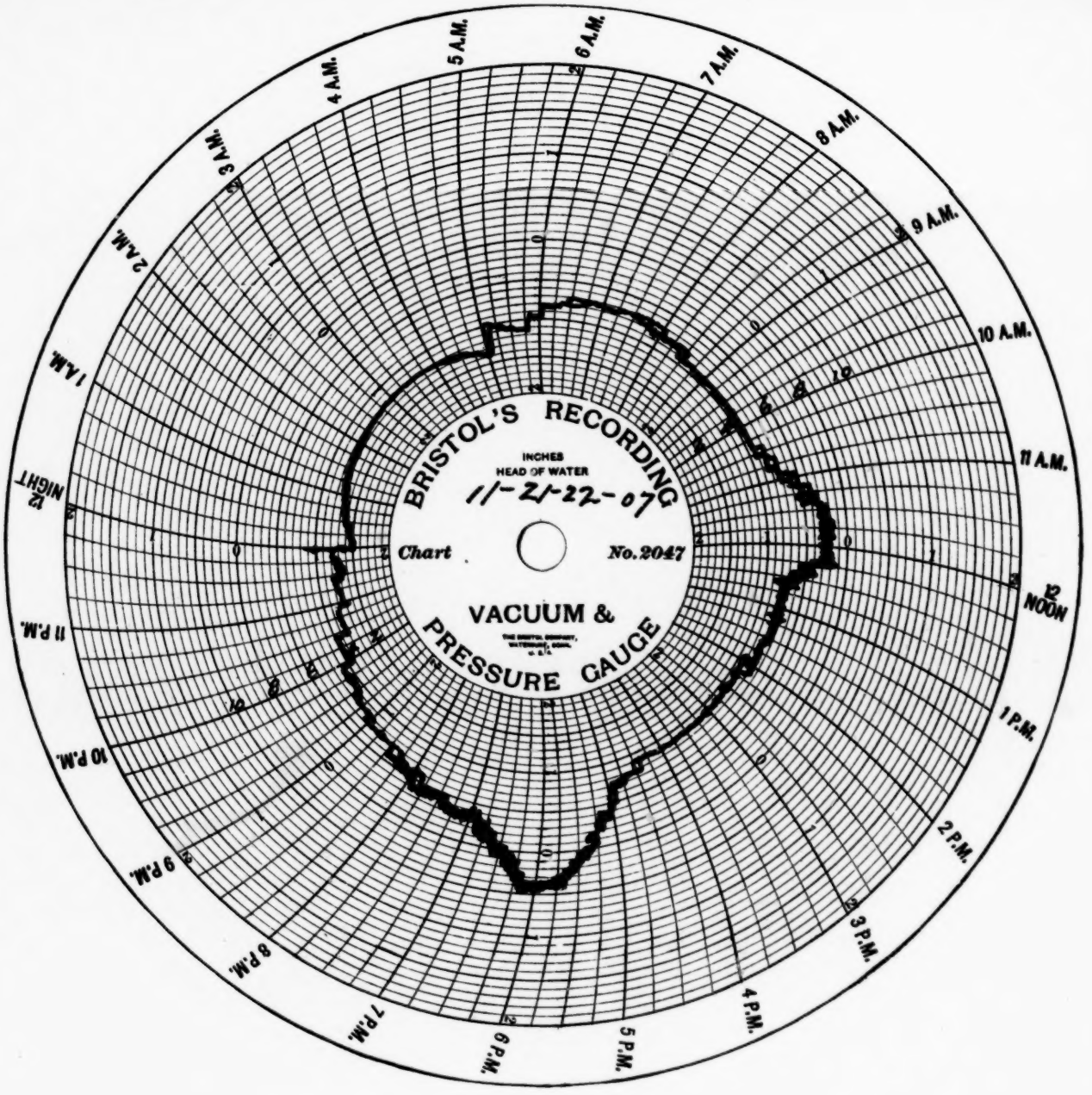



CHART No. 4.W.

DATE 11/21-22/07.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

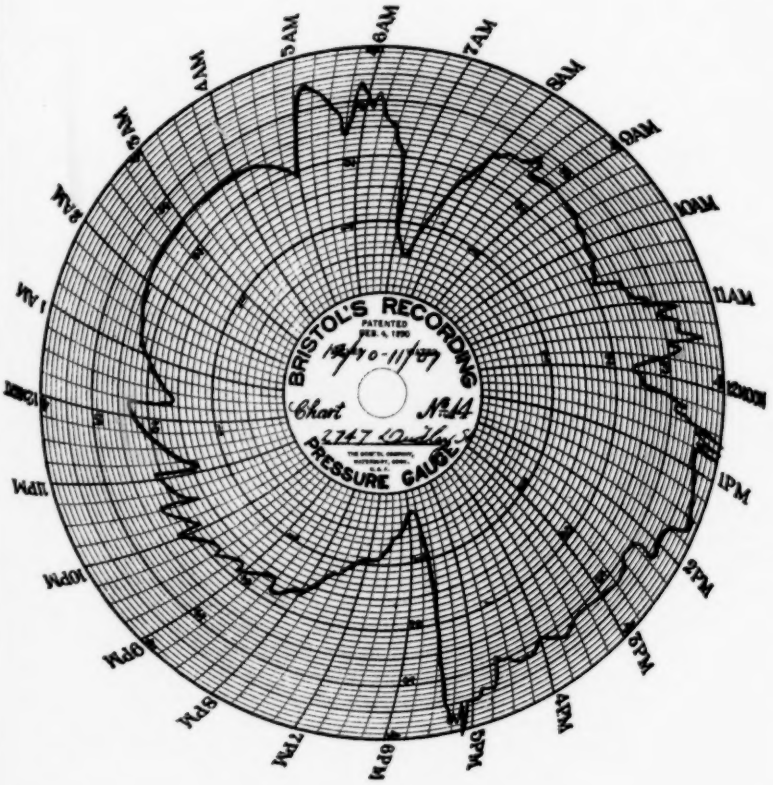



CHART No 5 DATE 12/10-11/07

LOCATION 2747 "DUDLEY" ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

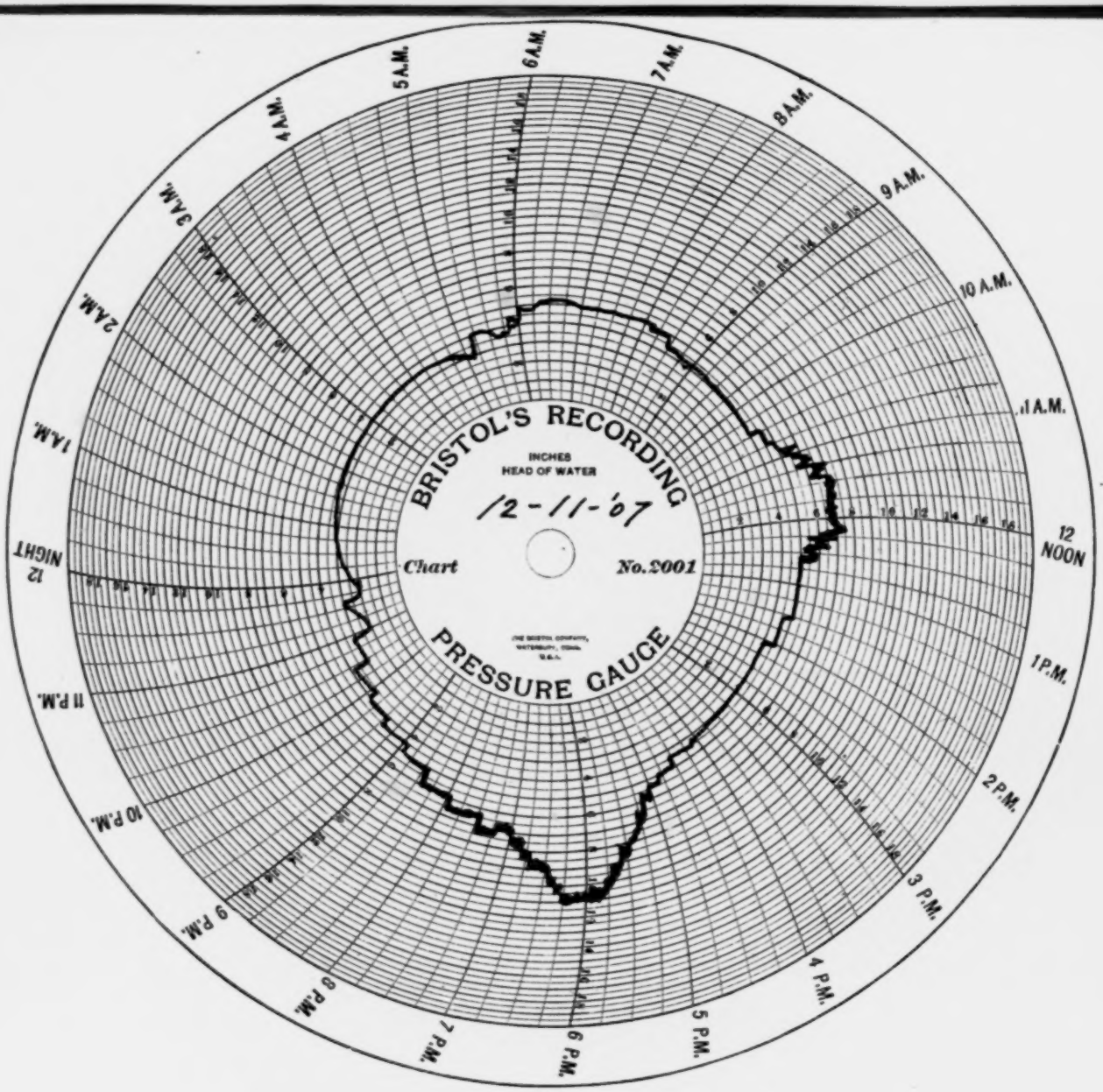



CHART NO. 5W

DATE 12-11-'07

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

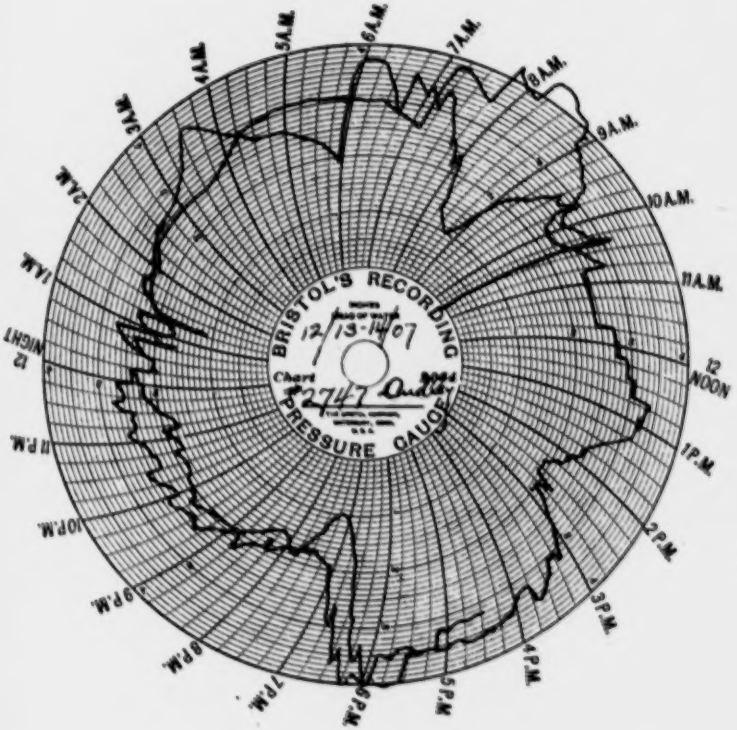



CHART No 6 DATE 12/13-14/07

LOCATION 2747 "DUDLEY" ST.

Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

Page 1302

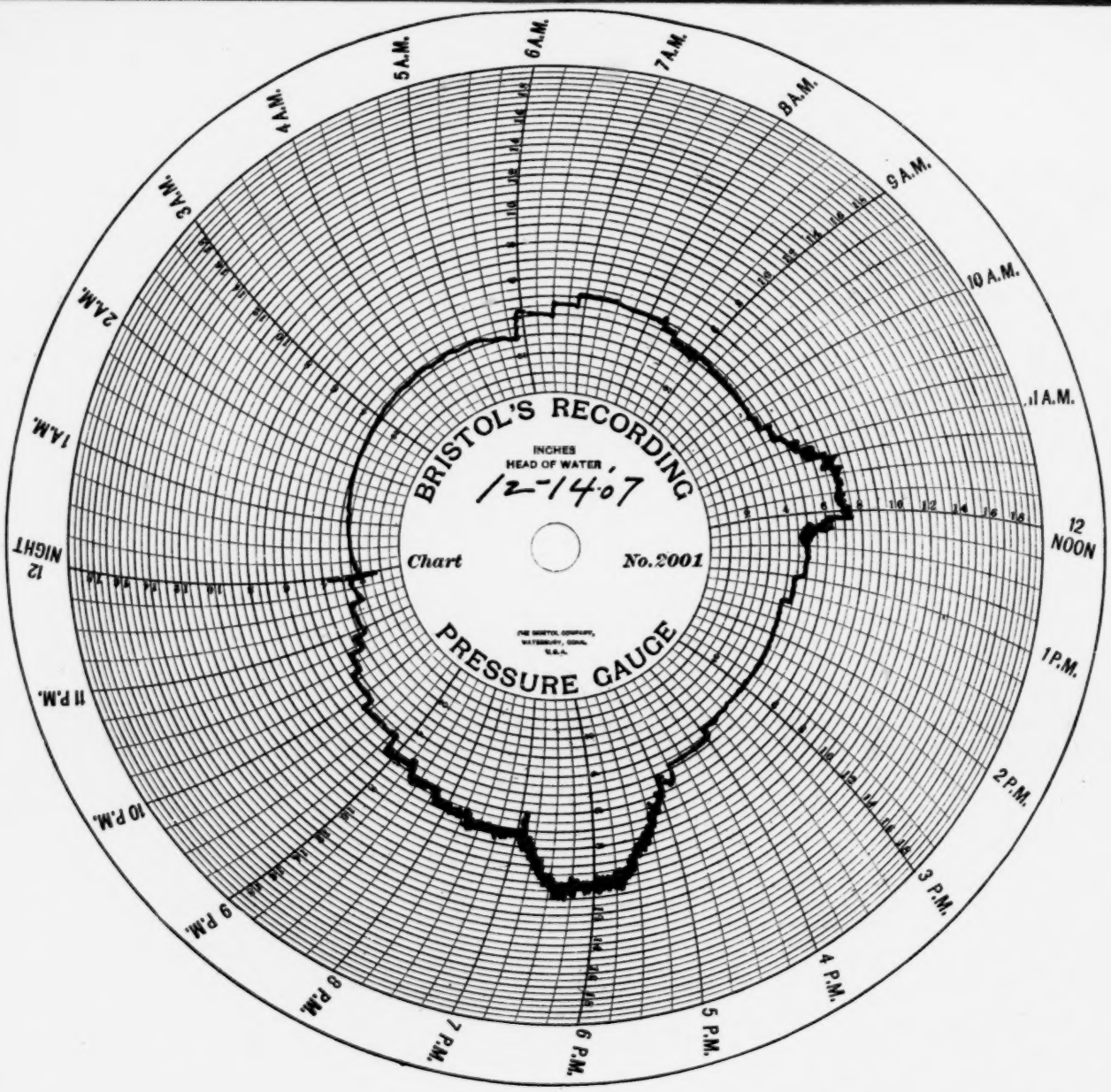



CHART No 6W.

DATE 12-14-'07

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

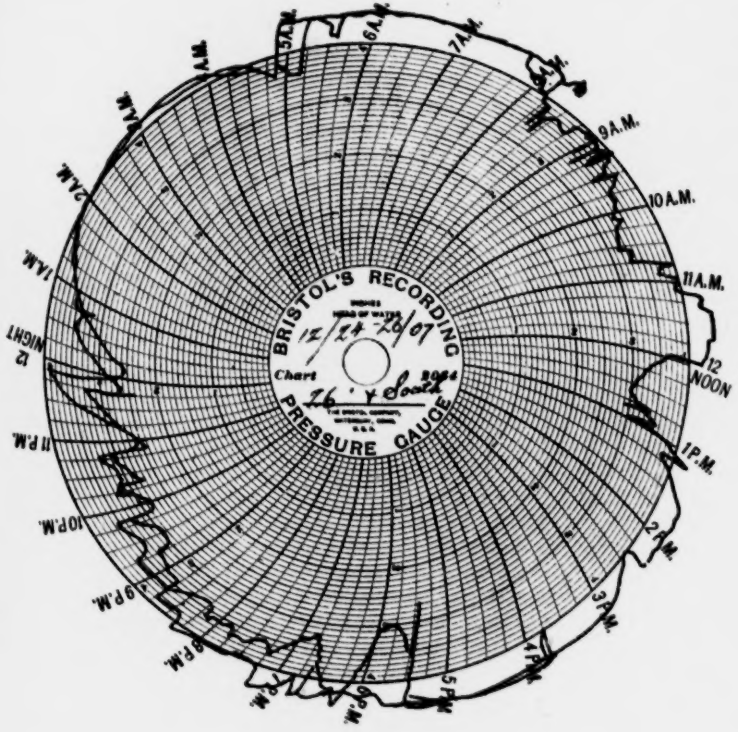



CHART No 7 DATE 12/20-26/07

LOCATION 26"ST AND "SOUTH" ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

Page 13 of 15

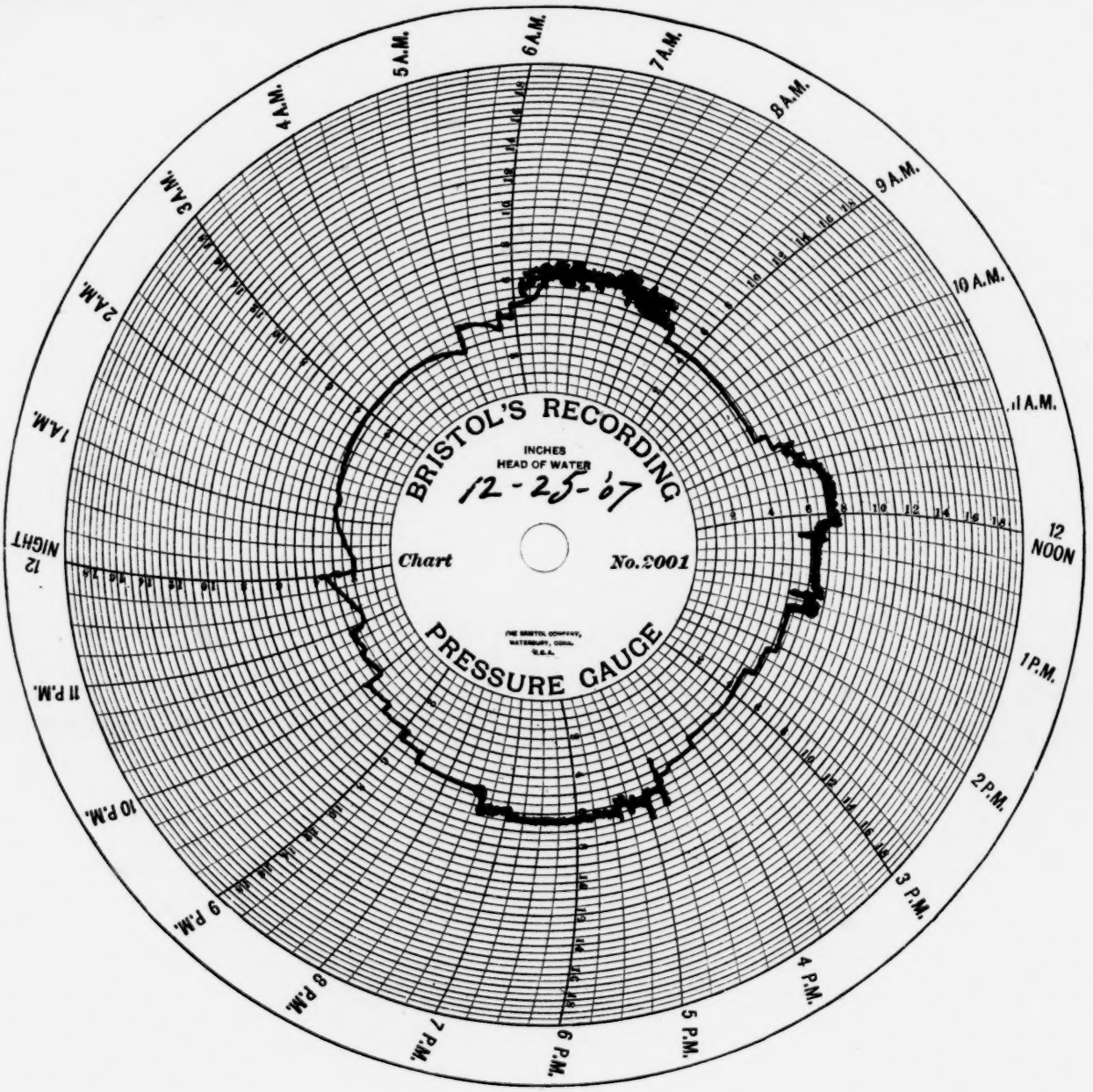



CHART No. 7W.

DATE 12-25-'07.

No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

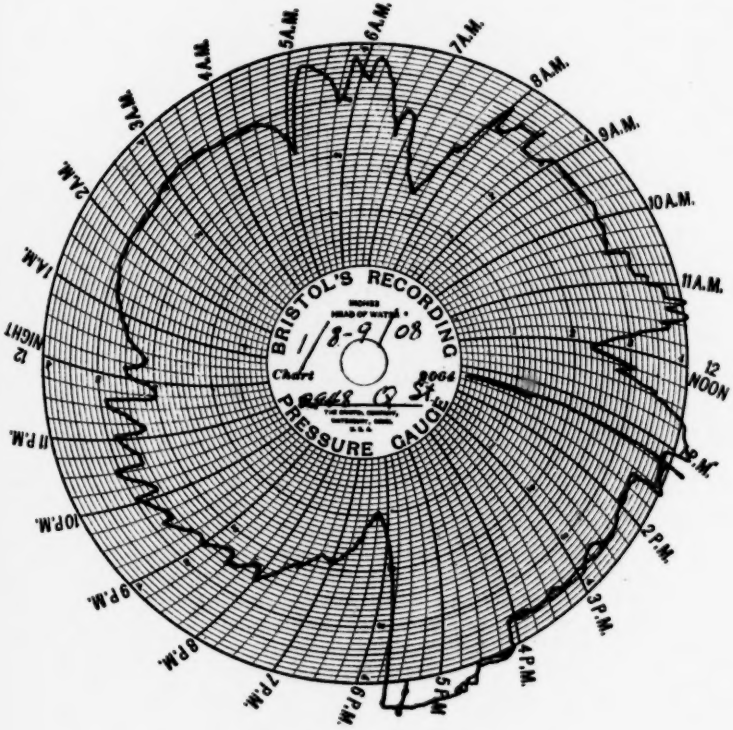



CHART No. 8 DATE 1/8-9/07

LOCATION 2948 "Q" ST.

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

Page# 1307½

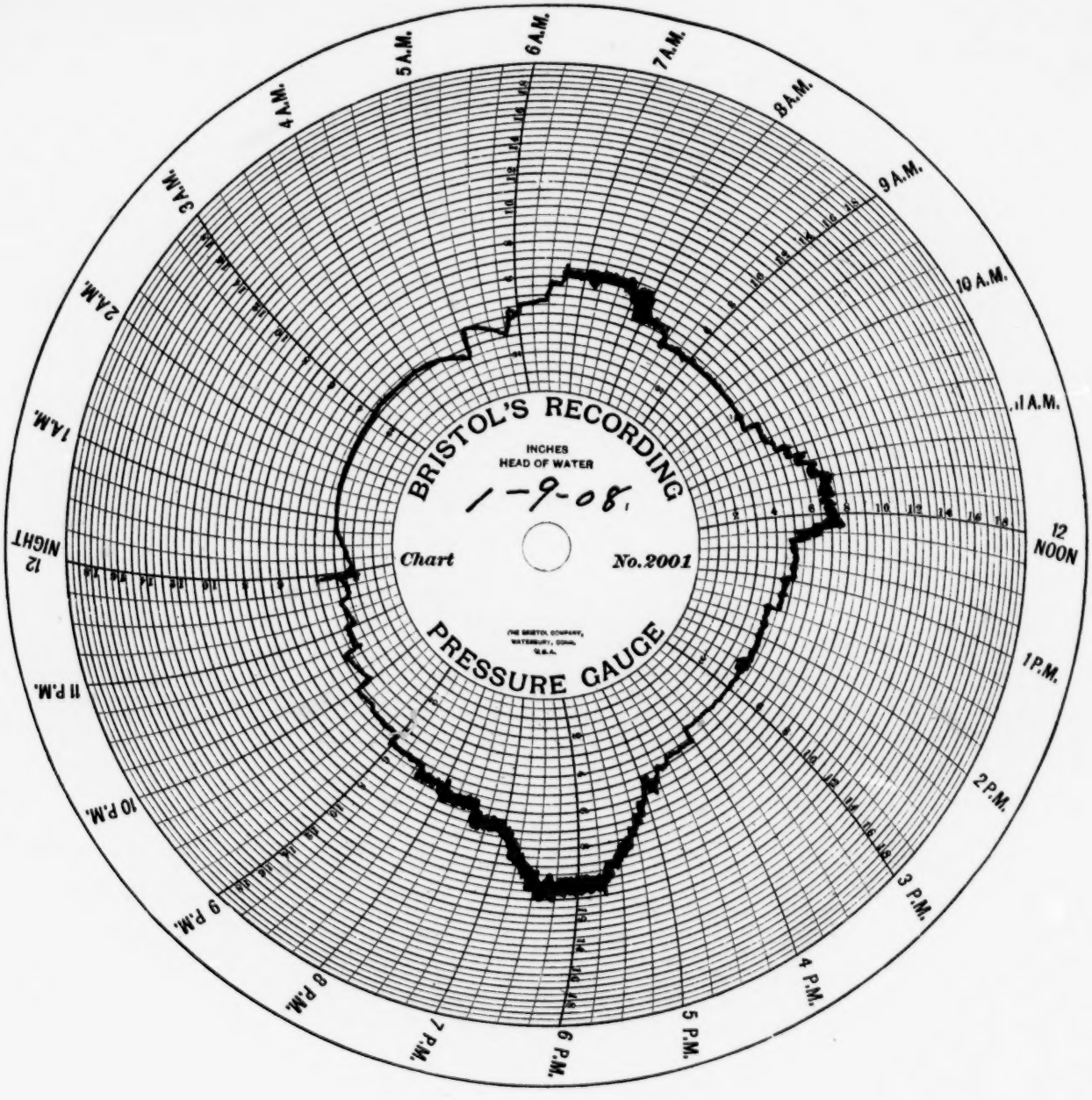



CHART NO 8W

DATE 1/9/08.

No. 744
Lincoln Gas & Electric Light Co.,
V.
The City of Lincoln et al

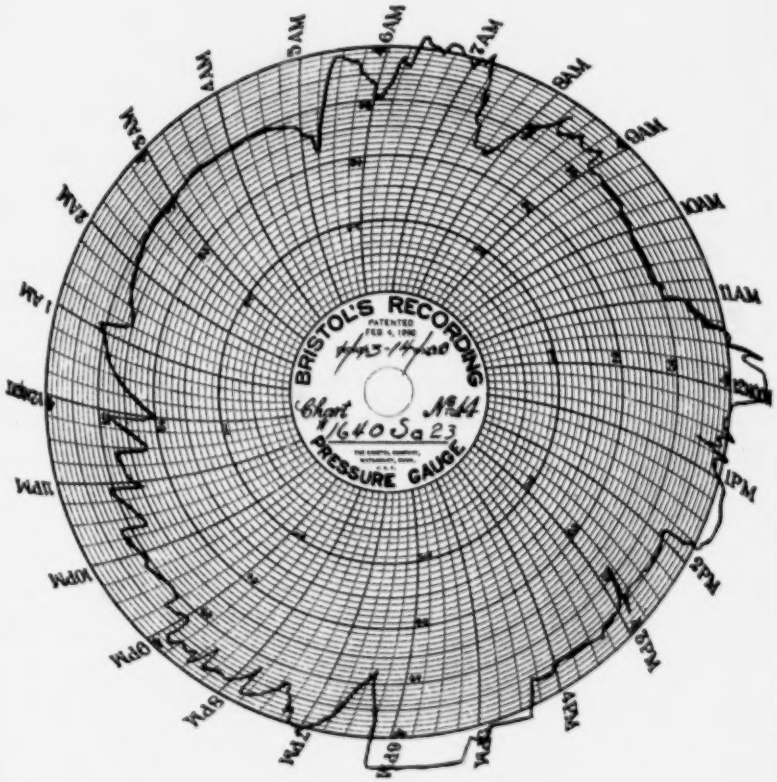



CHART No 3 DATE 1/13-14/08

LOCATION 1640 "So. 23" ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

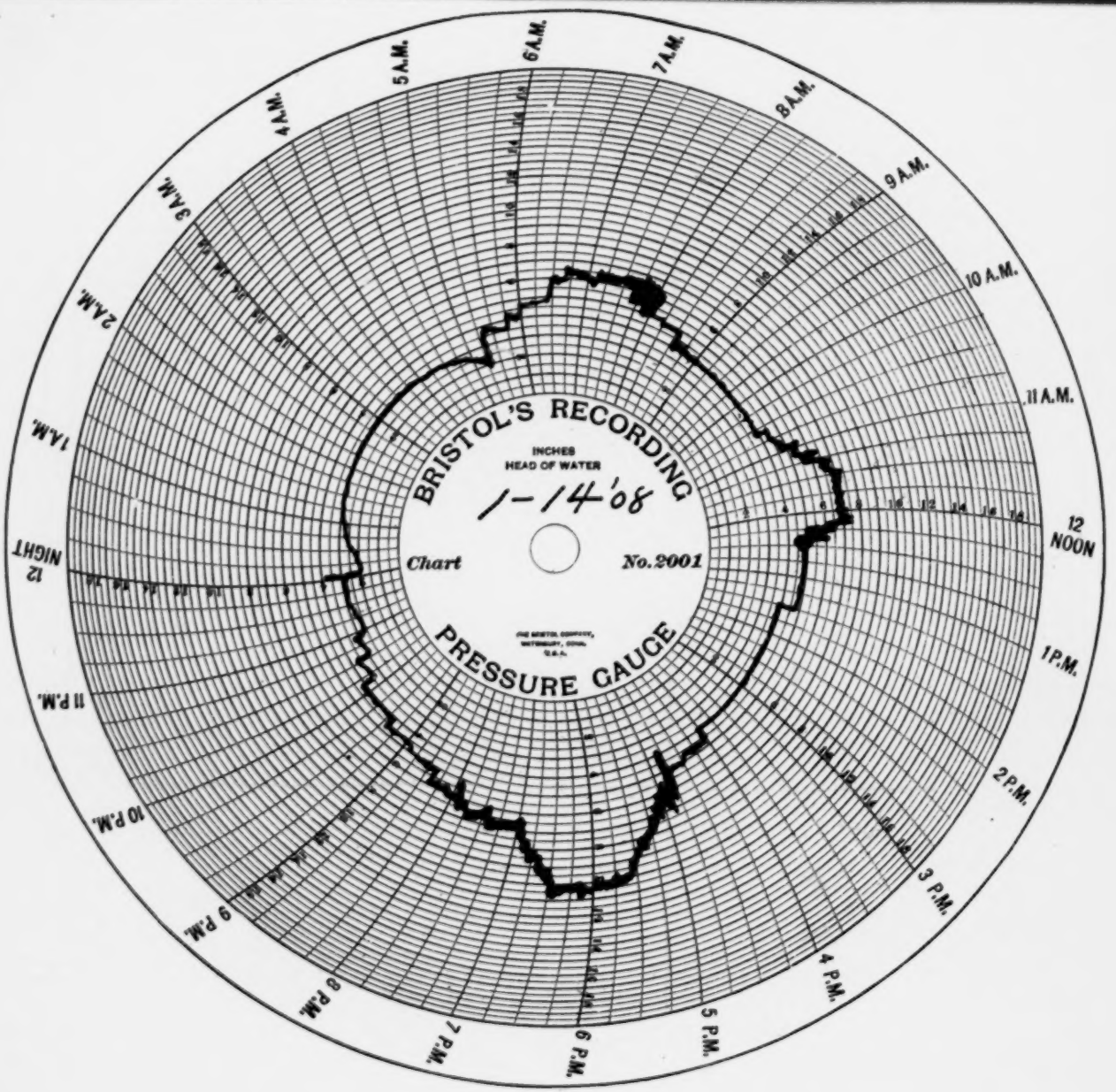



CHART No. 9W.

DATE 1-14-'08.

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

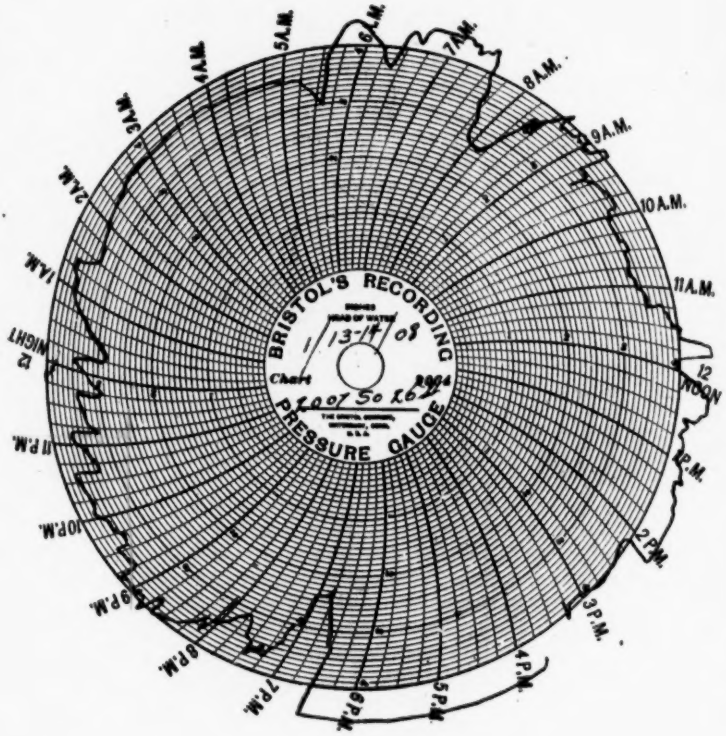



CHART No 10 DATE 1/13-14/08

LOCATION 2007 So. 26 ST.

No. 744
Lincoln Gas & Electric
Light Co.,
V.
The City of Lincoln et al

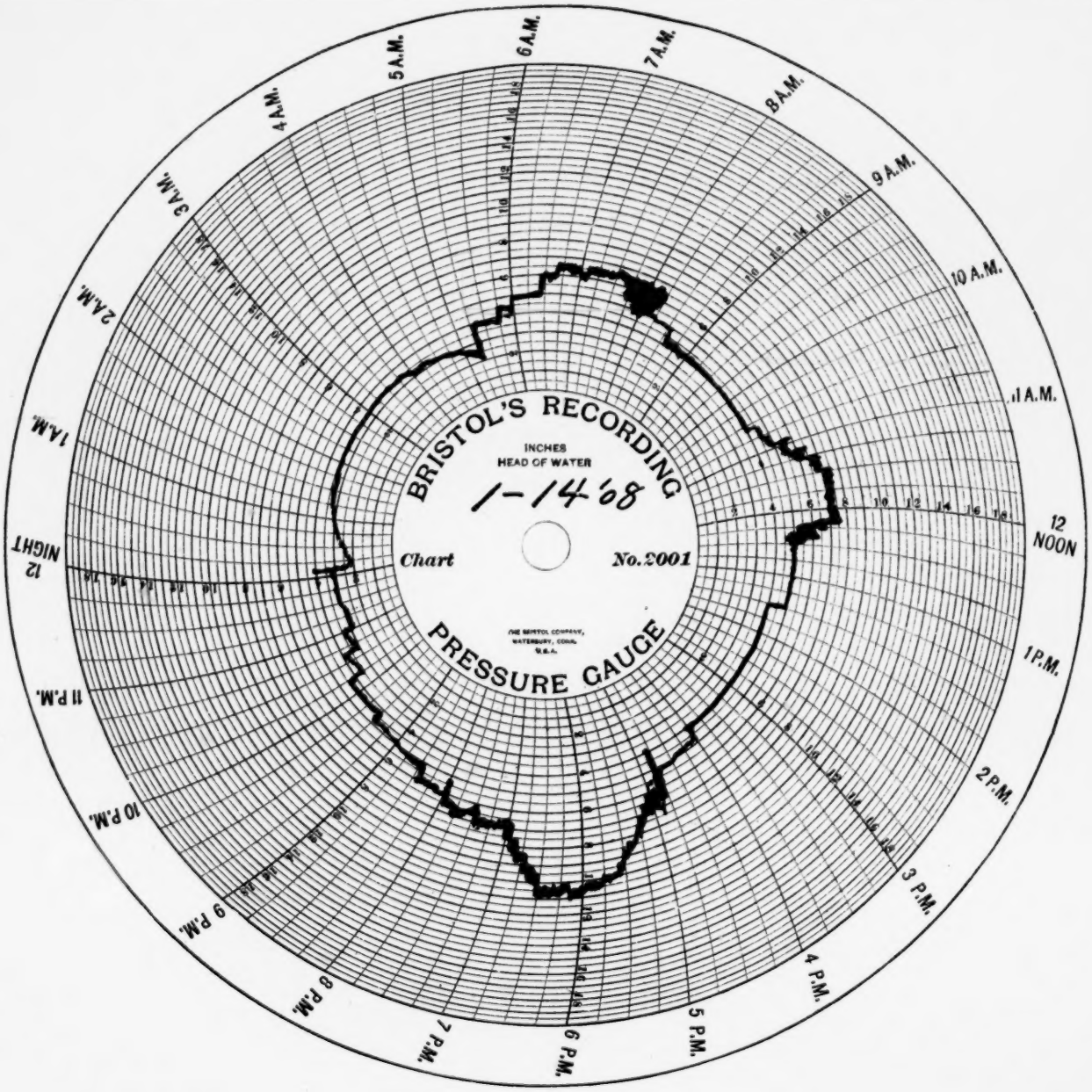



CHART No. 10.W.

DATE 1-14-'08

No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

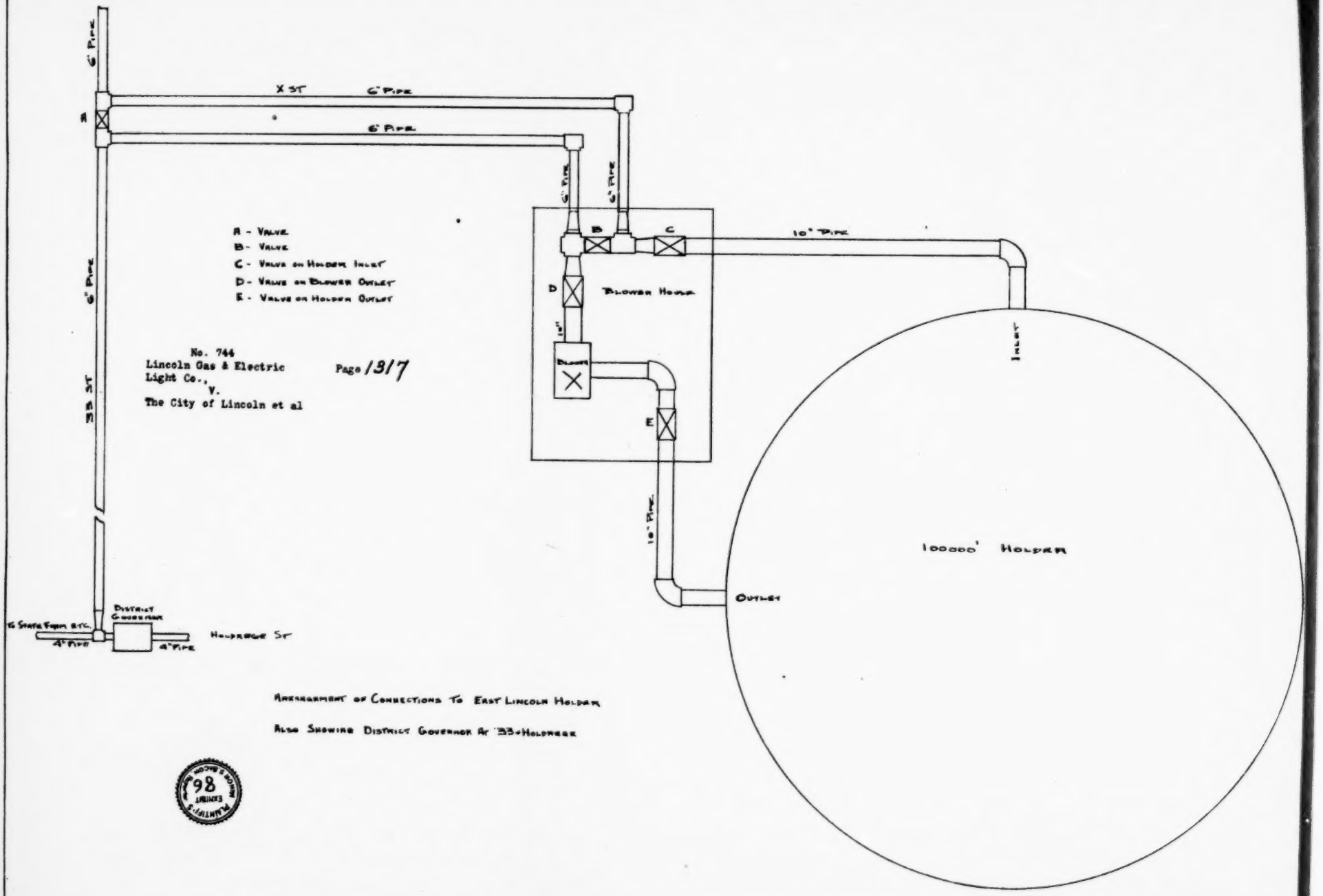
Page 1311

1312½ *Estimate of Lea on Property at District Holder.*

| | Total reproduction cost. |
|---|---|
| District holder booster house | $836.00 |
| 100,000 cu. ft. holder | 21,675.00 |
| Water piping district station | 205.00 |
| Gas yard mains district station | 537.00 |
| Manholes " " | 1,778.00 |
| 25 H. P. motor " " | 491.00 |
| 5 H. P. motor " " | 186.00 |
| Sturtevant blower " " | 209.00 |
| " " " " | 244.00 |
| | $26,151.00 |

| | | |
|---|---|---|
| 1313–1316 | Dist. H Booster House | $721.00 |
| | Dist. 100 M. Holder | 18,685. |
| | | 177. |
| | | 463. |
| | | 1,533. |
| | | 423. |
| | | 160. |
| | | 180. |
| | | 210. |
| | | 22,552. |

(Here follows diagram marked page 1317.)




No. 744
Lincoln Gas & Electric Light Co.,
v.
The City of Lincoln et al

Page 1317

Arrangement of Connections To East Lincoln Holder

Also Showing District Governor At 33rd & Holdrege

Plaintiff's Exhibit 98 Marsh & Bacon Reporters

Drawing #36

1317

1318 Whereas, the Lincoln Gas & Electric Light Company of the City of Lincoln, Nebraska, has petitioned the Mayor and Council of said city, for a permit to construct a gas tank, to be used for the storage of gas, and whereas, the Mayor and Council find that such a holder is for the best interests of the gas consumers of the city of Lincoln, and that such holder is proper as an appliance to furnish more uniform and better service to the inhabitants of said city, and especially to those in East Lincoln; and,

Whereas, the City of Lincoln does not recognize any franchise or contractual rights as at the present time existing in, or as having been granted to the Lincoln Gas & Electric Light Company; but does recognize that said company is operating in said city under irregular ordinances, which has resulted in a license to said company only and said city claims that said license is revocable and may be terminated by the city at its option at any time; and,

Whereas, there is now pending in the District Court of Lancaster County, Nebraska, a suit instituted to test the question of the franchise of the Lincoln Gas & Electric Light Company and whereas it is understood and agreed that said suit is to be continued and tried and the parties are to abide the ultimate outcome of the said proceedings in the courts, and

Whereas, it is hereby agreed that a grant of permission to build a gas holder herein shall in no way prejudice the city's rights, as they at present exist, of revoking the Gas Company's license to operate within the said city nor be construed as a waiver of the City's right to terminate the license as above stated; nor shall anything herein contained be construed as a grant of any franchise right, nor shall permission to erect said holder in any way prejudice or change the rights of said city in the suit now pending, or in said city's rights to institute a suit and to have the alleged franchise declared void; nor shall anything herein contained be construed as a waiver by the Gas Company of its claim that it has a valid subsisting

1318½ franchise; nor as a waiver of any of its rights at present existing whatsoever.

Now therefore, it is hereby agreed by and between the parties that the Mayor and Council of the City of Lincoln, Nebraska, for and upon considerations as hereinafter stated, do hereby grant to the said gas company, permission to build a gas holder for the storage of artificial gas used in heating and illuminating purposes, said permission being coextensive in time only with the rights of the said company as they at present exist, and upon revocation or termination of whatever rights the said company now has, the said permission to operate or maintain the gas holder, shall at the same time be concluded and limited.

It is further agreed that said holder will be constructed at 32d and X streets, to-wit: upon lots, 7, 8, 9, 10, 11, 12, 13, 14 and 15, all in Block 2, Peck's Grove Addition to the City of Lincoln; and said holder to be of a kind and constructed according to the plans and specifications for same last filed in the City Engineer's office.

And the said Lincoln Gas & Electric Light Company hereby agrees to make the following connection with service pipes in East Lincoln

and to lay the following mains and pipes, according to a plat now on file with the City Engineer, to-wit: a 4" main on 33rd street, from O street to T street, and a 6" main from T street to the proposed holder, and to extend the 4" main on T street from 31st street to 33rd street, and a 4" main on Vine street from 29th to 33rd street; and said company further agrees to keep said service pipes connected with said holder at all times open, so that gas may flow freely from said holder through said pipes to consumers in that vicinity and district.

And the said Lincoln Gas & Electric Light Company agrees to maintain a gas pressure in a district east of 27th and north of O street within the said city, to the standard required by the present ordinance of said city, without increasing the downtown pressure.

It is hereby further understood and agreed that nothing herein contained shall be construed as granting permission to said company to manufacture gas in the said location or vicinity of said holder or in connection therewith.

1319 & 1320

And the said Lincoln Gas & Electric Light Company further agrees, immediately upon the completion of said holder to plant Pine trees of a size eight inches in diameter of trunk, and at 30 ft distance apart, and two rows surrounding said holder with the object of hiding the same from view. One row to be Austrian Pine and one row Bull Pine.

And it is further agreed by the said Lincoln Gas & Electric Light Company that should it fail to perform any of the agreements herein expressed, that this agreement shall be of no force and effect and in such event the said permit upon notice from the Council, to the said gas company, shall stand revoked and be the same as if it has never been issued. And the said Company in that event shall upon order from the Council, disconnect and cut off all service pipes running from or connected with said holder.

In witness whereof, we have hereunto placed our signature.

CITY OF LINCOLN,
D. L. LOVE, *Mayor.*
LINCOLN GAS & ELECTRIC LIGHT CO.,
By B. C. ADAMS, *General Manager.*

Attest:
R. C. OZMAN, *City Clerk.*

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, Roscoe C. Ozman, City Clerk of the City of Lincoln, Nebraska, do hereby certify that the above and foregoing is a true and correct copy of an agreement by and between the City of Lincoln, and the Lincoln Gas & Electric Light Company of said city, as shown by the records and files in my office.

Dated this 10th day of May 1913.

[Seal of City of Lincoln, Lancaster County, Nebraska.]

ROSCOE C. OZMAN,
*City Clerk.*

| | Credit. elec. dept. | Charge. gas dept. | Sub-division of charges to gas department. | | |
|---|---|---|---|---|---|
| Jan. | 860.00 | 1,057.03 | Steam | 860.00 | (350.00—1100 |
| | | | Electricity | 59.14 | (100.00—1110 |
| | | | Water | 137.89 | (410.00—1116 |
| Feb. | 900.00 | 1,027.46 | Steam | 900.00 | (360.00—1100 |
| | | | Electricity | 48.40 | (140.00—1110 |
| | | | Water | 79.06 | (400.00—1116 |
| Mch. | 950.00 | 1,072.34 | Steam | 950.00 | (400.00—1100 |
| | | | Electricity | 68.13 | (150.00—1110 |
| | | | Water | 54.21 | (400.00—1116 |
| Apr. | 825.00 | 1,026.48 | Steam | 825.00 | (350.00—1100 |
| | | | Electricity | 146.41 | (200.00—1110 |
| | | | Water | 55.07 | (275.00—1116 |
| May | 760.00 | 965.49 | Steam | 760.00 | (320.00—1100 |
| | | | Electricity | 80.04 | (200.00—1110 |
| | | | Water | 125.45 | (240.00—1116 |
| June | 760.00 | 973.07 | Steam | 760.00 | (320.00—1100 |
| | | | Electricity | 94.73 | (200.00—1110 |
| | | | Water | 118.34 | (240.00—1116 |
| July | 500.00 | 882.68 | Steam | 500.00 | (250.00—1100 |
| | | | Electricity | 169.13 | (100.00—1110 |
| | | | Water | 213.55 | (150.00—1116 |

| | | | | | |
|---|---|---|---|---|---|
| Aug..... | 540.00 | 832.64 | Steam..... | 540.00 | (250.00—1100 |
| | | | Electricity..... | 83.01 | (140.00—1110 |
| | | | Water..... | 209.63 | (150.00—1116 |
| Sept..... | 600.00 | 929.63 | Steam..... | 600.00 | (280.00—1100 |
| | | | Electricity..... | 88.11 | (150.00—1110 |
| | | | Water..... | 241.52 | (170.00—1116 |
| Oct..... | 640.00 | 880.59 | Steam..... | 640.00 | (300.00—1100 |
| | | | Electricity..... | 89.43 | (160.00—1110 |
| | | | Water..... | 151.16 | (180.00—1116 |
| Nov..... | 780.00 | 991.57 | Steam..... | 780.00 | (365.00—1100 |
| | | | Electricity..... | 85.66 | (195.00—1110 |
| | | | Water..... | 126.31 | (220.00—1116 |
| Dec..... | 780.00 | 1,215.21 | Steam..... | 780.00 | (365.00—1100 |
| | | | Electricity..... | 80.03 | (195.00—1110 |
| | | | Water..... | 155.18 | (220.00—1116 |
| | | | Tar..... | 100.00 | |
| | | | Coal..... | 100.00 | |

1322 NOTE.—Reading of water meter in water gas house charged to Steam Acc't No. 1110.
Reading of water meter in Purifying House Charged to Works, Expense & Supplies Acc't No. 1116.

| | Lbs. of water evaporated during year 1912. | Cost per M lbs. water. | Gas made during year 1912. | Lbs. water on same basis as coal. | Lbs. water, actual. |
|---|---|---|---|---|---|
| Jan. | 19,778,000 | .3829 | 25,384,380 | 2,780,000 | 2,250,000 |
| Feb. | 17,613,000 | .3988 | 21,519,727 | 2,265,000 | 2,260,000 |
| March | 17,475,000 | .4782 | 21,641,248 | 2,280,000 | 2,000,000 |
| April | 15,380,000 | .4691 | 20,477,439 | 1,761,000 | 1,760,000 |
| May | 17,051,000 | .4324 | 20,911,278 | 1,710,000 | 1,760,000 |
| June | 15,512,000 | .4445 | 19,765,215 | 1,705,000 | 1,710,000 |
| July | 16,071,000 | .4088 | 18,734,783 | 1,292,000 | 1,223,000 |
| Aug. | 20,000,000 | .3491 | 19,408,562 | 1,582,000 | 1,550,000 |
| Sept. | 21,461,000 | .3745 | 22,044,900 | 2,040,000 | 1,600,000 |
| Oct. | 24,135,000 | .3582 | 22,886,031 | 2,075,000 | 1,790,000 |
| Nov. | 24,081,000 | .3293 | 22,376,830 | 3,150,000 | 2,380,000 |
| Dec. | 23,363,000 | .4045 | 23,055,255 | 2,455,000 | 1,935,000 |
| | | | | 25,095,000 | 22,218,000 |

1324

| | Lbs. coal, elect. | Lbs. coal, gas. | Per cent to gas. |
|---|---|---|---|
| Jan. | 3,033,260 | 500,000 | 14.15 |
| Feb'y | 2,784,604 | 410,000 | 12.83 |
| Mar. | 2,870,920 | 433,000 | 13.10 |
| Apr. | 2,349,624 | 307,000 | 11.55 |
| May | 2,812,850 | 313,650 | 10.03 |
| June | 2,382,188 | 296,500 | 11.07 |
| July | 2,715,260 | 240,000 | 8.12 |
| Aug. | 3,388,300 | 291,100 | 7.91 |
| Sept. | 3,136,600 | 330,700 | 9.53 |
| Oct. | 3,650,700 | 343,300 | 8.60 |
| Nov. | 3,892,500 | 447,500 | 13.11 |
| Dec. | 3,915,900 | 461,100 | 10.53 |

1325 *Construction Account from July 1, 1907, to Jan. 1, 1913.*

1326

Gas Construction.

| | | |
|---|---|---|
| From 1873 to June 30, 1907, both inclusive | | $603,278.14 |
| July 1st, 1907, to Jan. 1st, 1908. | | |
| New horses & wagons | $255.63 | |
| Armature water gas blower | 179.00 | |
| New benches (Trans. to Exp.) | R350.00 | |
| Street mains | 2,301.72 | |
| Services | 3,932.14 | |
| Office Furn. & Fix. (704.77) 80% | 563.82 | |
| Gas meters | 2,733.44 | |
| | | $9,615.75 |
| Construction account Jan. 1, 1908 | | $612,893.89 |
| 1908. | | |
| Gas works | $63,060.52 | |
| Street mains | 2,972.95 | |
| Services | 3,346.06 | |
| Gas meters & cons. | 3,733.10 | |
| Office Furn. & Fix. (80%) | 420.97 | |
| | $73,533.60 | |
| Credits. | | |
| Sale of old purifying boxes | $500.00 | |
| | | $73,033.60 |
| Construction Jan. 1, 1909 | | $685,927.49 |

1909.

| | | |
|---|---|---|
| Gas works | $12,061.01 | |
| Street mains | 6,584.92 | |
| Services | R92.02 | |
| Gas meters & Cons | 4,228.25 | |
| Street lamps | 15.04 | |
| Office Furn. & Fix. (80%) | 199.82 | |
| Auditor's adjustments | 257.25 | |
| Lots in Pecks Grove | 1,000.00 | |
| | $24,254.27 | |

Credits.

| | | |
|---|---|---|
| Auditors adjustment (80%) | $1,286.51 | |
| " " on water cooler | 331.89 | |
| | $1,618.40 | $22,635.87 |
| Construction Jan. 1, 1910 | | $708,563.36 |
| 1327 | | $708,563.36 |

1910.

| | | |
|---|---|---|
| Gas works | $33,992.95 | |
| Street mains | 13,148.90 | |
| Services | 393.10 | |
| Gas meters & cons | 2,304.34 | |
| Office Furn. & Fix. (80%) | 327.02 | |
| Havelock Extension | 2,705.00 | |
| Uni. Place Extension | 1,255.00 | |
| | | $54,126.31 |
| Construction Jan. 1, 1911 | | $762,689.67 |

1911.

| | | |
|---|---|---|
| Gas works | $8,149.20 | |
| Street mains | 9,559.20 | |
| Services | 1,643.75 | |
| Gas meters & Cons | 574.46 | |
| Office Furn. & Fix. (80%) | 325.19 | |
| Street lamps | 6.01 | |
| | | $20,257.81 |
| Construction Jan. 1, 1912 | | $782,947.48 |

1912.

| | | |
|---|---|---|
| Gas works | $11,218.43 | |
| Street mains | 7,585.67 | |
| Services | 271.81 | |
| Gas meters & cons | 958.76 | |
| Office Furn. & Fix. (80%) | 5,706.44 | |
| | | $25,741.11 |
| Construction Jan. 1, 1913 | | $808,688.59 |

Amount Charged Customers for Services.

| | | |
|---|---|---|
| Last six months 1907 | $1,826.35 | |
| Year 1908 | 3,072.40 | |
| Year 1909 | 7,529.90 | |
| Year 1910 | 6,995.24 | |
| Year 1911 | 5,206.45 | |
| Year 1912 | 5,854.09 | |
| | | $30,484.43 |
| | | $839,173.02 |
| Cost of collateral trust notes (80%) | | 12,000.00 |
| | | $851,173.02 |
| Credit Lot 3 blk. 83 by sale (80%) | | 2,000.00 |
| | | $849,173.02 |

1328

The Massillon Iron & Steel Co.

Engineers. Founders. Machinists.

All Agreements Contingent Upon Strikes, Accidents, or Other Causes Beyond Our Control.

Cast iron pipe for water, gas and culverts. Range pipe and fittings a specialty.

Heavy castings in loam, green sand or dry sand for blast furnaces rolling mills, etc.

The Rookery: Chicago, Ill.,
Long Distance Telephone, Wabash 2066,
Auto 52-855.

Eliot A. Kebler, Sales Manager.

General Office & Works: Massillon, Ohio,
Long Distance Telephone No. 13.

CHICAGO, ILLINOIS, U. S. A., May 5th, 1913.

Lincoln Gas & Electric Light Company, Lincoln, Nebr.

GENTLEMEN: Your letter of the 3rd at hand. We enclose herewith a car giving the standard weights of water pipe as adopted by

the American Water Works Association on May 12th, 1908 and we are now furnishing class "A" to Gas Companies.

You will note a variation allowed from these weights is shown at the bottom of this list. Please note that the information given on our invoice is not based on Railroad weights but on our own weights, and of course, if these were found to be incorrect by the Railroads, they would make claim on you for the difference in the freight rate, which would be caused thereby, so that you will see there is a double check on these weights.

Yours very truly,

THE MASSILLON IRON & STEEL COMPANY,
ELIOT A. KEBLER, *Sales Manager.*

E. A. K., R.

1329 Lincoln Gas & Electric Company, Lincoln, Nebr.

This additional information may be of use to you.

| Size. | Weights per foot. American Gas Light Ass'n. Adopted Oct. 18th, 1905. | | Massillon standards. Prior to adoption of American Water Works Ass'n w'ts. | | |
|---|---|---|---|---|---|
| | Standard. | Extra heavy. | Light. | Standard. | Heavy. |
| 4″ | 19.0 | 20.0 | 20 | 22 | 24 |
| 6″ | 30.0 | 32.8 | 30 | 33 | 35 |
| 8″ | 42.0 | 45.3 | 40 | 42 | 50 |
| 10″ | 55.8 | 58.7 | 55 | 60 | 65 |
| 12″ | 72.5 | 76.1 | 70 | 75 | 85 |
| 14″ | .... | .... | 90 | 100 | 117 |
| 16″ | 108.3 | 117.2 | 100 | 125 | 150 |
| 18″ | .... | .... | 135 | 167 | 200 |
| 20″ | 150.0 | 166.7 | 150 | 200 | 225 |

MASSILLON IRON & STEEL COMPANY,
ELIOT A. KEBLER, *Sales Manager.*

E. A. K., R.

*Voucher Paid to Henry L. Doherty & Co. During* 1912.



Date—Jan. 22nd, 1912.

Voucher No. 11670:

| | | |
|---|---|---|
| Interest on $500,000 notes due Feb. 1, 1912 | | $15,000.00 |
| Exchange on New York draft | | 7.50 |
| | | $15,007.50 |

Date—Feb. 29th, 1912.

Voucher No. 11949:

| | | | |
|---|---|---|---|
| Jan. 3. | Drawing and cut for New Year Ad | 7.73 | |
| 19. | Telegrams, December, 1911 | 6.32 | |
| 31. | Salary, C. B. Gilbert, January | 25.00 | |
| 31. | Salary, H. L. Doherty, January | 250.00 | |
| Jan. 1. | Credit Balance | | $289.05 |
| | | | 36,098.32 |
| | Credit Balance, Feb. 1st, 1912 | | $35,809.27 |

Date—Mar. 14th, 1912.

Voucher No. 11981:

| | |
|---|---|
| Draft to Henry L. Doherty & Co | $10,000.00 |
| Exchange on draft | 6.00 |
| | $10,006.00 |

Date—Mar. 26th, 1912.

Voucher No. 12002:

| | | |
|---|---|---|
| Draft to Henry L. Doherty & Co | | $5,000.00 |
| Exchange on draft | | 2.50 |
| | | $5,002.50 |

Date—Mar. 30th, 1912.

Voucher No. 12104:

| | | | | |
|---|---|---|---|---|
| Feb. 1. | Services W. B. S. Winans 3 das. Jan | | $60.00 | |
| 1. | ¼% comm. acc't paying 2/1 coupons on 6% Notes | | 37.50 | |
| 13. | Exp. W. B. S. Winans, January, 1912 | | 22.79 | |
| 17. | Telegrams, January, 1912 | | 3.68 | |
| 17. | 3 advertising cuts | | 5.14 | |
| 29. | Salary H. L. Doherty, February | | 250.00 | |
| 29. | Salary C. B. Gilbert, February | | 25.00 | |
| 29. | Stationery— | | | |
| | 2/1/11. | 2 pads la | 1.30 | |
| | 12/15/11. | 3 half bound reports | 36.00 | |
| | | 3 full bound reports | 42.00 | |
| | | 2 finan. 15 elec. " | 10.20 | |
| | 12/20/11. | 730 Elec. output cards | 2.00 | |
| | | 730 Gas " " | 2.00 | |
| | | 1 rubber stamp | .25 | |
| | | | | 407.86 |
| Feb. 1. | Credit Balance | | | 35,809.27 |
| | Credit Balance | | | 35,311.41 |

1831

Date—Apr. 30th, 1912.

Voucher No. 12229:

| | | | |
|---|---|---|---|
| Mar. 1. | Legal expenses, Frueauff & Robinson | $34.95 | |
| 22. | Telegrams, February, 1912 | 4.05 | |
| 30. | Stock transfer tax stamps, March | 20.66 | |
| 30. | Stenographic work | 1.43 | |
| 30. | Salary H. L. Doherty, March | 250.00 | |
| 30. | " C. B. Gilbert, " | 25.00 | |
| 30. | Stationery, 1 classification 2/9 | 2.00 | |
| | " 1 " cover 2/9 | 1.50 | |
| | " 1 " 3/21 | 2.00 | |
| | | | $341.59 |

Credits.

| | | | |
|---|---|---|---|
| Mar. 1. | Credit Balance | $35,311.41 | |
| 14. | Payment Fremont 6% notes @ par | 4,425.00 | |
| 14. | Expenses advanced T. O. Kennedy a/c Ozark | 100.00 | |
| 18. | Cash on account | 10,000.00 | |
| 29. | Cash " " | 5,000.00 | |
| | | | 54,836.41 |
| | | | 54,494.82 |

Date—May 18th, 1912.

Voucher No. 12327:

| | | |
|---|---|---|
| Interest on bonds due June 1, 1912 | $19,175.00 | |
| Exchange on draft | 9.90 | |
| Credit our account with Henry L. Doherty & Co. with | 540.00 | |
| | | 19,724.90 |

Date—May 31st, 1912.

Voucher No. 12463:

| | | | |
|---|---|---|---|
| Apr. 4. | Prorata cost of Elec. Advertising | $15.33 | |
| 6. | Stenographic work | 6.32 | |
| 13. | " " | 2.43 | |
| 20. | " " | 3.02 | |
| 22. | Telegrams, March, 1912 | 1.92 | |
| 24. | Prorata cost decorative drgs. ad. cuts | 10.63 | |
| 26. | Expenses, Paul R. Jones 1/12-1/31/12 | 125.00 | |
| 26. | 1 pad, Form No. 22 | 1.25 | |
| 27. | Stenographic work | 3.85 | |
| 30. | Stock transfer tax stamps for Apr. '12 | 2.90 | |
| 30. | Services, Paul R. Jones, 1/21-1/31/12 11 days | 220.00 | |
| 30. | Salary, H. L. Doherty, April | 250.00 | |
| 30. | Salary, C. B. Gilbert " | 25.00 | |
| | | | $667.65 |

Credits.

| | | | |
|---|---|---|---|
| Apr. 1. | Credit Balance | $54,494.82 | |
| 17. | Rebates on transformers, G. E. Co. | 157.21 | |
| 27. | Telegrams charged to Loup River | 13.55 | |
| | | | 54,665.58 |
| | | | 53,997.93 |

1332

Date—June 29th, 1912.

Voucher No. 12564:

| | | | |
|---|---|---|---|
| May 4. | Stenographic work | $2.43 | |
| 11. | " " | .82 | |
| 31. | Transfer Tax Stamps for May | 19.76 | |
| 31. | Salary H. L. Doherty, May | 250.00 | |
| 31. | Salary, C. B. Gilbert for May | 25.00 | |
| 31. | 1 pad form #22—5/24/12 | 1.25 | |
| | | | $299.26 |

Credits.

| | | | |
|---|---|---|---|
| May 1. | Credit balance | $53,997.93 | |
| 20. | Overpayment on coupon acc't | 540.00 | |
| | | | $54,537.93 |
| | | | $54,238.67 |

Date—July 25th, 1912.

Voucher No. 12687:

| | | |
|---|---|---|
| Interest on $500,000 notes | | $15,000.00 |
| Exchange on draft | | 7.50 |
| | | $15,007.50 |

1333

Date—July 31, 1912.

Voucher—No. 12764.

| | | | |
|---|---|---|---|
| June 1. | ¼% commission a/c payment 6/1 coupons Lincoln 5% bonds... | $47.94 | |
| 20. | Telegrams—May, 1912 | 1.52 | |
| 29. | Salary—H. L. Doherty, June | 250.00 | |
| 29. | " C. B. Gilbert, June | 25.00 | |
| | | | $324.46 |

Credits.

| | | | |
|---|---|---|---|
| June 1. | Credit balance | $54,238.67 | |
| 30. | Interest to 7/1/12 on account | 1,385.15 | |
| | | | $55,623.82 |
| | | | $55,299.36 |

Date—July 31st, 1912.

Voucher No. 12765:

| | | | |
|---|---|---|---|
| | Nine—Pyrene fire extinguishers | | $55.57 |

Date Aug. 27th, 1912.

Voucher No. 12890:

| | | | |
|---|---|---|---|
| July 1. | Engraving for advertising | $6.27 | |
| 11. | Contribution to Civic Federation | 200.00 | |
| 12. | 9 Fire extinguishers from Pyrene Mfg. Co. | 55.57 | |
| 23. | Draft on H. L. D. & Co. a/c purchase $5,000 per value Havelock Elec. Co. common stock | 5,000.00 | |
| 31. | Telegrams, June, 1912 | .60 | |
| 31. | Salary, Henry L. Doherty—July | 250.00 | |
| 31. | " C. B. Gilbert—July | 25.00 | |
| | | | $5,481.87 |

Credits.

| | | | |
|---|---|---|---|
| July 1. | Credit balance | $55,299.36 | |
| 1. | Expenses examining Plattsmouth plant 5/2/12 | 23.00 | |
| 2. | Rebate on meters | 51.84 | |
| | | | $55,374.20 |
| | | | $49,836.76 |

Date—Sept. 17th, 1912.

Voucher No. 13026:

| | | | |
|---|---|---|---|
| Aug. 1. | ¼% comm. paym't 8/1 coup. Lincoln Notes | 37.50 | |
| 7. | Stock registrar's fee to 8/1/13 | 37.50 | |
| 10. | Draft on H. L. D. & Co. 8/6/12 | 5,000.00 | |
| 29. | Telegrams, July, 1912 | 6.12 | |
| 31. | Express charges 8/7/12 | .90 | |
| 31. | Salary C. B. Gilbert, August | 25.00 | |
| 31. | " H. L. Doherty, " | 250.00 | |
| 31. | 8 Financial Reports | 4.80 | |
| | | | $5,361.82 |

1334

| | | |
|---|---|---|
| Brought Ford | | $5,361.82 |

Credits.

| | | | |
|---|---|---|---|
| Aug. 1. | Credit balance | $49,836.76 | |
| 15. | 9 Fire extinguishers | 55.57 | |
| 30. | Telegrams & Telephone E. C. Strode | 15.64 | |
| | | | 49,907.97 |
| | | | $44,546.15 |

Date—Oct. 31, 1912.

Voucher 13250:

| | | | |
|---|---|---|---|
| Sept. 3. | Draft on H. L. D. & Co | $15,070.00 | |
| 14. | Telephone messages 7/21-8/20/12 | .40 | |
| 21. | Drawings for advertisements | 34.44 | |
| 24. | Expenses, W. E. Quillin | 29.70 | |
| 25. | Telegrams, August | 5.64 | |
| 27. | Note to W. E. Quillin | 500.00 | |
| 30. | Advanced Mr. Adams, 9/13/12 | 100.00 | |
| 30. | Salary, C. B. Gilbert, Sept | 25.00 | |
| 30. | " H. L. Doherty, " | 250.00 | |
| | | | $16,015.18 |

Credits.

| | | | |
|---|---|---|---|
| Sept. 3. | Credit balance | $44,546.15 | |
| 19. | Advanced Messrs. Adams & Phillips a/c Grant Island Prop. | 51.60 | |
| | | | $44,597.83 |
| | | | $28,582.65 |

Date—Nov. 18th, 1912.

Voucher No. 13386:

| | |
|---|---|
| Interest on bonds due Dec. 1st, 1912 | $19,175.00 |
| Exchange on draft | 9.60 |
| | $19,184.60 |

Date—Nov. 19th, 1912.

Voucher No. 13396:

| | | | |
|---|---|---|---|
| Oct. 1. | Services, W. E. Quillin, Sept | $40.00 | |
| 11. | Expenses " " " 9/7-9/25/12 | 65.00 | |
| 11. | Setnographic work | 1.80 | |
| 25. | Telegrams, Sept. | 1.80 | |
| 25. | Special advertising cuts | 12.50 | |
| 26. | Stenographic work | 2.54 | |
| 31. | Cash advanced B. C. Adams | 475.00 | |
| 31. | B. C. Adams' check to Martinique Hotel | 100.00 | |
| 31. | Salary H. L. D., October | 250.00 | |
| 31. | " C. B. Gilbert, " | 25.00 | |
| | | | $973.64 |

Credits.

| | | | |
|---|---|---|---|
| Oct. 1. | Credit balance | $28,582.65 | |
| 31. | Telephone expense invoice 10/29/12 | 4.60 | |
| | | | $28,587.25 |
| | | | $27,613.61 |

1335

Date—Dec. 14th, 1912.

Voucher No. 13526:

| | | | |
|---|---|---|---|
| Nov. 1. | Phone call C. A. Frueauff to Lincoln July | $2.75 | |
| 6. | Services Columbus stock transfer agent 10/25/11 to 10/1/12 | 42.00 | |
| 27. | Telegrams, October | 1.60 | |
| 30. | Salary, C. B. Gilbert, November | 25.00 | |
| 30. | " H. L. Doherty, " | 250.00 | |
| | | | $321.35 |

Credits.

| | | | |
|---|---|---|---|
| Nov. 1. | Credit balance | $27,613.61 | |
| 9. | Additional discount from C. H. Dickey & Co. | 53.78 | |
| 23. | Commercial report on Northern Const. Co. | 1.20 | |
| 23. | Expenses advanced E. C. McMaster | 65.00 | |
| 30. | Rebate on gas meters purchased 7/12-10/1/12 from C. H. Dickey & Co | 18.25 | |
| | | | $27,751.84 |
| | | | $27,430.49 |

Date—Jan. 21st, 1913.

Voucher No. 13707:

| | | |
|---|---|---|
| Interest on $500,000 notes | $15,000.00 | |
| Exchange on draft | 7.50 | |
| | | $15,007.50 |

**Date**—Jan. 25th, 1913.

**Voucher No. 13715:**

| | | | |
|---|---|---|---|
| Dec. 1. | ¼% Com. a/c payment Nov. 5% coupons | 47.94 | |
| 16. | Special advertising, 10/15 to 11/15/12 | 10.00 | |
| 24. | Telegrams, November | 3.00 | |
| 30. | Express charges, 12/26/12 | .60 | |
| 31. | Salary, C. Gilbert, December | 25.00 | |
| 31. | " H. L. Doherty, " | 250.00 | |
| | | | $336.54 |

Credits.

| | | | |
|---|---|---|---|
| **Date**—Dec. 1. | Credit balance | $27,430.49 | |
| 16. | Expenses, B. C. Adams, Genoa | 20.00 | |
| 31. | Interest on account 7/1/12 to 1/1/13 | 1,068.78 | |
| | | | $28,519.27 |
| | | | $28,182.73 |

1336 Sheffield Cast Iron Pipe & Foundry Co.

Manufacturers of Cast Iron Gas and Water Pipe and Specials.

SHEFFIELD, ALABAMA, May 7, 1913.

Lincoln Gas & Electric Light Co., Lincoln, Nebraska.

DEAR SIRS: We beg to acknowledge receipt of your favor of the 3rd, and are glad to give you as much information as we are able to.

I am enclosing herewith a schedule showing the four classes of pipe from "A" to "D," inclusive, in diameters from 4" to 20", inclusive, which will give you the thickness of the pipe in inches and the weight of pipe per foot and weight of pipe per length.

I am also enclosing a sheet which will show the socket dimensions of the different classes of the different diameters from 4" to 20", inclusive, and I hope that this will be some of the information which you desire.

The specifications as given have been standard for a number of years, but I am unable to say just how many years.

In answer to your question as to whether there was any difference in charge between gas pipe and water pipe of the same size and weight, I would say that there should be no extra charge for gas pipe simply because it was to be used for gas. As a practical matter, gas pipe commands a higher price because it is practically always of a much lighter weight than pipe used in connection with water works, and as the loss in manufacture of light weight pipe is much greater than the loss in the manufacture of heavier weights in the same diameter, it is of course necessary for the manufacturer to charge a slightly higher price per ton in order to protect himself on the increase percentage of loss at the foundry. In other words, quotations on gas pipe are higher on account of the lightness in weight
1337 and not simply from the fact that the pipe is to be used for gas rather than water.

In answer to your question as to which class is specified when quoting on standard gas pipe, I would say that in nearly all cases the purchaser of gas pipe makes his own specifications as to weight per foot, which are usually slightly under the class "A" weights. For instance, on 4" pipe, the lightest class, calls for 20 pounds to the foot, while nearly all gas companies in asking for quotations or placing orders for 4" pipe, specify the pipe to be 19 pounds per foot.

I trust that these statements will answer your questions, but if they do not, or if there are any other questions that arise in your mind, it will give us great pleasure to give you any further information that we can.

Very truly yours,

SHEFFIELD CAST IRON
PIPE & FOUNDRY CO.,
W. S. HATCH,
*Ass't to President.*

1338

| Nominal diameter, inches. | Classes. | Actual outside diameter, inches. | Diameter of sockets. | | Depth of sockets. | |
|---|---|---|---|---|---|---|
| | | | Pipe, inches. | Special castings, inches. | Pipe, inches. | Special castings, inches. |
| 4..... | A | 4.80 | 5.60 | 5.70 | 3.50 | 4.00 |
| 4..... | B-C-D | 5.00 | 5.80 | 5.70 | 3.50 | 4.00 |
| 6..... | A | 6.90 | 7.70 | 7.80 | 3.50 | 4.00 |
| 6..... | B-C-D | 7.10 | 7.90 | 7.80 | 3.50 | 4.00 |
| 8..... | A-B | 9.05 | 9.85 | 10.00 | 4.00 | 4.00 |
| 8..... | C-D | 9.30 | 10.10 | 10.00 | 4.00 | 4.00 |
| 10..... | A-B | 11.10 | 11.90 | 12.10 | 4.00 | 4.00 |
| 10..... | C-D | 11.40 | 12.20 | 12.10 | 4.00 | 4.00 |
| 12..... | A-B | 13.20 | 14.00 | 14.20 | 4.00 | 4.00 |
| 12..... | C-D | 13.50 | 14.30 | 14.20 | 4.00 | 4.00 |
| 14..... | A-B | 15.30 | 16.10 | 16.10 | 4.00 | 4.00 |
| 14..... | C-D | 15.65 | 16.45 | 16.45 | 4.00 | 4.00 |
| 16..... | A-B | 17.40 | 18.40 | 18.40 | 4.00 | 4.00 |
| 16..... | C-D | 17.80 | 18.80 | 18.80 | 4.00 | 4.00 |
| 18..... | A-B | 19.50 | 20.50 | 20.50 | 4.00 | 4.00 |
| 18..... | C-D | 19.92 | 20.92 | 20.92 | 4.00 | 4.00 |
| 20..... | A-B | 21.60 | 22.60 | 22.60 | 4.00 | 4.00 |
| 20..... | C-D | 22.06 | 23.06 | 23.06 | 4.00 | 4.00 |

1339

| Nominal inside diameter, inches. | Class "A." 43 pounds pressure. | | | Class "B." 86 pounds pressure. | | |
|---|---|---|---|---|---|---|
| | Thickness, inches. | Weight per | | Thickness, inches. | Weight per | |
| | | Foot. | Length. | | Foot. | Length. |
| 4..... | .42 | 20.0 | 240 | .45 | 21.7 | 260 |
| 6..... | .44 | 30.8 | 370 | .48 | 33.3 | 400 |
| 8..... | .46 | 42.9 | 515 | .51 | 47.5 | 570 |
| 10..... | .50 | 57.1 | 685 | .57 | 63.8 | 765 |
| 12..... | .54 | 72.5 | 870 | .62 | 82.1 | 985 |
| 14..... | .57 | 89.6 | 1075 | .66 | 102.5 | 1230 |
| 16..... | .60 | 108.3 | 1300 | .70 | 125.0 | 1500 |
| 18..... | .64 | 129.2 | 1550 | .75 | 150.0 | 1800 |
| 20..... | .67 | 150.0 | 1800 | .80 | 175.0 | 2100 |

| Nominal inside diameter, inches. | Class "C." 130 pounds pressure. | | | Class "D." 173 pounds pressure. | | |
|---|---|---|---|---|---|---|
| | Thickness, inches. | Weight per | | Thickness, inches. | Weight per | |
| | | Foot. | Length. | | Foot. | Length. |
| 4..... | .48 | 23.3 | 280 | .52 | 25.0 | 300 |
| 6..... | .51 | 35.8 | 430 | .55 | 38.3 | 460 |
| 8..... | .56 | 52.1 | 625 | .60 | 55.8 | 670 |
| 10..... | .62 | 70.8 | 850 | .68 | 76.7 | 920 |
| 12..... | .68 | 91.7 | 1100 | .75 | 100.00 | 1200 |
| 14..... | .74 | 116.7 | 1400 | .82 | 129.2 | 1550 |
| 16..... | .80 | 143.8 | 1725 | .89 | 158.3 | 1900 |
| 18..... | .87 | 175.0 | 2100 | .96 | 191.7 | 2300 |
| 20..... | .92 | 208.3 | 2500 | 1.03 | 229.2 | 2750 |

1340

The Massillon Iron & Steel Co.
Engineers. Founders. Machinists.

All Agreements Contingent upon Strikes, Accidents or Other Causes Beyond Our Control.

The Rookery, Chicago, Ill.
Long Distance Telephone Harrison 2066.

Cast iron pipe for water, gas and culverts. Flange pipe and fittings a specialty.

Heavy castings in loam, green sand or dry sand for blast furnaces, rolling mills, etc. Long distance telephone No. 13.

MASSILLON, OHIO, U. S. A., April 14, 1913.

O. R. Mallon, P. A., Lincoln Gas & Elec. Light Co., Lincoln, Neb.

DEAR SIR: Replying to your favor of the 9th to our Chicago office, which has been referred to us for attention, we give you below an approximate list of prices for the year- 1906 to 1912, inclusive.

The prices we mention are per net ton of 2,000 lbs. F. O. B. cars our foundry, Massillon, Ohio, and we would say for your further information that the carload rate of freight from our foundry to your city is $5.75 per net ton, so that this amount would have to be added to our figures.

The prices we have named, we believe, will average up very well for the sizes you mention, namely, from 4 to 20".

| | |
|---|---|
| 1906 | $32.00 |
| 1907 | $31.00 |
| 1908 | $26.00 |
| 1909 | $25.00 |
| 1910–11–12 | $23.00 |
| Std. B. & S. Fittings | $50.00 |

We trust this information will be of value and regret that your letter did not reach us in time for us to have the information in your hands prior to today.

Yours truly,

J. R. DAUGLER,
*Sec'y & Ass't Treas.*

JRD–LR

1341 Western Supply Company, 820-822 N St., Lincoln, Neb.

Wholesale Steam, Water and Plumbing Supplies.

Long Distance Phone 150.
State Agents Trahern Pump Co. Elevator and Mill Supplies.
Nebraska and Colorado Agents Perkins Wind Mill Co.

LINCOLN, NEB., April 15, '13.

Lincoln Gas Co., City.

GENTLEMEN: The following prices cover black pipe and are net per hundred feet. The dates are those on which the prices set opposite became effective:

| | Size. | | | | | | |
|---|---|---|---|---|---|---|---|
| | ⅜" | ½" | ¾" | 1" | 1¼" | 1½" | 2" |
| Apr. 18, '07 | 2.53 | 3.57 | 4.03 | 5.78 | 7.88 | 9.45 | 12.60 |
| Nov. 7, '07 | 2.26 | 3.24 | 3.70 | 5.31 | 7.25 | 8.69 | 11.59 |
| Apr. 13, '08 | 2.20 | 3.15 | 3.65 | 5.23 | 7.13 | 8.56 | 11.41 |
| June 15, '08 | 2.10 | 3.00 | 3.49 | 5.00 | 6.81 | 8.16 | 10.88 |
| Oct. 26, '08 | 2.15 | 2.98 | 3.45 | 4.95 | 6.75 | 8.10 | 10.80 |
| Mar. 1, '09 | 1.87 | 2.64 | 3.11 | 4.46 | 6.08 | 7.29 | 9.72 |
| May 15, '09 | 1.93 | 2.55 | 2.99 | 4.29 | 5.85 | 7.02 | 9.36 |
| Oct. 1, '09 | 1.98 | 2.64 | 2.99 | 4.29 | 5.85 | 7.02 | 9.36 |
| Apr. 11, '10 | 1.86 | 2.64 | 3.09 | 4.44 | 6.05 | 7.26 | 9.68 |
| Oct. 5, '10 | 1.81 | 2.54 | 2.98 | 4.27 | 5.83 | 6.99 | 8.96 |
| Oct. 2, '11 | 1.70 | 2.37 | 2.86 | 4.11 | 5.60 | 6.72 | 8.60 |
| Dec. 1, '11 | 1.64 | 2.29 | 2.75 | 3.94 | 5.38 | 6.45 | 8.24 |
| Sep. 14, '12 | 1.81 | 2.46 | 2.98 | 4.28 | 5.83 | 6.99 | 9.32 |
| Jan. 1, '13 | 1.97 | 2.46 | 2.98 | 4.40 | 5.96 | 7.12 | 9.58 |

Yours truly,

WESTERN SUPPLY CO.,
W. C. SUNDERLAND.

WCS/o

1342 United States Cast Iron Pipe and Foundry Company, 638 Rookery.

George B. Hayes, President.
George J. Long, First Vice-President.
A. F. Callahan, Second Vice-President.
B. F. Haughton, Secretary and Treasurer.

Telephone Harrison 2222. Long Distance Telephone.

All agreements contingent upon strikes, accidents or other causes beyond our control.

CHICAGO, March 4, 1904.

Lincoln Gas & Electric Light Co., Lincoln, Neb.

GENTLEMEN: Replying to your favor 3rd inst. We are pleased to quote you on 4, 6, 10, 12 and 16" cast iron gas pipe, our standard gas weights, delivered in car-load lots, the following prices:

$27.80 for 4 inch
$26.80 for 6 and 10 inch
$26.30 for 12 and 16 inch.

all per ton of 2,000# delivered f. o. b. cars Lincoln, Neb., and can make shipment at once if favored with the order, which we hope to receive.

Yours truly,

U. S. CAST IRON PIPE & FOUNDRY CO.,
By A. J. GOODHUE,
*Western Sales Manager.*

AJG.

1343 Postal Telegraph-Cable Company,

John W. Mackay, President.
J. O. Stevens, Sec'y.
Wm. H. Baker, V. P. & G. M.

Postal Telegraph-Cable Company (Incorporated) in connection with the Commercial (Mackay-Bennett) Cables. Registered Trade-mark.

In Connection with

The Commercial Cable Company.

John W. Mackay, President.
Albert Beck, Sec'y.
Geo. G. Ward, V. P. & G. M.

The Commercial Cable Company, Mackay-Bennett System. Atlantic Ocean. Patented.

*Telegram.*

The Postal Telegraph-Cable Company transmits and delivers this message subject to the terms and conditions printed on the back of this blank.

Received at ———— (where any reply should be sent).

11 EX LS 20.

CHICAGO, ILLS., April 14, '04.

Lincoln Gas and Elec. Co., Lincoln, Nebr.:

Your telegram. Can ship eight inch immediately. Price twenty-seven sixty net ton delivered Lincoln if accepted by wire answer.

U. S. CAST IRON PIPE
AND F. DY. CO.

350 Pm.

1344 United States Cast Iron Pipe and Foundry Company.

Office of Western Sales Manager, 638 Rookery.

George B. Hayes, President.
George J. Long, Vice-President.
B. F. Haughton, Secretary and Treasurer.

Telephone Harrison 2222. Long Distance Telephone.

All agreements contingent upon strikes, accidents or other causes beyond our control.

CHICAGO, Jan. 30, 1905.

Jas. S. Dales, Gen. Supt., Lincoln Gas & Electric Co., Lincoln, Neb.

DEAR SIR: Replying to your favor 28th inst. We are pleased to quote you on 4, 6 and 8 inch standard cast iron gas pipe, to weigh respectively about 19, 30 and 41 pounds per foot $30.10 for the 4 inch and $29.60 for the 6 and 8 inch pipe all per ton of 2000# delivered f. o. b. cars Lincoln, Neb., in car-load lots. This proposition is subject to conditions stated above and to prompt acceptance. Terms of payment net cash in thirty days. We hope to be favored with your order, to which we can give prompt attention.

Yours truly,

U. S. CAST IRON PIPE &
FOUNDRY CO.,
By A. J. GOODHUE,
*Western Sales Manager.*

WGS.

1345 Foreign Shipments Invariably Cash Against Shipping Documents in New York or London.

United States Cast Iron Pipe and Foundry Company.

A. J. Goodhue, Western Sales Manager.

638 Rookery, 217 La Salle St.

General offices: 71 Broadway, New York.

George B. Hayes, President.
George J. Long, Vice-President.
B. F. Haughton, Sec'y and Treas.

Sales Department: L. R. Lemoine, General Manager.

Cable Address: "Uscipipe, Chicago." A-B-C Code—Fifth Edition. Lieber's Code, 1896. The Premier Code.

Long Distance Telephone. Harrison 2222.

All agreements contingent upon strikes, accidents or other causes beyond our control. Any casting developing an inherent defect

when placed in service, will be replaced f. o. b. agreed point of delivery. No claims for damage allowed.

CHICAGO, June 22, 1905.

Lincoln Gas & Electric Light Co., Lincoln, Nebraska.

GENTLEMEN: We are in receipt of your telegram of the 21st, reading:

"Wire us price and delivery on eight inch cast iron gas pipe."

To which we have replied by wire:

"Your telegram twenty-first. Will furnish eight inch standard gas carloads twenty-eight sixty net ton delivered Lincoln, shipment ten days, immediate acceptance."

Which we herewith confirm, and hope to be favored with your order.

Yours truly,

U. S. CAST IRON PIPE & FOUNDRY CO.,
By A. J. GOODHUE,
*Western Sales Manager.*

CEB.

1346 Foreign Shipments Invariably Cash Against Shipping Documents in New York or London.

United States Cast Iron Pipe and Foundry Company.

A. J. Goodhue, Western Sales Manager.

638 Rookery, 217 La Salle St.

General offices: 71 Broadway, New York.

George B. Hayes, President.
George J. Long, Vice-President.
B. F. Haughton, Sec'y and Treas.

Sales Department: L. R. Lemoine, General Manager.

Cable Address: "Uscipipe, Chicago." A-B-C Code—Fifth Edition. Lieber's Code, 1896. The Premier Code.
Long Distance Telephone. Harrison 2222.

All agreements contingent upon strikes, accidents or other causes beyond our control. Any casting developing an inherent defect when placed in service, will be replaced f. o. b. agreed point of delivery. No claims for damage allowed.

CHICAGO, July 20, 1905.

Jas. S. Dales, Gen. Supt., Lincoln Gas & Electric Light Co., Lincoln, Neb.

DEAR SIR: We thank you for your inquiry of July 18th. We can offer you the pipe mentioned therein at the following prices

per ton of 2000 pounds delivered f. o. b. cars Lincoln, Neb., for shipment the latter part of August:

2500′ of 6″ cast iron pipe, weighing about 30½# per foot, at $29.60 per net ton.

4000′ of 4″ cast iron pipe, weighing about 19# per foot, at $30.60 per ton. This proposition is subject to conditions noted under date line and for acceptance within ten days from date. Terms of payment, net cash in thirty days from date of invoice.

Yours truly,

U. S. CAST IRON PIPE & FOUNDRY CO.,
A. J. GOODHUE,
*Western Sales Manager.*

ECH.

1347 Foreign Shipments Invariably Cash Against Shipping Documents in New York or London.

United States Cast Iron Pipe and Foundry Company.

A. J. Goodhue, Western Sales Manager.

638 Rookery, 217 La Salle St.

General offices: 71 Broadway, New York.

George B. Hayes, President.
George J. Long, Vice-President.
B. F. Haughton, Sec'y and Treas.

Sales Department: L. R. Lemoine, General Manager.

Cable Address: "Uscipipe, Chicago." A-B-C Code—Fifth Edition. Lieber's Code, 1896. The Premier Code.
Long Distance Telephone. Harrison 2222.

All agreements contingent upon strikes, accidents or other causes beyond our control. Any casting developing an inherent defect when placed in service, will be replaced f. o. b. agreed point of delivery. No claims for damage allowed.

CHICAGO, April 13, 1906.

Lincoln Gas & Electric Light Co., Lincoln, Nebraska.

GENTLEMEN: Referring to yours of the 11th, we are pleased to quote you on 5000′ standard 6″ gas pipe $32.35 per ton of 2000#, delivered f.o.b. cars Lincoln, Nebraska. This proposition is subject

to conditions noted above under date line and for prompt acceptance. Terms of payment, net cash in thirty days.

Hoping to be favored with your order, we are,

Yours truly,

U. S. CAST IRON PIPE & FOUNDRY CO.,
By A. J. GOODHUE, JR.,
*Western Sales Manager.*

TNJ.

4/25/05.

1347½ United States Cast Iron Pipe & Foundry Company, Chicago, Illinois:

GENTLEMEN: Enclosed please find our order No. 5641 confirming our telegram and leter of recent date.

Yours very truly,

Encl.
K. W.

JAS. S. DALES,
*Gen. Supt.*

Form No. 168. M. T.

The Western Union Telegraph Company, Incorporated.

24,000 Offices in America. Cable Service to All the World.

This Company Transmits and Delivers messages only on conditions limiting its liability, which have been assented to by the sender of the following message.

Errors can be guarded against only by repeating a message back to the sending station for comparison, and the Company will not hold itself liable for errors or delays in transmission or delivery of Unrepeated Messages, beyond the amount of tolls paid thereon, nor in any case where the claim is not presented in writing within sixty days after the message is filed with the Company for transmission.

This is an Unrepeated Message, and is delivered by request of the sender, under the conditions named above.

209.

Robert C. Clowry, President and General Manager.

Received at 134 O Street, Lincoln, Neb. Phones: Bell 18 & 190, Auto. 2233.

9 EX YQ J 14 Paid 1 Pm
RX Chicago Ill Apl 20

Lincoln Gas and Elec. Light Co., Lincoln, Neb.:

Can complete shipment six inch specified in our quotation of thirteenth in thirty days.

U. S. CAST IRON PIPE AND FDY. CO.

United States Cast Iron Pipe and Foundry Company.

Money transferred by telegraph. Cable office.

1348 May 3, 1913.

*Weights of Cast-iron Pipe in Stock.*

| Size. | Length. | Weight. | Wt. per foot. |
|---|---|---|---|
| 4 ..... (1) | 12 | 220 | 18.33 |
| 4 ..... (2) | 12 | 229 | 19.08 |
| 4 ..... (3) | 12 | 233 | 19.42 |
| 4 ..... (4) | 12 | 238 | 20.83 |
| | 48 | 920 | 19.17 |
| 6 ..... | 12 | 374 | 31.17 |
| 8 ..... | 12 | 500 | 41.67 |
| 12 ..... | 12 | 836 | 69.67 |

1349 & 1350 *Comparison of Gas & Electric Customers.*

| Year ending. | No. gas customers. | No. electric customers. | % Gas. | % Electric. |
|---|---|---|---|---|
| 1902 ..... | 3224 | 771 | 81 | 19 |
| 1903 ..... | 3859 | 834 | 82 | 18 |
| 1904 ..... | 4658 | 1006 | 82 | 18 |
| 1905 ..... | 5320 | 1214 | 81 | 19 |
| 1906 ..... | 5882 | 1486 | 80 | 20 |
| 1907 ..... | 6244 | 1640 | 79 | 21 |
| 1908 ..... | 6630 | 1855 | 78 | 22 |
| 1909 ..... | 7047 | 2228 | 76 | 24 |
| 1910 ..... | 7587 | 2122 | 78 | 22 |
| 1911 ..... | 7896 | 2389 | 77 | 23 |
| 1912 ..... | 7816 | 2934 | 73 | 27 |

| 1912. | Henry L. Doherty & Co. | First Nat'l Bank. | Central Nat'l Bank. | Neb. State Bank. | City Nat'l Bank. | Emerson McMillian. |
|---|---|---|---|---|---|---|
| Jan. 1..... | 51,593.20 | 13,493.27 | 15,231.68 | 5,099.07 | 2,914.74 | 41.30 |
| Feb. 1..... | 40,821.69 | 15,779.92 | 11,071.96 | 8,148.95 | 5,749.88 | 41.30 |
| M'ch 1..... | 40,348.32 | 13,452.32 | 18,551.66 | 11,662.45 | 6,189.35 | 41.30 |
| Apr. 1..... | 55,072.82 | 16,270.63 | 9,663.38 | 10,186.28 | 8,688.22 | 41.30 |
| May 1..... | 55,007.17 | 17,906.10 | 19,408.73 | 6,816.71 | 5,599.78 | 41.30 |
| June 1..... | 55,228.58 | 16,302.92 | 8,713.51 | 7,659.58 | 4,491.19 | 41.30 |
| July 1..... | 54,576.57 | 16,665.43 | 18,984.30 | 10,367.52 | 4,491.19 | 41.30 |
| Aug. 1..... | 55,735.72 | 13,622.36 | 9,838.95 | 6,849.44 | 6,168.40 | 41.30 |
| Sept. 1..... | 49,959.65 | 15,386.50 | 11,075.15 | 6,849.44 | 6,168.40 | 41.30 |
| Oct. 1..... | 44,102.43 | 6,442.47 | 20,226.22 | 14,508.74 | 6,168.40 | 41.30 |
| Nov. 1..... | 28,588.45 | 11,910.84 | 28,599.49 | 6,985.14 | 6,168.40 | 41.30 |
| Dec. 1..... | 27,748.99 | 8,748.40 | 10,209.80 | 6,985.14 | 6,168.40 | 41.30 |
| 1913. | | | | | | |
| Jan. 1..... | 27,445.89 | 13,071.36 | 20,197.86 | 6,985.14 | 6,168.40 | 41.30 |
| Feb. 1..... | 28,373.53 | 5,765.00 | 8,442.49 | 11,647.54 | 6,168.40 | 41.30 |
| M'ch 1..... | 27,984.10 | 13,092.66 | 10,874.87 | 11,184.73 | 6,168.40 | 41.30 |
| Apr. 1..... | 52,475.19 | 7,801.78 | 7,959.34 | 8,328.35 | 1,168.40 | 41.30 |
| May 1..... | 51,265.97 | 7,076.59 | 10,741.64 | 11,014.50 | 1,168.40 | 41.30 |
| June 1..... | 49,670.58 | 6,572.34 | 7,733.42 | 4,778.09 | 1,168.40 | 41.30 |
| Total ..... | 795,998.85 | 219,360.89 | 247,524.45 | 156,056.81 | 90,976.75 | 743.40 |
| Average Deposit... | 44,220.00 | 12,178.00 | 13,750.00 | 8,670.00 | 5,054.00 | 41.30 |

Total Average Deposit=$83,930.00.

1352 The Western Gas Construction Company,
Main Office and Works Fort Wayne, Indiana.

This agreement, made the 24th day of May in the year one thousand nine hundred and twelve by and between The Western Gas Construction Company of Fort Wayne, Indiana, a corporation duly organized under the laws of the State of Indiana. party of the first part (hereinafter designated the "Contractor") and The Lincoln Gas & Electric Light Company of Lincoln, Nebraska, party of the second part (hereinafter designated the "Owner");

Witnesseth, That the Contractor, in consideration of the covenants and agreements contained herein on the part of the Owner, does covenant, promise and agree with the said Owner, in manner following, that is to say:

1. Any part or portion of the Specifications which are struck out are not included in this Agreement.

2. The Contractor shall and will well and sufficiently furnish, erect and finish, to the reasonable satisfaction of the Owner, subject to strikes, fires, freight blockades, and any other cause beyond their control, all the Gas Apparatus and Machinery described and specified in its Specification No. 5066 comprising pages 1 to 13 inclusive, dated May 15, 1912 the original being herewith delivered to and receipt thereof acknowledged by the Owner, and whereof an impression or duplicate copy is retained by the Contractor, generally comprising the following apparatus:

7′–6″ Generator 7′ 0″ Carburettor 7′ Superheater and 5′ 6″ seal including connections to outlet from present seal.

3. The apparatus shall be accepted upon completion in accordance with the Specification.

4. The Owner will receive and properly store at the expense of the Contractor all materials which may arrive before the erectors of the Contractor, will hold Contractor harmless for damage to materials by fires or other causes, and afford all necessary protection from depredation of any sort until acceptance of the apparatus, will use proper precaution to prevent the access of unauthorized persons to the premises where said work is being done.

5. The Owner shall furnish and provide the buildings, inclusive of the foundations, all yards and other excavations, fillings and refillings, pavings, floors, openings in walls and roofs, flashings for stacks, etc., all necessary steam, oil, water and drain connections at respectively convenient points for the several apparatus, all connections and parts of the gas plant not specified in the before mentioned specifications, in all respects suitable and sufficient, also openings or doors in the several rooms of suitable size to allow the apparatus of the Contractor to pass.

6. The Owner shall have the buildings in proper condition for the erection of the Apparatus on its arrival otherwise pay Contractor for expenses necessarily incurred through such delay. Nor during erection delay the progress of the work, otherwise pay for time men are idle, and traveling expenses, (if necessary to leave work and re-

turn -ater to continue or complete same,) including any other expenses necessarily incurred through such delay.

7. It is hereby mutually agreed between the parties hereto that the sum to be paid by the Owner to the Contractor for the proper execution of the provisions of this agreement shall be Eight Thousand and no/100 Dollars ($8,000.00) lawful money of the United States, payable at par in Fort Wayne, Indiana, as follows:

Fifty per cent. of the contract price in proportion as material is shipped or delivered to the premises of the Owner; twenty-five per cent. of the contract price in such sums as may be called for from time to time during the progress of the work (said amount to include all payments for account of freights, advances to erectors and other sundry charges prior to the completion of the Apparatus) and the balance of the contract price upon acceptance of the Apparatus as hereinbefore provided.

8. There are no understandings, promises or agreements on the part of the Owner or Contractor outside of this contract and specifications noted above, together with terms, conditions, and limitations therein contained.

Apparatus to be ready for operation on or before Aug. 1st, 1912.

In witness whereof, The said parties for themselves, their heirs, executors or assigns, have signed this Agreement in Duplicate, by their agents thereunto duly authorized, as of the day and year first above written.

THE WESTERN GAS CONSTRUCTION COMPANY,
By EDW. W. STEINMUELLER,
*Sales Agt.*
LINCOLN GAS & ELECTRIC LIGHT CO.,
By B. C. COLEMAN, *V.-P. & G. M.*

Witnessed for the
Contractor: F. H. CROSBY.
Owner: G. A. MONTGOMERY.

1353 *Contract for Building a Masonry Tank for Gas Holder.*

This agreement made and concluded this 29th day of June in the year One Thousand Nine Hundred and Ten between the Lincoln Gas & Electric Light Company, party of the first part, and C. P. Hahn, party of the second part.

Witnesseth, that for and in consideration of the payment of $6,375.00 (Sixty-three Hundred and Seventy-five Dollars) to be made by the party of the first part, upon the satisfactory completion of the work hereinafter mentioned, the party of the second part agrees with said party of the first part to furnish all material, labor, and tools, and to build and complete, ready for the iron work, in accordance with the plans furnished and in conformity with the specifications hereto attached, a concrete and brick tank for a gas holder

on the property of the Lincoln Gas & Electric Light Company, party of the first part.

The party of the second part also agrees, in consideration hereof, to enter upon the work covered by the contract as soon as the excavation for the tank is completed, and to complete said work within a reasonable time, taking into account the character and extent of the work to be done.

In witness whereof the parties to these presents have hereunto set their hands, the year and day first above written.

LINCOLN GAS & ELECTRIC
LIGHT COMPANY,
By WM. BRADFORD.
C. P. HAHN.

Signed in the presence of:

O. R. MALLAT,
JNO. J. EAGAN.

1354 *Specifications for Masonry Tank for Gas Holder.*

Scope: The work consists of furnishing all material, tools, and labor, and building and finishing, ready for the iron work, a masonry tank for a gas holder for the Lincoln Gas & Electric Light Company on its property at 32nd & X Street, City of Lincoln, in accordance with the plans furnished and in conformity with these specifications.

The work to be done is shown in detail on the following drawings:

1. Excavations.
2. Concrete and brick work.
3. Details.

Materials: Brick—All brick used shall be sound, hard, and evenly burned red brick and must be approved by the engineer of the company.

Cement—All cement shall be a standard grade of Portland cement approved by the engineer of the company.

Stone—All broken stone used in concrete must be sound and free from dirt and of a size not less than three quarters of an inch nor greater than two inches at its greatest diameter.

Sand—All sand must be clean river sand.

Concrete—All concrete shall be mixed in the proportion of 1 part cement, 2 parts sand, and 4 parts broken stone.

Cement Plaster—All exposed surfaces of concrete shall be covered with one inch of cement plaster mixed in the proportion of 1 part cement and 2 parts clean sand.

Mortar—All brick shall be laid in cement mortar mixed in the proportion of 1 part Portland cement and 2 parts clean sand except as provided later.

Concrete work: All concrete shall be laid in courses of from six to nine inches in depth and each course must be thoroughly rammed in place.

In placing the concrete, it must not be dropped from a height of more than ten feet.

1355 When the work is interrupted at the end of the day, all surfaces of concrete on which additional concrete is to be laid must be covered and kept wet, and before fresh concrete is laid, these surfaces must be thoroughly water soaked and all earthy matter removed.

At each of the points where the gas pipes pass under the tank wall foundation, the concrete will be reinforced by the use of six four-inch I beams, weighing not less than nine pounds per lineal foot, each beam to be eight feet in length.

Brick work: The standard height for laying all brick shall be two courses to five inches and every fifth course shall be a header-course.

The brick in outside and inside faces of the tank wall shall be laid in cement mortar to which has been added sufficient lime to make it work easily and make a good tight joint. These brick shall be laid four courses high between header courses and then cement mortar of the consistency of thick cream poured into the space between, and the brick firmly settled into it leaving positively no voids.

When finished, the tank wall shall be truly circular and plumb and the tank of correct diameter and depth.

Into the walls shall be built the tank rail anchors in accordance with the drawings furnished, and said anchors must be accurately located so that when rails are secured to them, the rails will be plumb, at correct heights, equally spaced, and correct distance from center of tank.

There will be nine column supports or piers equally spaced around the tank and formed by increasing the thickness of the tank wall at the points required so as to form rectangular piers 32 inches wide radially and 24 inches circumferentially. Piers will extend, full size, down to thickest part of tank wall. Each pier will have built into it four anchor bolts, the shortest being six feet, and the longest seven feet, but not more than two bolts in the same pier shall be of the same length.

There will be a center pier of brick into which will be built four anchor bolts as shown in the drawings furnished.

Coping: The tank wall will be provided with a
1356 & 1357 coping of cement concrete six inches in thickness overhanging the wall two inches on the outside, said coping also covering in the same manner the column supports or piers and forming the footings for the columns, which footings must be truly flat and level with each other on the top surfaces. The top of the center pier must also have a similar concrete coping.

Over-flow: In wall of tank at top will be built a piece of three inch pipe inside bottom of pipe to be four inches below top of wall coping.

Landing Stones: There will be 18 landing stones evenly spaced around the tank bottom as shown in the drawings. These may be either of natural stone or cement concrete and must all have flat and true top faces, all at the same level 22 feet 2 inches from top of tank coping.

Filling: As the tank wall is built, the contractor must fill in the space outside the wall and thoroughly tamp dirt into place.

General: All iron work required in the masonry tank, including anchor bolts, wall brackets, bolts for column supports, I beams for reinforcements, will be furnished by the Gas Company, but will be placed by the contractor. All gas pipe and connections will be furnished and placed by the Gas Company.

[Endorsed:] Masonry tank for East Lincoln Holder 1910.

1358 *Contract for Excavation.*

This agreement made and concluded this ——— day of —— in the year One Thousand Nine Hundred and Ten between the Lincoln Gas & Electric Light Company, party of the first part, and Robert Malone, party of the second part;—

Witnesseth, that for and in consideration of the payment of Seventy Cents ($.70) per cubic yard to be made by the party of the first part, the party of the second part agrees with said party of the first part to furnish all necessary tools and labor and to do all excavating for a masonry tank for a gas holder on the property of the Lincoln Gas & Electric Light Company, party of the first part, in accordance with plans furnished and in conformity with the specifications hereto attached.

The party of the second part further agrees in consideration hereof to start upon the work at once and to finish the same within a reasonable time considering the character and extent of work to be done.

In witness whereof the parties to these presents have hereunto set their hands, the year and day first above written.

LINCOLN GAS & ELECTRIC LIGHT CO.,

By —— ——.

ROBERT MALONE.

1359–1620 *Specifications for Excavation.*

The excavation shall be made in such a manner as to remove or disturb the least amount of earth outside of tank walls in order to retain as much as possible its resisting power to reinforce the tank wall, and no excavation will be allowed below levels on which foundations will rest.

In addition to the main excavation for the tank, there will be excavations for the inlet and outlet pipes at points on the circumference to be designated by the engineer of the company.

All dirt excavated shall be placed by the contractor upon the property of the Lincoln Gas & Electric Light Company located immediately east of and adjacent to the holder site.

1621 *Occupation Tax Ordinance Amendment.*

1622 Lancaster County, Nebraska.

1906.

Assessment of Personal Property for the year 1906 of Lincoln Gas and Electric Light Company of the fourth ward, Lancaster County, Nebraska, 1323 O Street.

J. R. C. Miller, Co. Assessor.

| | | | |
|---|---|---|---|
| 1. | All Annuities due me | None | |
| 2. | All Bonds owned by me | None | |
| 3. | All notes secured by mortgage owned by me | None | $ 17.00 |
| 4. | All other notes owned by me | None | |
| 5. | Kind and number of firearms | None | |
| 6. | Number of steamboats, sailing vessels, etc. | None | |
| 7. | Number of Patent rights | None | |
| 8. | Number of Engines, including boilers (part of plant assessed as real estate) | | |
| 9. | Number of Fire and Burglar Proof Safes | One | $ 30.00 |
| 10. | Number of Typewriting Machines | Two | $ 120.00 |
| 11. | Number of adding Machines | One | $ 200.00 |
| 12. | Number of typesetting Machines | None | |
| 13. | All Book Accounts Due me | | $ 10,000.00 |
| 14. | Money on hand or deposit with Banks, Trust Companies, Corporations, Firms, or Individuals, or subject to my order, check or draft | | $ 719.00 |
| 15. | All money loaned by me and not already entered in this schedule | None | |
| 16. | All judgments and Allowances in my favor entered in any court and which I have not already entered on this schedule | None | |
| 17. | All money invested in Certificates of Purchase at tax sales | None | |
| 18. | All money paid to Building, Loan and Savings Associations on Certificates of Stock, | None | |
| 19 | All shares of stock in any corporation formed outside of this state, and also all shares of stock in any corporation formed in this state and conducting its business outside of this state | None | |
| 20. | Number of Cash Registers | None | |
| 21. | Number of Telegraph instruments | None | |
| 22. | Number of telephones | None | |
| 23. | Number of Billiard, Pigeonhole, Bagatelle, and other similar tables | None | |
| | Forwarded | | $ 11,086.00 |

| | | | |
|---|---|---|---|
| 1623 | Bro't forward | | $ 11,086.00 |
| | 24. Number of Pianofortes | None | |
| | 25. Number of Organs and other musical instruments | None | |
| | 26. All Goods, Merchandise, and Manufactured Articles on hand | | $ 10,000.00 |
| | 27. Articles purchased, received, or otherwise held, for the purpose of being used, in whole or in part, in any process of operation of manufacturing, rectifying or refining | None | |
| | 28. Manufacturing tools, Implements, and Machinery (other than Engines and Boilers, which will be listed as such) | | $ 150.00 |
| | 29. Agricultural Tools, Implements, and Machinery | None | |
| | 30. Diamonds, Jewelry, Gold, Silver plate and Plated Ware owned by one of my family, | None | |
| | 31. Household furniture and Library | None | |
| | 32. Mechanical tools, Law and Medical Books Surgical Instruments, Medicines | None | |
| | 33. Tons of Ice | None | |
| | 34. Number and kinds of scales | Three | $ 750.00 |
| | 35. Number of Threshing Machines | None | |
| | 36. Number of Corn Shellers | None | |
| | 37. Dogs owned or harbored by me | None | |
| | 38. Improvements on leased lands | None | |
| | 39. Value of interest in state lands under contract | None | |
| | 40. All Nursery Stock | None | |
| | 41. Property such persons required to list as Pawnbrokers | None | |
| | 42. All Property of Eating Houses | None | |
| | 43. All Slaughter Animals | None | |
| | 44. Every Franchise and description (listed on separate schedule) | | |
| | 45. All Bricks, Stone and other Building material on hand | None | |
| | 46. Number of Gold Watches | None | |
| | 47. Number of sewing machines and knitting Machines | None | |
| | 48. Number of Carriages, Wagons, etc | None | $200.00 |
| | 49. Number of Bicycles, Tricycles, Motorcycles, etc. | None | |
| | Forwarded | | $ 22,186.00 |
| 1624 | Bro't Forward | | $ 22,186.00 |
| | 50. Number of Horses of all ages | Nine | $ 300.00 |
| | 51. Number of Mules, all kinds and ages | None | |
| | 52. Number of Cattle of all ages | None | |
| | 53. Number of Sheep and Goats of all ages | None | |

| | | |
|---|---|---|
| 54. Number of Hogs of all ages | None | |
| 55. Number of stands of Bees | None | |
| 56. Tons of Coal | 1500 | $ 7,500.00 |
| 57. Barrels of Lime | None | |
| 58. Bushels of Wheat | None | |
| 59. Bushels of Corn | None | |
| 60. Bushels of Rye | None | |
| 61. Bushels of Oats | None | |
| 62. Bushels of Kaffir Corn | None | |
| 63. Bushels of Barley | None | |
| 64. Bushels of Potatoes | None | |
| 65. Bushels of Flax Seed*p* | None | |
| 66. Bushels of Grass, Alfalfa and Clover Seed, | None | |
| 67. Bushels of fruit | None | |
| 68. Tons of Hay and Alfalfa | None | |
| 69. Tons of Broom Corn, Hemp | None | |
| 70. Barrels of Beef and Pork | None | |
| 71. Barrels of Cider and Vinegar | None | |
| 72. Gallons of Wine, and Kegs of Beer | None | |
| 73. All Poultry on Hand | None | |
| 74. Feet of Lumber, Logs and timber, also cords of wood | None | |
| 75. Stock in any Company or corporation | None | |
| 82. Office Fixtures, Furniture and Equipment | | $1,000.00 |
| 83. All cooperage material and Merchandise | None | |
| 84. Amount of Capital invested by Elevator men and grain brokers in such business | None | |
| 85. Credits otherwise listed | None | |
| 86. Pipe lines, Poles, meters, etc | | $466,014.00 |
| Total | | $504,000.00 |

1625 Section 52. Such schedule shall have attached the following interrogatories which the person required to list property shall answer over his signature and under oath:

Interrogatory 1. Are you, or were you on the first day of April of the present year the executor of the last will or the administrator of the estate of any deceased person or the guardian of the estate of any infant or person of unsound mind, or the trustees of the property of any person, or the receiver of any corporation, association or firm, or the agent, attorney, or banker investing, loaning or otherwise controlling the money or the property of any person, or the president or accounting officer of any corporation, or a partner, con*d*ignee, or pawnbroker.

If yes, designate for whom you were then, or now are acting in such representative or fiduciary capacity; and if you were or now are acting under the authority of any particular court, name the court, and also state to what court you report.

Answer. No.

Interrogatory 2. Have you since the first day of April of last year, either personally or through the agency of others, caused all or any

part of your taxable property or other property to be temporarily converted either be sale, loan, exchange, or in any other manner, into bonds or other securities of the United States not taxable, or any other property not taxable, with the intention to pay back, return, exchange, or dispose of such property after you have made out your tax statement? Or did you on or before the first day of April of the present year, and before you saw this interrogatory, pay back, return, exchange, or dispose of any such property for the purpose aforesaid

Answer. No.

Interrogatory 3. If you have converted any of your money or property or money or property of any other person as inquired of you, then state when the same was so converted or invested, and the time and amount of value thereof?

Answer. No.

Interrogatory 4. Have you at any time since the first day of April in the preceding year, withdrawn from any bank any moneys there deposited, for the purpose of converting the same into some form of non-taxible property, or for the purpose of sending the same out of the state, or transferring the same to some other person or persons, with the intent to or purpose of, evading the payment of tax on the same?

Answer. No.

STATE OF NEBRASKA,
*Lancaster County, ss*:

I, Homer Honeywell, being duly sworn, say that the foregoing statement and schedule is true and contains a full and complete list of all property held by or belonging to me on the first day of April including all personal property pertaining to merchandising, whether held in actual possession or having been purchased with a view to possession or profit, and all personal property appertaining to manufacturing, and all manufactured articles, whether on hand or owned by me. In all cases where I have been unable to exhibit certain classes of property to the assessor, such property has been fully and fairly described, and its true condition represented, and I have in no case sought to mislead the assessor as to the quan-ity or quality of the property. I further swear that, since the first day of April of last year I have not directly or indirectly converted or exchanged any of my property temporarily, for the purpose of evading the assessment thereof for taxes, into non-taxable property or securities of any kind, or transferred or transmitted the same to any person or in any wise for the purpose of evading the assessment thereof, and that my
1626 answers to the foregoing interrogatories are true. So help me God.

(Signed) HOMER HONEYWELL.

Subscribed in my presence, and sworn to before me this — day of —, 190—.

_____

*Deputy Assessor, Lancaster Co., Nebr.*

1959

*Extracts from Revenue Law.*

Section 12. All property in this state not expressly exempt therefrom shall be subject to taxation.

Section 13. Exemptions.

No Property is Exempt from Taxation Except:

First. All property of the state, counties and municipal corporations.

Second. Such other property as may be used exclusively for agricu-tural and horticultural societies, for schools, religious, cemetery and charitable purposes. In the assessment of real estate, encumbered by public easement, any depreciation, occasioned by such easement shall be deducted in the valuation of such property. The increased value of lands by reason of live fences, and forest trees grown and cultivated thereon, shall not be taken into account in the assessment thereof.

Section 28. Personal Property shall be listed in the manner following:

First. Every person of full age and sound mind, being a resident of this state, shall list all his moneys, credits, bonds or stocks, shares of stock of joint stock of other companies, when the capital stock of such companies is not assessed in this state, moneys loaned or invested, annuities, franchises, royalties and all other personal property.

Second. He shall also list all moneys and other personal property invested, loaned or otherwise controlled by him as the agent or attorney, or on account of any other person or persons, company or corporation whatsoever, and all moneys deposited subject to his order, check or draft, and credits due from any person or persons, body corporate or politic; whether in or out of the county.

Third. The property of a minor child shall be listed by his guardian; if he have no guardian, then by the father, if living; if not, by the mother, if living; and if neither father nor mother be living, by the person having such property in charge.

Fourth. The property of any other person under guardianship, by his guardian, or if he have no guardian, by the person having charge of such property.

Fifth. The property of a wife, by her husband, if of sound mind; if not, by herself.

Sixth. The property of a person for whose benefit it is held in trust by the trustee; of the estate of a deceased person by the executor or administrator.

Seventh. The property of corporations whose assets are in the hands of receivers, by such receivers.

Eighth. The property of corporations by the president or proper agent or officer thereof.

Ninth. The property of manufacturers and others in the hands of an agent, by and in the name of such agent, as merchandise, and (Sec. 32) shall be listed and assessed at the place where the business of such agent is carried on.

Section 35. All improvements put on leased grounds shall be assessed to the owner of such improvements as personal property.

Section 53. If any person shall make a false or fraudulent list, schedule or statement, required by this act, or shall willfully fail or refuse to deliver to the assessor, when called upon for that purpose, a list of taxable property which under this act is required to be listed or shall temporarily convert any part of such property into
1627 property not taxable for the purpose of preventing such property from being listed and of evading the payment of taxes thereon, or shall transfer or transmit any property to any person with such intent, he shall be guilty of misdemeanor and subject to a fine of not less than fifty dollars and not more than two thousand dollars. And if any person shall knowingly swear falsely regarding any matter contained in such schedule or interrogatories, he shall be deemed guilty of perjury and punished accordingly.

Section 54. It shall be the duty of the State Board of Equalization and Assessment, all county boards, county assessors and deputy assessors, to notify the county attorney of the proper county, of all willful violations of the provisions of this act known to them or any of them; and to sign and certify complaints and informations with respect thereto when prepared by the county attorney.

Section 55. In every case where any person shall refuse to make out and deliver to the proper deputy assessor the statement required under this act or shall refuse to make and subscribe to any of the oaths or affirmations required, the deputy assessor shall proceed to ascertain the number of each description of the several enumerated articles of property and the value thereof; and such deputy assessor shall make a note of such refusal in a column opposite the person's name, and the county assessor shall add to such valuations, when returned by the deputy, fifty percentum of the value returned.

Section 57. For the purpose of determining the true value of the stock of any merchant or manufacturer, the assessor shall have the right to demand of such manufacturer, or merchant an inspection of his inventories and all book accounts for the preceding year, including the annual invoice and inventory of stock made by such merchant or manufacturer last preceding such assessment and the policies of insurance carried by such merchant or manufacturer on his stock for the year next preceding his assessment.

LINCOLN, NEBR., June 9, 1906.

I certify that I have valued the property and franchise of the Lincoln Gas and Electric Light Company in Lancaster County Nebraska as $663,400.00 and assessed it at $132,680.00 apportioned as follows:

Real Estate $12,000.00.
Personal $120,680.00.

J. R. C. MILLER,
*County Assessor.*

Public Utility Corporations, Lancaster County, Nebraska.

APRIL 27th, 1906.

To Lincoln Gas and Electric Light Company:

Under Section 68, Chapter 77, Compiled Statutes, 1903, you are required, in addition to the other property required to be listed, to make out and deliver to the Deputy Assessor a sworn statement as per schedule attached, for municipal taxation for 1906.

1628 1. Name of Company: Lincoln Gas and Electric Light Company. Location: Lincoln, Nebraska, 1323 O Street.

2. Capital Stock authorized: $2,250,000.00. Number of shares: 22,500.

3. Capital stock paid up: $2,250,000.00.

4. Market value of shares of stock—nothing. Actual value of shares of stock—nothing.

5. The true value of franchise $60,000.00. Granted by the City of Lincoln.

6. Total amount of indebtedness $1,129,600.00. Except current expenses, excluding from expenses the amount paid for the purchase and improvement of property.

7. The amount of capital on which a dividend was declared during 1905 —.

8-9. The amount of capital on which a dividend declared during said year ending December 31, 1905 none.

10. The total amount of each dividend declared during the year ending December 31, 1905. None.

11. Gross earnings during said year $264,671.65.

12. Net earnings during said year $34,207.31.

13. Amount of profit added to sinking fund during said year—none.

14. Amount of surplus—none.

15. Maximum price at which shares of stock sold during said year—not known.

16. Minimum price at which shares of stock sold during said year—not known.

17. Average price at which stock sold during said year—Not known.

We, Homer Honeywell and R. W. Harbor, officers having full knowledge of the finances and accounts of the said Company, being respectively, Acting General Manager and Secretary and Treasurer of the Lincoln Gas and Electric Light Company being duly sworn, do say that the statements made above are true and correct.

HOMER HONEYWELL.
R. W. HARBOR.

Subscribed to in my presence and sworn to before me this ninth day of June, 1906.

J. R. C. MILLER, *Assessor.*

| | |
|---|---|
| 1628½ Assessment of all Real Estate owned by the Company | $61,000.00 |
| Assessment of all tangible Personal Property of the Company | $504,000.00 |
| Total | $565,000.00 |
| Balance to be assessed as Franchise and Capital Stock. | $60,000.00 |

1629 Lancaster County, Nebraska.

*Assessment of Personal Property of the Year* 1907 *of Lincoln Gas and Electric Light Company, of the Fourth Ward, Lancaster County, Nebraska,* 1323 *O Street, Lincoln.*

D. R. C. Miller, Co. Assessor.

| | | |
|---|---|---|
| 1. All annuities due me | None | |
| 2. All Boards owned by me | None | |
| 3. All Notes secured by Mortgage owned by me | None | |
| 4. All other Notes owned by me | None | |
| 5. Kind and number of Firearms | None | |
| 6. Number of Steam Boats, Row Boats, Sailing Vessels, Wharf Boats, Canal Boats, Barges, etc | None | |
| 7. Number of Patent Rights | None | |
| 8. Number of Steam Engines, including Boilers (Part of Plant as Real Estate) | None | |
| 9. Number of Fire and Burglar Proof Safes | One | 30.00 |
| 10. Number of Typewriting Machines | Two | 120.00 |
| 11. Number of Adding Machines | One | 200.00 |
| 12. Number of Typesetting Machines | None | |
| 13. All Book Accounts due me | | 10,000.00 |
| 14. Money on hand or on deposit with Banks, Trust Companies, Corporations, Firms, or Individuals or subject to my order, check or draft | Overdraft | |
| 15. All Money loaned by me and not already entered in any court and which I have not already entered in this schedule | None | |
| 16. All Judgments and allowances in my favor entered in any court and which I have not already entered in this schedule | None | |
| 17. All money invested in Certificates of Purchase at tax sales | None | |
| 18. All money paid to Building and Loan and Savings Associations on Certificates of Stock | None | |

| | | |
|---|---|---|
| 19. All Shares of Stock in any corporation formed outside of this state, and also all shares of stock in any corporation formed in this state and conducting its business outside of this state | None | |
| 20. Number of Cash Registers | None | |
| 21. Pictures and engravings | None | |
| 1630 Bro't forward | | $10,350.00 |
| 22. Number of Telephones | None | |
| 23. Number of Billiard, pigeonhole, Bagatelle, and other similar tables | None | |
| 24. Number of Pianofortes | None | |
| 25. Number of Organs and other Musical Instruments | None | |
| 26. All Goods, Merchandise, and Manufactured Articles on hand | | 10,905.00 |
| 27. Articles purchased, received, or otherwise held, for the purpose of being used, in whole or in part, in any process of operation of manufacturing, rectifying or refining | None | |
| 28. Manufacturing Tools, Implements, and Machinery | None | 150.00 |
| 29. Agricultural Tools, Implements, and Machinery | None | |
| 30. Diamonds, and other valuable stones | None | |
| 31. Household Effect-, Furniture and Library | None | |
| 32. Mechanical Tools, Law and Medical Books, Surgical Instruments, Medicines | None | |
| 33. Automobiles | None | |
| 34. Number and kinds of Scales | Three | 750.00 |
| 35. Number of Threshing Machines | None | |
| 36. Number of Corn Shellers | One | 15.00 |
| 37. Dogs owned or harbored by me | None | |
| 38. Improvements on leased lands | None | |
| 39. Value of interest in state lands under contract | None | |
| 40. All Nursery Stock | None | |
| 41. Property of such persons required to list as Pawnbrokers | None | |
| 42. All Property of Eating Houses | None | |
| 43. Harness and saddle | None | |
| 44. Every Franchise and description. (Listed on separate schedule.) | | |
| 45. Cream Separator | None | |
| 46. Number of Sewing Machines and Knitting Machines | None | |
| 47. Number of Gold and Silver Watches, Clocks | None | |
| 48. Number of Carriages, Wagons, Coaches, etc. | Nine | 200.00 |
| Forwarded | | $22,370.00 |

| | | |
|---|---|---|
| 1631 | Bro't forward ..... | $22,370.00 |
| | 49. Number of bicycles, tricycles, velocipedes, Motorcycles, Automobiles and kind .....None | |
| | 50. Number of horses of all ages.....Nine | 350.00 |
| | 51. Number of Mules, all kinds and ages....None | |
| | 52. Number of cattle of all ages.....None | |
| | 53. Number of sheep and goats of all ages.....None | |
| | 54. Number of Hogs of all ages.....None | |
| | 55. Number of stands of Bees.....None | |
| | 58. Bushels of Wheat.....None | |
| | 59. Bushels of Corn.....None | |
| | 60. Bushels of Rye.....None | |
| | 61. Bushels of Oats.....None | |
| | 62. Bushels of Kaffir-Corn.....None | |
| | 63. Bushesl of Barley.....None | |
| | 64. Bushels of Potatoes.....None | |
| | 65. Bushels of Flax Seed.....None | |
| | 67. Bushels of Grass and Alfalfa and Clover Seed .....None | |
| | 68. Tons of Hay and Alfalfa.....None | |
| | 69. Tons of Broom Corn, Hemp.....None | |
| | 73. All Poultry on hand.....None | |
| | 75. Stock in any company or corporation.....None | |
| | 82. Office Fixtures, Furniture and Equipment.. | $ 1,000.00 |
| | 83. Jewelry, Gold, Silver Plate and Plated Ware, None | |
| | 84. Amount of Capital invested by elevator men and Grain Brokers in such business....None | |
| | 85. Credits not otherwise listed.....None | |
| | 86. Pipe lines, poles and meters..... | $ 55,123.34 |

Section 52. Such schedule shall have attached the following interrogatories which the person required to list the property shall answer in writing over his signature and under oath:

Interrogatory 1. Are you, or were you, on the first day of April of the present year the executor of the last will or the administrator of the estate of any deceased person or the guardian of the estate of any infant or person of unsound mind, or the trustee of the property of any person, or the receiver of any corporation, association
1632 or firm or the agent, attorney or banker investing, loaning or otherwise controlling the money or the property of any person, or the president or accounting officer of any corporation, or a partner, consignee, or pawn broker.

If yes, designate for whom you were then, or now are, acting in such representative or fiduciary capacity; and if you were or now are acting under the authority of any particular court, name the court, and also state to what court you report.

Answer. ——.

Interrogatory 2. Have you since the first day of April of last year either personally or through the agency of others, caused all or any part of your taxable property or other property to be temporarily

converted either by sale, loan, exchange, or in any other manner, into bonds or other securities of the United States not taxable or any other property not taxable, with the intention to pay back, return, exchange or dispose of such property after you have made out your tax statement? Or did you on or before the first day of April of the present year, and before you saw this interrogatory, pay back, return, exchange, or dispose of any such property for the purpose aforesaid?

Answer. ——.

Interrogatory 4. Have you at any time since the first day of April in the preceding year, withdrawn from any bank any moneys there deposited for the purpose of converting the same into some form of non-taxable property, or for the purpose of sending the same out of the state, or transferring the same to some other person or persons, with the intent to or purpose of, evading the payment of tax on the same?

Answer. ——.

Interrogatory 3. If you have converted any of your money or property or money or property of any other person as inquired of you, then state when the same was so converted or invested, and the time and amount of value thereof?

Answer. ——.

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, —— —— being duly sworn, say that the foregoing statement and schedule is true and contains a full and complete list of all property held by or belonging to me on the first day of April including all personal property pertaining to merchandising, whether held in actual possession or having been purchased with a view to possession or profit and all personal *pertertu* appertaining to manufacturing, and all manufactured articles, whether on hand or owned by me. In all cases where I have been unable to exhibit certain classes of property to the assessor, such property has been fully and fairly described, and its true condition represented, and have in no case sought to mislead the assessor as to the quantity or quality of the property. I further swear that, since the first day of April of last year I have not directly or indirectly converted or exchanged any of my property temporarily, for the purpose of evading the assessment thereof for taxes, into non-taxable property or securities of any kind, or transferred or transmitted the same to any person or in any wise for the purpose of evading the assessment thereof, and that my answers to the foregoing interrogatories are true So help me God.

(Signed) —— ——.

*Extracts from Revenue Law.*

Section 12. All property in this state not expressly exempt therefrom shall be subject to taxation.

Section 13. Exemptions.

No property is exempt from taxation except:

First. All Property of the state, counties and municipal corporations.

Second. Such other property as may be used exclusively for agricultural and horticultural societies, for schools, religious, cemetery and charitable purposes. In the assessment of real estate, encumbered by public easement, any depreciation occasioned by such easement shall be deducted in the valuation of such property.

1633 The increased value of lands by reason of live fences, and forest trees grown and cultivated thereon shall not be taken into account in the assessment thereof.

Section 28. Personal Property shall be listed in the manner following:

First. Every person of full age and sound mind; being a resident of this state, shall list all his moneys, credits, bonds or stocks, shares of stock of joint stock of other companies, when the capital stock of such companies is not assessed in this state, moneys loaned or invested, annuities, franchises, royalties and all other personal property.

Second. He shall also list all moneys and other personal property invested, loaned or otherwise controlled by him as the agent or attorney or on account of any other person or persons, company or corporation whatsoever, and all moneys deposited subject to his order, check or draft and credits due from any person or persons, body corporate or politic whether/ in or out of the county.

Third. The property of a minor child shall be listed by his guardian; if he have no guardian, then by the father, if living; if not by the mother, if living, and if neither father nor mother be living, by the person having such property in charge.

Fourth. The property of any other person under guardianship; by his guardian, or if he have not a guardian, by the person having such property in charge.

Fifth. The property of a wife, by her husband, if of sound mind; if not, by herself.

Sixth. The property of a person for whose benefit it is held in trust by the trustee of the estate of a deceased person by the executor or administrator.

Seventh. The property of corporations whose assets are in the hands of receivers, by such receivers.

Eighth. The property of corporations by the president or proper agent or officer thereof.

Ninth. The property of a firm or company, by a partner or agent thereof.

Tenth. The property of manufacturers and others in the hands of an agent, by and in the name of such agent, as merchandise, and (Sec. 32) shall be listed and assessed at the place where the business of such agent is carried on.

Section 35. All improvements put on leased grounds shall be assessed to the owner of such improvements as personal property.

Section 53. If any person shall make a false or fraudulent list, schedule or statement, required by this act, or shall willfully fail

or refuse to deliver to the assessor, when called upon for that purpose, a list of taxable property which under this act is required to be listed or shall temporarily convert any part of such property into property not taxable for the purpose of preventing such property from being listed and of evading the payment of taxes thereon, or shall transfer or transmit any property to any person with such intent, he shall be guilty of misdemeanor and subject to a fine of not less than fifty dollars and not more than two thousand dollars. And if any person shall knowingly swear falsely regarding any matter contained in such schedule or interrogatories, he shall be deemed guilty of perjury and punished accordingly.

Section 54. It shall be the duty of the State Board of Equalization and Assessment, all county boards, county assessors and deputy assessors, to notify the county attorney of the proper county, of all willful violations of the provisions of this act known to them or any of them; and to sign and verify complaints and informations with respect thereto when prepared by the county attorney.

Section 55. In every case where any person shall refuse to make out and deliver to the proper deputy assessor the statement required under this act, or shall refuse to make and subscribe to any of the oaths or affirmations required, the deputy assesser shall proceed to ascertain the number of each description of the several enumerated articles of property and the value thereof; and such deputy
1634 assessor shall make a note of such refusal in a column opposite the person's name, and the county assessor shall add to such valuations, when returned by the deputy, fifty per centum of the value thereof returned.

Section 57. For the purpose of determining the true value of the stock of any merchant or manufacturer, the assessor shall have the right to demand of such merchant or manufacturer an inspection of his inventories and all books of account for the preceding year, including the annual inventory and invoice of stock made by such merchant or manufacturer last preceding year and the policies of insurance carried by such merchant or manufacturer on his stock for the year next preceding his assessment.

I hereby certify that I have valued the property and franchise of the Lincoln Gas and Electric Light Company in Lancaster County, Nebraska, at $1,129,600. Setting aside $80,000 for Real Estate separately assessed and assessed the remaining $1,049,600 at $209,920.

J. R. C. MILLER,
*Assessor.*

*Public Utility Corporation.*

Lancaster County, Nebraska.

To Lincoln Gas and Electric Light Company:

Under Section 68, Chapter 77, Compiled Statutes, 1903, you are required in addition to the other property required to be listed, to

make out and deliver to the Deputy Assessor a sworn statement as per schedule, for municipal taxation for 1907.

1. Name of Company. The Lincoln Gas and Electric Light Company.

2. Location. Lincoln, Nebr. 1323 O St.

2. Capital stock authorized. $2,250,000.00.
Number of shares. 22500.

3. Capital stock paid up $2,250,000.00.

4. Market value of shares of stock. ——.
Actual value of shares of stock. ——.

5. The true value of Franchise.
Granted by the City of Lincoln.

6. Total amount of indebtedness. $1,129,600.00.
Except for current expenses, excluding from expenses the amount paid for purchase and improvement of property.

7. The amount of capital on which a dividend was declared during 1906. ——.

8-9. The date and rate of each dividend declared during said year ending December 31, 1906. None.

1635 10. The total amount of each dividend declared during the year ending December 31, 1906. None.

11. Gross earnings during said year. $316,898.38.

12. Net earnings during the said year. $42,801.43.

13. Amount of surplus. ——.

14. Amount of profit added to sinking fund during said year. None.

15. Maximum price at which shares of stock sold during said year. Not known.

16. Minimum price at which shares of stock sold during said year. Not known.

17. Average price at which stock sold during said year. Not known.

We —— officers having full knowledge of the finances and accounts of the said company, being respectively —— and —— of the —— company being duly sworn, do say that the statements made above are true and correct.

—— ——.
—— ——.

Assessment of all Real Estate Owned by the Company ————
Assessment of all tangible Personal Property owned by Company ..... ————

Total ..... ————

Balance to be assessed as Franchise and Capital Stock

1636 Lancaster County, Nebraska.

*Assessment of the Personal Property for the Year 1908 of Lincoln Gas and Electric Light Company of the Fourth Ward, Lancaster County, Nebraska.*

D. R. C. Miller, Co. Assessor.

| | | | |
|---|---|---|---|
| 1. | All annuities due me | None | |
| 2. | All Bands owned by me | None | |
| 3. | All Notes secured by Mortgage owned by me, | None | |
| 4. | All other notes owned by me | None | |
| 5. | Kind and number of firearms | None | |
| 6. | Number of Steamboats, Sailing Vessels, W-arf boats, Canal Boats, Barges, or other Water Craft, whether within or without this state | None | |
| 7. | Number of Patent Rights | None | |
| 8. | Part of plant assessed as Real Estate | | |
| 9. | Number of fire and burglar proof safes | One | $ 30.00 |
| 10. | Number of typewriting machines | Two | $ 120.00 |
| 11. | Number of Adding Machines | Two | $ 350.00 |
| 12. | Number of typesetting Machines | None | |
| 13. | All Book Accounts due me | | $ 10,000.00 |
| 14. | Money on hand or on deposit with banks, trusts companies, corporations, firms, or individuals or subject to my order, check or draft | Overdraft | |
| 15. | All money loaned by me and not already entered on this schedule | None | |
| 16. | All judgments and Allowances in my favor entered in any court and which I have not already entered on this schedule | None | |
| 17. | All money paid to Building, Loan and Savings Associations on Certificates of Stock, | None | |
| 18. | All money invested in Certificates of Purchase at tax sales | None | |
| 19. | All Shares of Stock in any corporation formed outside of this state, and also all shares of stock in any corporation formed in this state and conducting its business outside of this state | None | |
| 20. | Number of Cash Registers | None | |
| 21. | Pictures and Engravings | None | |
| 22. | Number of telephones | None | |
| 23. | Number of Billiard, Pigeonhole, Bagatelle and other similar tables | None | |
| | Forwarded | | $10,500.00 |

| | | | |
|---|---|---|---|
| 1637 | Bro't forward | | $10,500.00 |
| | 24. Number of pianofortes | None | |
| | 25. Number of Organs and other Musical instruments | None | |
| | 26. All Goods, Merchandise, and Manufactured Articles on hand | | $ 40,000.00 |
| | 27. Articles purchased, received, or otherwise held, for the purpose of being used, in whole or in part, in any process of operation of manufacturing, rectifying or refining | None | |
| | 28. Manufacturing Tools, Implements, and Machinery (other than Engines and Boilers, which shall be listed as such) | | $ 150.00 |
| | 29. Agricultural Tools, Implements and Machinery | None | |
| | 30. Diamonds, and other valuable stones | None | |
| | 31. Household effects, Furniture and Library | None | |
| | 32. Mechanical Tools, Law and Medical Books, Surgical Instruments, Medicines | None | |
| | 33. Automobiles | None | |
| | 34. Number and kind of scales | Three | $ 750.00 |
| | 35. Number of threshing Machines | None | |
| | 36. Number of Corn shellers | One | $ 20.00 |
| | 37. Dogs owned or harbored by me | None | |
| | 38. Improvements on leased lands | None | |
| | 39. Value of interest in state of lands under contract | None | |
| | 40. All Nursery Stock | None | |
| | 41. Property of such persons required to list as pawnbrokers | None | |
| | 42. All Property of Eating Houses | None | |
| | 43. Harness and Saddles | None | |
| | 44. Every Franchise and description (listed on separate schedule) | | |
| | 45. Cream Separator | None | |
| | 46. Number of Sewing Machines and Knitting Machines | None | |
| | 47. Number of Gold and Silver Watches and Clocks | None | |
| | 48. Number of Carriages, Wagons, Coaches, Hacks, Carts, Drays or other Vehicles | Ten | $ 250.00 |
| | 49. Number of Bicycles, Tricycles, Velocipedes, Motorcycles and kind | None | |
| | 50. Number of Horses of all ages | Eleven | $ 350.00 |
| | 51. Number of Mules of all ages and kind | None | |
| | Forwarded | | $52,060.00 |

| | | |
|---|---|---|
| 1638 | Bro't forwarded ..... | $52,060.00 |
| | 52. Number of Cattle of all ages.....None | |
| | 53. Number of Sheep and Goats of all ages....None | |
| | 54. Number of Hogs of all ages.....None | |
| | 55. Number of stands of Bees.....None | |
| | 56. Bushels of Wheat.....None | |
| | 57. Bushels of Corn.....None | |
| | 58. Bushels of Rye.....None | |
| | 59. Bushels of Oats.....None | |
| | 60. Bushels of Kaffir-Corn.....None | |
| | 61. Bushels of Barley.....None | |
| | 62. Bushels of Potatoes.....None | |
| | 63. Bushels of Flax Seed.....None | |
| | 64. Bushels of Grass, Alfalfa and Clover Seed...None | |
| | 65. Tons of Hay and alfalfo.....None | |
| | 66. Tons of Broom Corn, Hemp.....None | |
| | 67. All poultry on hand.....None | |
| | 68. Stock in any Company or Corporation.....None | |
| | 69. Shares Stock in National Bank.....None | |
| | 70. Shares Stock in State Bank.....None | |
| | 75. Office Fixtures, Furniture and Equipment.. | $1,000.00 |
| | 76. Jewelry, Gold, Silver plate and Plated ware, None | |
| | 77. Amount of Capital Invested by Elevator Men and Grain Brokers in such business, None | |
| | 78. Pipe and Pole Lines, Meters, etc..... | $679,780.00 |
| | Total ..... | $732,800.00 |

LINCOLN, NEBR., June 6, 1908.

Section 52. Such schedule shall have attached the following interrogatories which the person required to list property shall answer in writting over his signature and under oath:

Interrogatory 1. Are you, or were you, on the first day of April of the present year the executor of the last will or the administrator of the estate of any deceased person of the guardian of the estate of any infant or person of unsound mind, or the trustee of the property of any person, or the receiver of any corporation, association or firm or the agent, attorney, or banker investing, loaning or otherwise controlling the money or the property of any person, or the president or accounting officer of any corporation, or a
1639 partner, consignee or pawn broker.

If yes, designate for whom you were then, or now are, acting in such representative or fiduciary capacity; and if you were or now are acting under the authority of any particular court, name the Court, and also state to what court you report.

Answer. No.

Interrogatory 2. Have you since the first day of April of last year, either personally or through the agency of others, caused all or any part of your taxable property or other property to be temporarily converted either by sale, loan, exchange, or in any

other manner, into bonds or other securities of the United States, not taxable or any other property not taxable, with the intention to pay back, return exchange, or dispose of such property after you have made out your tax statement? Or did you on or before the first day of April — the present year, and before you saw this interrogatory, pay back, return, exchange or dispose of any such property for the purpose aforesaid?

Answer. No.

Interrogatory 3. If you have converted any of your money or property or money or property of any other person as inquired of you, then state when the same was so converted or invested, and the time and amount of value of same?

Answer. No.

Interrogatory 4. Have you at any time since the first day of April in the preceding year, withdrawn from any bank any moneys there deposited for the purpose of converting the same into some form of non-taxable property, or for the purpose of sending the same out of the state, or transferring the same to some other person or persons with the intent to or purpose of evading the payment of tax on the same?

Answer. No.

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, Harry Warner being duly sworn, say that the foregoing statement and schedule is true and contains a full and complete list of all propertu held by or belonging to me on the first day of April including all property pertaining to merchandising, whether held in actual possession by me. In all cases where I have been unable to exhibit certain classes of property to the assessor, such property has been fully and fairly described, and its true condition represented, and have in no case sought to mislead the assessor as to the quantity or quality of the property. I further swear that, since the first day of April of last year I have not directly or indirectly converted or exchanged any of my property temporarily, for the purpose of evading the assessment thereof for taxes, into non-taxable property or securities of any kind or transferred or transmitted the same to any person or in any wise for the purpose of evading the assessment thereof, and that my answers to the foregoing interrogatories are true, So help me God.

(Signed) HARRY WARNER.

Subscribed in my presence and sworn to before me this — day of — 1908.

—— ——,
*Deputy County Assessor.*

*Extracts from Revenue Law.*

Section 12. All property in this state not expressly exempt therefrom shall be subject to taxation.

Section 13. Exemptions.

No Property is exempt from taxation except

First. All property of the state, counties and municipal corporations.

Second. Such other property as may be used exclusively for agricultural and horticultural societies, for schools, religious, cemetery and charitable purposes. In the assessment of real estate,
1640 encumbered by public easement, any depreciation occasioned by such easement shall be deducted in the valuation of such property. The increased value of lands by reason of live fences, and forest trees grown and cultivated thereon shall not be taken into account in the assessment thereof.

Section 28. Personal property shall be listed in the manner following:

First. Every person of full age and sound mind, being a resident of this state, shall list all his moneys, credits, bonds or stocks, shares of stock or joint stock of other companies, when the capital stock of such companies in not assessed in this statem moneys loaned or invested, annuities, franchises, royalties and other personal property.

Second. He shall also list all moneys and other personal property invested, loaned or otherwise controlled by him as the agent or attorney, or on account of any other person or persons, company or corporation whatsoever, and all moneys deposited subject to his order, check, or draft, and credits due from any person or persons, body corporate or politic; whether in or out of the county.

Third. The property of a minor child shall be listed by his guardian; if he have no guardian, then by the father, if living; if not, by the mother, if living, and if neither father nor mother be living; by the person or persons having such property in charge.

Fourth. The property of any other person under guardianship, by his guardian; or if he have not a guardian, by the person having charge of such property.

Fifth. The property of a wife, by her husband, if of sound mind; if not by herself.

Sixth. The property of a person for whose benefit it is held in trust by the trustee; of the estate of a deceased person by the executor or administrator.

Seventh. The property of corporations whose assets are in the hands of receivers, by such receivers.

Eighth. The property of corporations by the president or proper agent or officer thereof.

Ninth. The property of a firm or company, by a partner or agent thereof.

Tenth. The property of a manufacturer and others in the hands of an agent, by and in the name of such agent, as merchandise,

and (sec. 32) shall be listed and assessed at the place where the business of such agent is carried on.

Section 35. All improvements put on leased grounds shall be assessed to the owner of such improvements as personal property.

Section 53. If any person make a false or fraudulent list, schedule or statement required by this act, or shall willfully fail or refuse to deliver to the assessor, when called upon for that purpose, a list of the taxable property which under this act is required to be listed, or shall temporarily convert any part of such property into property not taxable for the fraudulent purpose of preventing such property from being listed and of evading the payment of taxes thereon, or shall transfer or transmit any property to any person with such intent, he shall be guilty of a misdemeanor and subject to a fine of not less than fifty dollars and not more than two thousand dollars. And if any person shall knowingly swear falsely regarding any matter contained in such schedule or interrogatories, he shall be deemed guilty of perjury and punished accordingly.

Section 54. It shall be the duty of the State Board of Equalization and Assessment, all county boards, county assessors and deputy assessors, to notify the county attorney of the proper county, of all willful violations of the provisions of this act known to them or any of them; and to sign and verify complaints and informations with respect thereto when prepared by the County Attorney.

1641 Section 55. In every case where any person shall refuse to make out and deliver to the proper deputy county assessor the statement required under this act, or shall refuse to make and subscribe to any of the oaths or affirmations required, the deputy assessor shall proceed to ascertain the number of each description of the several enumerated articles of property and the value therof; and such deputy assessor shall make a note in a column opposite the person's name, and the county assessor shall add to such valuation, when returned by the deputy, fifty per centum of the value returned.

Section 57. For the purpose of determining the true value of the stock of any merchant or manufacturer, the assessor shall have the right to demand of such merchant or manufacturer, an inspection of his inventories and all books of account for the preceding year, including the annual invoice and inventory of stock made by such merchants or manufacturer last preceding such assessment, and the policies of insurance carried by such merchant or manufacturer on his stock for the year next preceding his assessment.

LINCOLN, NEBR., June 6, 1908.

I hereby certify that I have valued the personal property and franchise of the Lincoln Gas and Electric Light Company at $792,800.00 the real estate being $57,200.00 making a total value of $850,000.00.

Personal property valuation $792,800.00 assessed value $158,560.00.

D. R. C. MILLER,
*Assessor.*

Public Utility Corporations,
Lancaster County, Nebraska.

April 20, 1908.

To Lincoln Gas and Electric Light Company:

Under Section 68, Chapter 77, Compiled Statutes, 1903, you are required, in addition to the other property required to be listed, to make out and deliver to the Deputy Assessor a sworn statement as per schedule attached, for municipal taxation for 1908.

1. Name of the Company Lincoln Gas & Electric Light Company.
2. Location 1323 O St., Lincoln, Nebr.
2. Capital stock authorized $2,250,000.00.
Number of shares 22,500.
3. Capital stock paid up $2,250,000.00.
4. Market value of shares of stock—not known.
Actual value of shares of stock—not know.
5. The true value of franchise.
1642 Granted by City of Lincoln.
6. Total amount of indebtedness $1,129,600.00.
Except for current expenses, excluding from expenses the amount paid for purchase and improvement of property.
7. The amount of capital on which a dividend was declared during 1907.
8-9. The date and rate of each dividend declared during said year ending December 31, 1907—none.
10. The total amount of each dividend declared during the year ending December 31, 1907—none.
11. Gross earnings during said year $352,225.75.
12. Net earnings during said year $52,515.98.
13. Amount of surplus—none.
14. Amount of profit added to sinking fund during said year none.
15. Maximum price at which shares of stock sold during said year—not known.
16. Minimum price at which shares of stock sold during said year—not known.
17. Average price at which stock sold during said year—not known.
18. We, Harry Warner and Homer Honeywell officers having full knowledge of the finances and accounts of the said Company, being respectively Secretary and Treasurer and General Manager of the Lincoln Gas and Electric Light Company being duly sworn, do say that the statements made above are true and correct.

HOMER HONEYWELL.
HARRY WARNER.

Subscribed in my presence and sworn to before me this — day of 1907.

—— ——.

| | |
|---|---|
| Assessment of all Real Estate owned by the Company | $57,200.00 |
| Assessment of all tangible Personal Property owned by the Company | $732,800.00 |
| Total | $790,000.00 |
| Balance to be assessed as Franchise and Capital Stock. | $60,000.00 |

1643 Lancaster County, Nebraska.

*Assessment of Personal Property for the Year* 1909 *of The Lincoln Gas and Electric Light Company, of 4th Precinct or Ward, Lancaster County, Nebraska,* 1323 *O St.*

D. R. C. Miller, Co. Assessor.

| | | |
|---|---|---|
| 1. All Annuities due me | none | |
| 2. All Bonds owned by me | none | |
| 3. All notes secured by Mortgage owned by me | none | |
| 4. All other notes owned by me | none | |
| 5. Fire arms | none | |
| 6. Steam boats, sailing Vessels, W-arf Boats, etc. | none | |
| 7. Patent Rights | none | |
| 8. Steam Engines, including Boilers | none | |
| 9. Fire and Burglar Proof Safes | one | $30.00 |
| 10. Typewriting Machines | two | $100.00 |
| 11. Adding Machines | three | $500.00 |
| 12. Tyesetting Machines | none | |
| 13. All Book Accounts Due me | | $10,000.00 |
| 14. Money on hand or on deposit with Banks, Trust companies, Corporations, Firms, or individuals or subject to my order, check or draft | | $500.00 |
| 15. All money loaned by me and not already entered in this schedule | none | |
| 16. All judgments and Allowances in my favor entered in any court and which I have not already entered on this schedule | none | |
| 17. All Money invested in Certificates of Purchase at tax sales | none | |
| 18. All Money paid to Building, Loan and Saving Associations on Certificates of stock | none | |
| 19. All Shares of Stock in any corporation formed outside this state, and also all Shares of Stock in any corporation formed in this state conducting business outside of this State | none | |

| | | |
|---|---|---|
| 20. Cash Registers | none | |
| 21. Pictures and Engravings | none | |
| 22. Telephones owned by me | none | |
| 23. Billiard, Pigeonhole, Bagatelle, and other similar tables | none | |
| 1644 & 1645 Bro't forward | | $11,130.00 |
| 24. Organs and other musical instruments | none | |
| 25. Pianofortes | none | |
| 26. All Goods, Merchandise, and Manufactured Articles on hand | | $29,000.00 |
| 27. Articles purchased, received, or otherwise held for the purpose of being used, in whole or in part, in any process or operation of manufacturing, rectifying, or refining | none | |
| 28. Manufacturing Tools, Implements, and Machinery (other than engines and Boilers which shall be listed as such) | | $150.00 |
| 29. Agricultural tools, implements and machinery | none | |
| 30. Diamonds, and other valuable stones owned by any member of my family | none | |
| 31. Household effects, Furniture and Library | none | |
| 32. Mechanical Tools, Law and Medical Books, Surgical instruments, Medicines | none | |
| 33. Automobiles | none | |
| 34. Scales | three | $300.00 |
| 35. Threshing Machines | none | |
| 36. Corn shellers | three | 20.00 |
| 37. Dogs owned or harbored by me | none | |
| 38. Improvements on Leased Lands | none | |
| 39. Value of interest in State Lands under contract | " | |
| 40. All Nursery Stock | none | |
| 41. Property such persons required to list as Pawnbrokers | none | |
| 42. All Property of Eating houses | none | |
| 43. Harness and Saddles | none | |
| 44. Franchises (listed on separate schedule). | | |
| 45. Cream Separators | none | |
| 46. Sewing Machines and Knitting Machines | none | |
| 47. Number of Gold Watches, Silver Watches, Clocks | none | |
| 48. Carriages, Wagons, Coaches, Hacks, Carts, Drays, of other Vehicles | ten | $250.00 |
| 49. Bicycles, Tricycles, Velocipedes, Motorcycles | none | |
| 50. Number of Horses of all ages | eleven | 400.00 |
| Forwarded | | 41,250.00 |

| | | | |
|---|---|---|---|
| 1646 | Bro't Forward..... | | $41,250.00 |
| 51. | Number of Mules, Jacks and Jennies of all ages..... | none | |
| 52. | Number of Cattle of all ages..... | none | |
| 53. | Number of sheep and Goats of all ages.. | none | |
| 54. | Hogs of all ages..... | none | |
| 55. | Stands of Bees..... | none | |
| 56. | Bushels of Wheat..... | none | |
| 57. | Bushels of Corn..... | none | |
| 58. | Bushels of Rye..... | none | |
| 59. | Bushels of Oats..... | none | |
| 60. | Bushels of Kaffir-corn..... | none | |
| 61. | Bushels of Barley..... | none | |
| 62. | Bushels of Potatoes..... | none | |
| 63. | Bushels of Flax seed..... | none | |
| 64. | Bushels of Grass, Alfalfa, and Clover Seed | none | |
| 65. | Tons of Hay and Alfalfa..... | none | |
| 66. | Tons of Broom Corn, Hemp..... | none | |
| 67. | All Poultry on hand..... | none | |
| 68. | Stock in any Company or Corporation... | none | |
| 69. | Shares Stock in National Banks..... | none | |
| 70. | Shares Stock in State Banks..... | none | |
| 75. | Office Fixtures, Furniture and Equipment | | $1,000.00 |
| 76. | Jewelery, Gold, Silver, and Plated Ware. | none | |
| 77. | Amount of Capital invested by Elevator Men and Grain Brokers in such business ..... | none | |
| 78. | Credits not otherwise listed..... | none | |
| 79. | Pipe and Pole Lines, Meters, etc..... | | $691,000.00 |
| | Total Actual Value..... | | $733,250.00 |

Sec. 52. Such schedule shall have attached the following interrogatories which the person required to list property shall answer in writing over his signature and under oath:

Interrogatory 1. Are you, or were you, on the first day of April of the present year the executor of the last will or the administrator of the estate of any deceased person or the guardian of the estate of any infant or person of unsound mind, or the trustee of the property of any person, or the receiver of any corporation, association or firm, or the agent, attorney, or banker investing, loaning or otherwise controlling the money or the property of any person, or the president or accounting officer of any corporation, or a partner, consignee, or pawnbroker?

If yes, designate for whom you were then, or now are,
1647 acting in such representative or fiduciary capacity, and if you were or now are acting under the authority of any particular court, name the Court, and also state to what court you report.

Answer. No.

Interrogatory 2. Have you since the first day of April of last year, either personally or through the agency of others, caused all or any

part of your taxable property or other property to be temporarily converted either by sale, loan, exchange, or in any other manner, into bonds or other securities of the United States, not taxable or any other property not taxable, with the intention to pay back, return, exchange or dispose of such property after you have made out your tax statement? Or did you on or before the first day of April the present year, and before you saw this interrogatory, pay back, return, exchange, or dispose of any such property for the purpose aforesaid?

Answer. No.

Interrogatory 3. If you have converted any of your money or property or money or property of any other person as inquired of you, then state when the same was so conveyed or invested, and the time and amount of value thereof.

Answer. No.

Interrogatory 4. Have you at any time since the first day of April in the preceding year, withdrawn from any bank any moneys there deposited for the purpose of converting the same into some form of non-taxable property, or for the purpose of sending the same out of the state, or transferring the same to some other person or persons, with the intent to or purpose of, evading the payment of tax on the same?

Answer. No.

STATE OF NEBRASKA,
*Lancaster County, ss:*

I, Harry Warner, Secretary of the Lincoln Gas and Electric Light Company being duly sworn, say that the foregoing statement and schedule is true and contains a full and complete list of all property held by me or belonging to me on the first day of April including all personal property pertaining to merchandising, whether held in actual possession or having been purchased with a view to possession or profit, and all personal property appertaining to manufacturing, and all manufactured articles, whether on hand or owned by me. In all cases where I have been unable to exhibit certain classes of property to the assessor, such property has been fully and fairly described, and its true condition represented, and have in no case sought to mislead the assessor as to the quantity or quality of the property, I further swear that, since the first day of April of last year I have not directly or indirectly converted or exchanged any of my property temporarily, for the purpose of evading the assessment thereof for taxes, into non-taxable property or securities of any kind, or transferred or transmitted the same to any person or in any wise for the purpose of evading the assessment thereof, and that my answers to the foregoing interrogatories are true. So help me God.

(Signed) HARRY WARNER.

Subscribed in my presence and sworn to before me this 2nd day of June 1909.

D. H. McCLENAHAN.

*Certificate of Assessment.*

I hereby certify that I have assessed the foregoing personal property this 2nd day of June 1909 at its fair cash value, as indicated in the column provided, to the best of my knowledge and belief.

D. H. McCLENAHAN.

1648 *Extracts from Revenue Law.*

Section 12. All property in this state not expressly exempt therefrom shall be subject to taxation.

Section 13. Exemptions.

No Property is Exempt From Taxation Except:

First. All property of the state, counties and municipal corporations.

Second. Such other properties as may be used exclusively for agricultural and horticultural societies, for schools, religious, cemetery and charitable purposes. In the assessment of real estate, encumbered by public easement, any depreciation occasioned by such easement shall be deducted in the valuation of such property. The increased value of lands by reason of live fences, and forest trees grown and cultivated thereon shall not be taken into account in the assessment thereof.

Section 28. Personal property shall be listed in the manner following:

First. Every person of full age and sound mind, being a resident of this state, shall list all his moneys, credits, bonds or stocks, shares of stock or joint stock of other companies, when the capital stock of such companies is not assessed in this state, moneys loaned or invested annuities, franchises, royalties and other personal property.

Second. He shall also list all moneys and other personal property invested, loaned or otherwise controlled by him as the agent or attorney, or on account of any other person or persons, company or corporation whatsoever, and all moneys deposited subject to his order, check, or draft, and credits due from any person or persons, body corporate or politic; whether in or out of the county.

Third. The property of a minor child shall be listed by his guardian if he have no guardian, then by the father, if living, if not, by the mother, if living, and if neither father nor mother be living, by the person having such property in charge?

Fourth. The property of any other person under guardianship, by his guardian; or if he have no guardian, by the person having charge of such property.

Fifth. The property of a wife, by her husband, if of sound mind; if not by herself.

Sixth. The property of a person for whose benefit it is held in trust by the trustee; of the estate of a deceased person by the executor or administrator.

Seventh. The property of corporations whose assets are in the hands of receivers, by such receivers.

Eighth. The property of corporations by the president or proper agent or officer thereof.

Ninth. The property of a firm or company, by a partner or agent thereof.

Tenth. The property of manufacturers and others in the hands of an agent, by and in the name of such agent, as merchandise and (Sec. 32) shall be listed and assessed at the place where the business of such agent is carried on.

Section 35. All improvements put on leased grounds shall be assessed to the owner of such improvements as personal property.

Section 53. If any person shall make a false or fraudulent list, schedule or statement required by this act, or shall willfully fail or refuse to deliver to the assessor, when called upon for that purpose, a list of the taxable property which under this act is required to be listed or shall temporarily convert any part of such property into property not taxable for the fraudulent purposes of preventing such property from being listed and of evading the payment of taxes thereon, or shall transfer or transmit any property to any person with such intent, he shall be guilty of a misdemeanor and subject to a fine of not less than fifty dollars and not more than two thousand dollars. And if any person shall knowingly swear falsely regarding any matter contained in such schedule or interrogatories, he shall be deemed guilty of perjury and punished accordingly.

1649 Section 54. It shall be the duty of the State Board of Equalization and Assessment, all county boards, county assessors, and deputy assessors to notify the county attorney of the proper county, of all willful violations of the provisions of this act known to them or any of them; and to sign and verify complaints and informations with respect thereto when prepared by the county attorney.

Section 55. In every case where any person shall refuse to make out and deliver to the proper deputy assessor the statement required under this act, or shall refuse to make and subscribe to any of the oaths or affirmations required, the deputy assessor shall proceed to ascertain the number of each description of the several enumerated articles of property and the value thereof; and such deputy assessor shall make note of such refusal in a column opposite the person's name and the county assessor shall add to such valuations, when returned by the deputy, fifty per centum of the value returned.

Section 57. For the purpose of determining the true value of the stock of any merchant or manufacturer, the assessor shall have the right to demand of such merchant or manufacturer, an inspection of his inventories and all books of account for the preceding year, including the annual inventory of stock made by such merchant or ma*un*facturer last preceeding such assessment, and the policies of insurance carried by such merchant or manufacturer on his stock *of*r the year next preceding his assessment.

I hereby certify that I have this day valued the personal property and franchise of the Lincoln Gas and Electric Light Company in

Lincoln, Lancaster County, Nebraska, at $793,525 after deducting $56,475 for real estate and assessed the personal property and franchise at $158,705.

(Signed) D. R. C. MILLER,
*County Assessor.*

Lincoln $158,705. School District #1 $158,705.

1650 Public Utility Corporations,

Lancaster County, Nebraska.

April 10, 1909.

To Lincoln Gas and Electric Light Company:

Under section 68, Chapter 77, Compiled Statutes, 1903, you are required, in addition to the other property required to be listed, to make out and deliver to the Deputy Assessor a sworn statement as per schedule attached, for municipal taxation for 1909.

1. Name of Company, Lincoln Gas & Electric Light Company. Location, Lincoln, Nebr.
2. Capital stock authorized $2,250,000.00. Number of shares, 22500.
3. Capital stock paid up, $2,250,000.00.
4. Market value of shares of stock—not known.
5. Actual value of shares of stock—not known.
5. True value of Franchise —. Granted by City of Lincoln.
6. Total amount of indebtedness, $1,129,600.00 (except for current expenses, excluding from expense the amount paid for purchase and improvement of property).
7. The amount of capital on which a dividend was declared during 1908 —.
8-9. The date and rate of each dividend declared during the year ending December 31, 1908 —.
10. The total amount of each dividend declared during the said year ending December 31, 1908 —.
11. Gross earning during said year, $363,631.20.
12. Net earning during said year, $64,437.65.
13. Amount of surplus, none.
14. Amount of profit added to sinking fund during said year, none.
15. Maximum price at which shares of stock sold during said year, not known.
16. Minimum price at which shares of stock sold during said year, not known.
17. Average price at which shares of stock sold during said year, not known.
18. We, Harry Warner, Secretary and Treasure-, officers having full knowledge of the finances and accounts of the said Company,

1651 being Secretary and Treasurer of the Lincoln Gas & Electric Light Company being duly sworn, do say that the statements made above are true and correct.

(Signed) HARRY WARNER.

Subscribed in my presence and sworn to before me this 2nd day of June, 1909.

(Signed) D. H. McCLENAHAN.

| | |
|---|---|
| Assessment of all Real Estate owned by the Company.. | $57,200.00 |
| Assessment of all tangible Personal Property owned by Company ..... | $733,250.00 |
| Total..... | $790,450.00 |
| Balance to be assessed as Franchise and Capital Stock. | $60,000.00 |

1652 *Assessment of Personal Property for the Year* 1910.

Lincoln Gas & Electric Light Company,
Lancaster County, Nebraska.

D. R. C. Miller, Co. Assessor.

Description of Property.

| | | |
|---|---|---|
| 1. All Annuities due me..... | none | |
| 2. All bonds owned by me..... | none | |
| 3. All notes secured by Mortgage owned by me ..... | none | |
| 4. All other Notes owned by me..... | none | |
| 5. Firearms ..... | none | |
| 6. Steam boats, Row boats and other Water Craft ..... | none | |
| 7. Patent rights ..... | none | |
| 8. Steam Engines, including boilers, included in #79 and other property.. | | |
| 9. Fire and Burglar Proof Safes..... | No. 1 | $30.00 |
| 10. Typewriting Machine ..... | No. 2 | 100.00 |
| 11. Adding Machines ..... | No. 3 | 450.00 |
| 12. Typesetting Machines ..... | none | |
| 13. All book accounts due me..... | | 10,000.00 |
| 14. Money on hand or on deposit with banks, trust companies, corporations, firms or individuals or subject to my order, check or draft..... | overdraft | |
| 15. All money loaned by me and not already entered on this schedule..... | none | |
| 16. All judgements and allowances in my favor in any court which I have not already entered on this schedule..... | none | |

| | | |
|---|---|---|
| 17. All money invested in certificates of purchase at Tax Sales | none | |
| 18. All money paid to Building, Loan and savings Associations on Certificates of Stock | none | |
| 19. All shared in stock of any corporation formed outside of this state and also all shares of stock in any corporation formed in this state and conducting its business outside of this state | none | |
| 20. Cash Registers | none | |
| 21. Pictures and Engravings | none | |
| 22. Telephones owned by me | none | |
| 23. Billiard, pigeonhole, Bagatelle, and other similar tables | none | |
| 24. Pianofortes | none | |
| 25. Organs and other musical instruments | none | |
| Forwarded | | $10,580.00 |
| 1653 Bro't forward | | $10,580.00 |
| 26. All goods, merchandise, manufactured articles on hand | | 3,103.00 |
| 27. Articles purchased, received, or otherwise held for the purpose of being made, in whole or in part, in any process or operation of manufacturing, rectifying, or refining | | 30,000.00 |
| 28. Manufacturing tools, implements, and machinery (other than engines and boilers which will be listed as such) | | 150.00 |
| 29. Agricultural tools, implements and machinery | none | |
| 30. Diamonds and other valuable stones owned by me or any member of my family | none | |
| 31. Household effects furniture and library. | none | |
| 32. Medical tools, Law and Medical books, Surgical instruments, Medicine | none | |
| 33. Automobiles | none | |
| 34. Scales No. 3. | | 300.00 |
| 35. Threshing Machines | none | |
| 36. Corn shellers No. 1 | | 20.00 |
| 37. Dogs owned or harbored by me | none | |
| 38. Improvements on leased lands | none | |
| 39. Value of interest in State lands under contract | none | |
| 40. All Nursery stock | none | |
| 41. Property such persons require to list as Pawn-Brokers | none | |

| | | | |
|---|---|---|---|
| 42. | All property of eating houses..... | none | |
| 43. | Harness and Saddles ..... | | 200.00 |
| 44. | Every Franchise and description (listed on separate schedule) ..... | | |
| 45. | Cream Separator ..... | none | |
| 46. | Sewing Machine and knitting machine.. | none | |
| 47. | Number of gold and silver watches and clocks ..... | none | |
| 48. | Carriages, Wagons, Coaches, Hacks, Carts, Drays, or other Vehicles.....No. 10 | | 300.00 |
| 49. | Bicycles, Tricycles, Velocipedes, Motorcycles and kind..... No. 1 | | 150.00 |
| 50. | Horses of all ages.....No. 13 | | 1,400.00 |
| 51. | Mules, jacks and jennies of all ages..... | none | |
| 52. | Cattle of all ages..... | none | |
| 53. | Sheep and Goats of all ages..... | none | |
| | Forwarded ..... | | $46,203.00 |
| 1654 | Bro't forward ..... | | $46,203.00 |
| 54. | Hogs of all ages, Average weight..... | none | |
| 55. | Stands of bees..... | none | |
| 56. | Bushels of wheat ..... | none | |
| 57. | Bushels of Corn ..... | none | |
| 58. | Bushels of Rye ..... | none | |
| 59. | Bushels of Oats ..... | none | |
| 60. | Bushels of Kaffir Corn ..... | none | |
| 61. | Bushels of Barley..... | none | |
| 62. | Bushels of Potatoes..... | none | |
| 63. | Bushels of Flax Seed..... | none | |
| 64. | Bushels of Grass, Alfalfa and Clover Seed. | none | |
| 65. | Tons of Hay and Alfalfa..... | none | |
| 66. | Tons of Broom Corn, hemp..... | none | |
| 67. | All Poultry on hand..... | none | |
| 68. | Stock in any company or Corporation.. | none | |
| 69. | Shares of Stock in National Bank..... | none | |
| 70. | Shares of Stock in State Bank..... | none | |
| 75. | Office fixtures, Furniture and equipment. | | 1,000.00 |
| 76. | Jewelry, Gold, Silver and Plated ware... | none | |
| 77. | Amount of Capital invested by Elevator men and Grain Brokers in such business. ..... | none | |
| 78. | Credits not otherwise listed..... | none | |
| 79. | Value of other property not listed Pipe and Pole Lines, etc..... | | 693,000.00 |
| 80. | Fifty percent penalty added for refusal to list ..... | none | |
| | Total actual value..... | | $740,203.00 |

1910 *Schedule of Personal Property.*

(Extracts and Deductions from Revenue Law.)

Sec. 15 (property exempt). The following property shall be exempt from taxes:

First. All property of the state, counties, and municipal corporations.

Second. Such other property as may be used exclusively for agricultural and horti cultural societies, for schools, religious, cemetery and charitable purposes. In the assessment of real estate, encumbered by a public easement, any depreciation occasioned by
1655 such easement shall be deducted in the valuation of such property. The increased value of lands by reason of live fences, forest trees grown and cultivated thereon, shall not be taken into account in the assessment thereof.

Sec. 28 (Personalty, by whom listed). Personal property shall be listed in the manner following:

First. Every person of full age and sound mind, being a resident of the state, shall list all his moneys, credits, bonds or stocks, shares of stock of joint stock or other companies when the capital stock of such company is not assessed in this state, moneys loaned or invested, annuities, franchises, royalties, and all other personal property.

Second. He shall also list all moneys and all other personal property invested, loaned or otherwise controlled by him as the agent or attorney or on account of any other person or persons, company, or corporation whatsoever, and all moneys deposited subjected to his order, check or draft, and credits due from any other person or persons, body corporate or public, whether in or out of the county.

Third. The property of a minor child shall be listed by his guardian; if he have no guardian, then by the father, if living; if not by the mother, if living, and if neither father nor mother be living; by the person having such property in charge.

Fourth. The property of any other person under guardianship, by his guardian; or if he has no guardian, by the person having charge of such property.

Fifth. The property of the wife, by her husband, if of sound mind; if not, by herself.

Sixth. The property of a person for whose benefit it is held in trust, by the trustee; of the estate of a deceased person, by the executor or administrator.

Seventh. The property of corporations whose assets are in the hands of receivers, by such receivers.

Eighth. The property of corporations, by the president or proper agent or officer thereof.

Ninth. The property of manufacturers and others in the hand of an agent, by and in the name of such agents, as merchandise.

Tenth. The property of firm or company, by a partner or agent thereof.

1656 Sec. 53. (Violation of acts as to listing.—Penalty.) If any person shall make a false or fraudulent list, schedule or statement, required by this act, or shall willfully fail or refuse to deliver to the assessor when called upon for that purpose, a list of the taxable property which under this act is required for that purpose, or shall temporarily convert any part of such property into property not taxable, for the fraudulent purpose of preventing such property from being listed and of evading the payment of taxes thereon, or shall transfer or transmit any property to any person with such intent, he shall be guilty of a misdemeanor and subject to a fine of not less than fifty dollars and not more than two thousand dollars. And if any person shall knowingly swear falsely regarding any matter contained in such schedule or interrogatories, he shall be deemed guilty of perjury and be punished accordingly.

Sec. 54. (Same.—Duty of State Board in Prosecutions.) It shall be the duty of the State Board of Equalization and Assessment, all county boards, county assessors and deputy assessors, to notify the county attorney of the proper county, of all willful violations of the provisions of this act known to them, and to sign and verify complaints and information with respect thereto when prepared by the county attorney.

Sec. 55. (Refusal to list.) In every case where any person refuse to make out and deliver to the proper deputy assessor the statement required under this act, or shall refuse to make and subscribe to any of the oaths or affirmations required, the deputy assessor shall proceed to ascertain the number of each description of the several enumerated articles of property and the value thereof; and such deputy shall make a note of such refusal in a column opposite the persons name, and the county assessor shall add to such valuation, when returned by the deputy assessor, fifty per centum of the value returned.

For exemption see section 13.

Sec. 52. (Interrogatories—Verifications.) Such schedule shall have attached the following interrogatories which the person required to list property shall answer in writing over his signature and under oath:

Interrogatory 1. Are you, or were you, on the first day of April of the present year, the executor of the last will, or the administrator of the estate of any deceased person, or the guardian of the estate of any infant or person of unsound mind, or the trustee of the property of any person, or the receiver of any corporation, association, or firm or the agent, attorney, or banker investing, loaning or otherwise controlling the money or the property of any person, or the president or accounting officer of any corporation, or a partner, consignee, or pawnbroker? If yes, designate for whom you were then, or now are, acting in such representative or fiduciary capacity, and if you were or now are acting under the authority of any particular court name the court and also state to what Court you report? Answer. No.

Interrogatory 2. Have you since the first day of April of last year, either personally or through the agency of others caused all or any part of your taxable property or other property to be temporarily

converted either by sale, loan or exchange, or in any other manner, into property not taxable, with the intentions to pay back, return, exchange or dispose of such property after you have made out your tax statement? Or did you on or before the first day of April of the present year, and before you saw this interrogatory, pay back, return, exchange, or dispose of any such property for the purpose aforesaid? Answer. No.

Interrogatory 3. If you have converted any of your property or money or property of any other person, as inquired of you, then state when same was so converted or invested, and the time and amount or value of it. Answer. No.

Interrogatory 4. Have you, at any time since the first day of April in the preceding year, withdrawn from any bank any moneys there deposited for the purpose of converting the same into some form of non-taxable property, or for the purpose of sending the same out of the state, or transferring the same to some other person or persons, with the intent to, or purpose of evading the payment of tax on the same? Answer. No.

1657 LINCOLN, NEBR., May 24, 1910.

I hereby certify that I have valued the property and franchise of the Lincoln Gas and Electric Light Co., at $1,184,250, setting aside $65,375 for real estate and assessed the remainder at $223,775 the same being apportioned as follows:

(Signed) D. R. C. MILLER,
*Co. Assessor.*

| | | | | |
|---|---|---|---|---|
| Havelock ..... | $1,000 | s/d | #137 | $1,000 |
| Uni Place ..... | 2,969 | | 87 | 2,960 |
| Lancaster R/D2. | 530 | | | |
| Lincoln .....219,285 | | | 1 | 219,815 |
| | $223,775 | | | $223,775 |

Public Utility Corporations.

(Street Railways, Waterworks, Electric Light and Gas Works, Natural Gass, Mining, and All Other Like Companies.)

April 15, 1910.

To Lincoln Gas and Electric Light Company:

Under Section 68, Chapter 77, Compiled Statutes, 1903, you are required, in addition to the other property required to be listed, to make out and deliver to the Deputy Assessor a sworn statement as per schedule attached for municipal taxation for 1910.

1. Name of Company, Lincoln Gas and Electric Light Company. Location 1323 G Street.
2. Capital Stock Authorized, $2,250,000.
   Number of shared 22,500.

3. Capital stock paid up $s,s50,000.
4. Market value of shares of stock—not known.
   Actual value of shares of stock—not know-.
5. The true value of franchise $60,000.
   Granted by City of Lincoln.
6. Total amount of indebtedness $1,129,600.
   Except for current expense, excluding from expenses the amount paid for purchase and improvement of property.
7. The amount of capital on which a dividend was declared 190 None.

8-9. The date and rate of each dividend declared during said year ending December 31, 190– None.

1658 10. The total amount of each dividend declared during the year ending December 31, 1909. None.

11. Gross earnings during said year $364,133.27.
12. Net earnings during said year $48,863.58.
13. Amount of surplus None.
14. Amount of profit added to sinking fund during said year—None.
15. Maximum price at which shares of stock sold during said year—not known.
16. Minimum price at which shares of stock sold during said year—not known.
17. Average price at which stock sold during said year—not known.

We, B. C. Adams and Harry Warner, officers having full knowledge of the finances and accounts of the said Company, being respectively General Manager and Secretary of the Lincoln Gas and Electric Light Company, being duly sworn, do say that the statements made above are true and correct.

(Signed) B. C. ADAMS.
HARRY WARNER.

Subscribed in my presence and sworn to before me thie day of 190–.

| | |
|---|---|
| Assessment of all Real Estate owned by the company..... | $57,200 |
| Assessment of all tangible Personal Property owned by the Company ..... | 740,203 |
| Pipe line to Havelock..... | 11,230 |
| Total ..... | 808,633 |
| Balance to be assessed as Franchise and Capital Stock.... | 60,000 |
| | 868,633 |

*Report of Gal Line Extending to Havelock and Uni. Place.*

4" Cast Iron Gas Main.

| | | |
|---|---|---|
| In the County: | | |
| 2,640 Ft. from 33rd to 40th streets on Holdrege | | $1,320.00 |
| In University Place: | | |
| From 40th street east on Holdrege to Warren Ave. | 2,640 | |
| North on Warren Ave. to 21st Street | 5,280 | |
| East on 21st street to Tonzalin Ave | 3,700 | |
| | 11,620 | $5,810.00 |
| In Havelock: | | |
| From 21st north on Tonzalin to Howard | 4,200 | |
| East on Howard to Forbes | 800 | |
| | 5,000 | $2,500.00 |
| 8,000 2" pipe in University Place | | $1,600.00 |

1659–1661 *Pipe Lines.*

April 15th, 1910.

To Lincoln Gas and Electric Light Company:

Under Section 82, Chapter 77, compiled Statutes of Nebraska, you are required to make out and deliber to the local Assessor a true and verified statement of all Personal Property within said assessing district owned by said Company, and also a true and verified statement of the gross receipts of business in said assessing district for the year next preceding the first day of April of the current year, for the purpose of assessment and taxation for the year 190–.

—— ——, *Assessor.*

*Statement.*

| | |
|---|---|
| Personal schedule attached | $11,230.00 |
| Gross receipts for the year representing Franchise valuation | none |
| Total personal | $11,230.00 |

I, Harry Warner solemnly swear that the foregoing statement is trus and correct and that the same may be verified by the books of the company.

(Signed) HARRY WARNER.

Subscribed in my presence and sworn to before me this day of 190–.

—— ——.

1662 *Copy of Report Filed with State Railway Commission Under Date of February 7th, 1913.*

| | |
|---|---|
| Used to purchase 333,000 Lincoln Gas Co. Bonds Sept. 1st, 1911 | $333,000.00 |
| Paid on bills payable up to August 22nd, 1911 | 108,000.00 |
| On deposit in banks | 44,000.00 |

1663 *Pecks Grove Property.*

| Date. | Description. | Cost. |
|---|---|---|
| Dec. 20, 1911. | Lots 1 to 6 incl. Blk. 2 Including house | $3,500.00 |
| Nov. 1, 1911. | Lots 7 to 15 incl. Blk. 2 | 1,000.00 |
| Apr. 29, 1912. | Lots 1 to 6 incl. Blk. 7 | 1,750.00 |
| March 6, 1912. | Lots 7 to 15 incl. Blk. 7 | 1,500.00 |
| | Total | $7,750.00 |

1664 Miscellaneous Earnings.

| | | |
|---|---|---|
| 1907. | Rent Receivable | $100.00 |
| 1908. | Rent Receivable | 16.00 |
| | Interest Receivable | 40.00 |
| | | $56.00 |
| 1909. | Rent Receivable | 45.12 |
| | Interest Receivable | 70.65 |
| | | $115.77 |
| 1910. | Rent Receivable | 60.00 |
| | Interest Receivable | 4.15 |
| | Dividend Traction Company stock | 45.00 |
| | | $109.15 |
| 1911. | Rent Receivable | 13.25 |
| | Traction Co. stock dividends | 60.00 |
| | Interest on notes | 107.03 |
| | Acme Amusement Co. stock dividends | 5.00 |
| | Interest on Henry L. Doherty Co. acct | 4,468.60 |
| | | $4,653.88 |
| 1912. | Rent Receivable | 138.70 |
| | Interest Receivable | 676.98 |

| | |
|---|---|
| Traction Co. stock dividends | 100.00 |
| Acme Amusement Co. stock dividends | 5.00 |
| Interest 5% bonds | 616.65 |
| Interest 6% bonds | 8,325.00 |
| Electric sign 13 & O | 125.00 |
| Miscellaneous earnings adjustment | R1,994.22 |
| Amount credited to net earnings | $7,993.11 |
| Amound charged as int. as above | 8,941.65 |
| Miscl. earnings for 1912.....Red | $948.54 |

Total Amount Credited to Net Earnings as Non-Operating Income from 1907 to 1912 Both Inclusive.

| | |
|---|---|
| Year 1907 | $100.00 |
| 1908 | 56.00 |
| 1909 | 115.77 |
| 1910 | 109.15 |
| 1911 | 4,653.88 |
| 1912 | R 948.54 |
| Total for 6 years | $4,086.26 |

1665 Gas Customers Outside Lincoln—Jan. 1st, 1913.

| | |
|---|---|
| University Place | 179 |
| Havelock | 112 |
| Outside city limits | 6 |
| Total | 297 |

Electric Customers Outside Lincoln—Jan. 1st, 1913.

| | |
|---|---|
| Havelock Elect. Lt. Co. | 1 |
| Klose Bros. | 1 |
| Gooch Mill | 1 |
| Fair Grounds | 1 |
| Country Club | 1 |
| Epworth Park | 1 |
| Small customers outside city limits | 2 |
| Total | 8 |

Electric Sales.

| | |
|---|---|
| Electric Gross Sales 1911 | $151,583.78 |
| " " " 1912 | 160,315.82 |

Gas Election Expense.

Dec. 28th, 1912. Total Expense..... $1,559.24

1666 & 1667 Western 6′ 6″ set ran from June 30, 1910
to Aug. 29 (flood) 1910 alone

from Aug. 6, 1911
to Sept. 10, 1911 alone

Ran mornings from
June 30, 1912) with old 7′ 6″ part
to Aug. 31, 1912) time every day and
part time every other
day.
Start new machine.

The old springer set ran off and on during the month of July, 1909.

1668 Lincoln Gas & Electric Light Company.

*Index.*


| | | | | |
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1669 Lincoln Gas & Electric Light Company.

*List of Books Used in Compiling Data Regarding Gas Construction Account.*

Journals:

A April 1872 to July 30, 1890, pages 1 to 385.
B June 1890 to Dec. 31, 1897, pages 1 to 410.
C Jan. 1, 1898 to Sept. 30, 1900, pages 1 to 106.
– Oct. 1, 1900 to Date (1913).

Cash Books:
A Jan. 1, 1873 to August 1890, pages 2 to 379.
B June 1890 to Dec. 31, 1897.
C Jan. 1, 1898 to Sept. 30, 1900.

Ledgers:
A Jan. 1, 1873 to August 1890.
B June 1890 to Dec. 31, 1897.
C Jan. 1, 1898 to Sept. 30, 1900.
– Oct. 1, 1900 to Nov. 30, 1901.
2 Dec. 1, 1901 to Dec. 31, 1905.
3 Jan. 1, 1906 to Dec. 31, 1908.
4 Jan, 1, 1909 to Dec. 31,1911.
5 Jan. 1, 1912 to Dec. 31, 1912.
6 Jan. 1, 1913 to April 1, 1913.

Voucher Records:
Oct. 1, 1900 to July 5, 1901.
Jan. 10, 1904 to Jan. 31, 1907.
Feb. 1, 1907 to Dec. 31, 1909.
Jan. 1, 1910 to Dec. 31, 1911.
Jan. 1, 1912 to Dec. 31, 1912.

Accounts Payable Record:
Sept. 1900 to July 13, 1901.
Dec. 1, 1901 to Jan. 10, 1903.

*Total Charged to Construction of Gas Plant, 1873 to 1912, Inclusive.*

| Year. | Reference for detail. | Amount chg'd each year. | Amount chg'd to end of year. |
|---|---|---|---|
| 1873. | U. S. Sup. Court Record, P. 498 | $54,247.32 | $54,247.32 |
| 1874. | " " 498 | 887.31 | 55,134.63 |
| 1875. | " " 498 | None | 55,134.63 |
| 1876. | " " 498 to 500 (Corrected) | 9,967.84 | 65,102.47 |
| 1877. | " " 500-501 | 3,371.55 | 68,474.02 |
| 1878. | " " 502-503 (Corrected) | 1,606.06 | 70,080.08 |
| 1879 & 1880. | " " 503 to 505 (Corrected) | 4,103.40 | 74,183.48 |
| 1881. | " " 505 | 1,318.42 | 75,501.90 |
| 1882. | " " 506 | 11,160.80 | 86,662.70 |
| 1883. | " " 506 | 1,177.98 | 87,840.68 |
| 1884. | " " 507-508 | 3,233.36 | 91,074.04 |
| 1885. | " " 508 to 510 | 7,609.33 | 98,683.37 |
| 1886. | " " 510 to 512 | 15,163.34 | 113,846.71 |
| 1887. | " " 512 to 514 | 12,390.47 | 126,237.18 |
| 1888. | " " 514 to 516 | 24,261.65 | 150,498.83 |
| 1889. | " " 516 & 517 | 9,650.72 | 160,149.55 |
| 1890. | " " 517 to 522 | 43,301.28 | 203,450.83 |
| 1891. | " " 523 to 530 & Corrections | 48,429.26 | 251,880.09 |
| 1892. | " " 530 to 540 | 71,284.59 | 323,164.68 |
| 1893. | " " 541 to 548 | 17,345.41 | 340,510.09 |
| 1894. | " " 548 to 553 | 6,534.89 | 347,044.98 |
| 1895. | " " 553 to 558 | 9,081.63 | 356,126.61 |
| 1896. | " " 558 to 562 | 5,327.06 | 361,453.67 |
| 1897. | " " 562 to 566 | 6,810.45 | 368,264.12 |

| | | | | |
|---|---|---|---|---|
| 1898. | " " | 566 to 570 | 6,427.28 | 374,691.40 |
| 1899. | " " | 570 to 573 | 11,480.62 | 386,172.02 |
| 1900 to Oct. 31 | " " | 574 to 577 & Corrections | 21,448.44 | 407,620.46 |
| 1901. Inc. Nov. & Dec. 1900 | | 577 & Exhibit (Corrected) | 30,805.54 | 438,426.00 |
| 1902. U. S. Sup. Court Record P. | | 578 & Exhibit (Corrected) | 55,871.82 | 494,297.82 |
| 1903. | " " | 578 & Exhibit | 23,664.67 | 517,962.49 |
| 1904. | " " | 578 " " | 20,359.09 | 538,321.58 |
| 1905. | " " | 578 & 9 " | 20,916.24 | 559,237.82 |
| 1906. | " " | 579 " " | 14,632.32 | 573,870.14 |
| 1907. | | Exhibit | 16,017.70 | 589,887.84 |
| 1908. | | " | 73,638.84 | 663,526.68 |
| 1909. | | " | 23,031.93 | 686,558.61 |
| 1910. | | " | 50,248.06 | 736,806.67 |
| 1911. | | " | 20,333.10 | 757,139.77 |
| 1912. | | " | 27,167.72 | 784,307.49 |

*Statement of Corrections Necessary in U. S. Supreme Court Record of Gas Construction Exhibit* 129, *Lincoln Gas & Electric Light Company vs. City of Lincoln et al.*

| Record page. | Item. | | Reads. | Should read. |
|---|---|---|---|---|
| 499 | Morris Tasker & Co. | | 2,417.15 | 2,417.50 |
| 500 | Labor, Trenches | | 100.00 | 130.00 |
| 500 | Yearly Total, 1876 | | 9,937.44 | 9,967.84 |
| 500 | Construction, A. Nichol | | 40.00 | 4.00 |
| 501 | D. & C. L. Baum | | 9.91 | .91 |
| 501 | Wm. Ashton | Omitted | | 20.92 |
| 502 | Fieldhouse Dutchen & B | | 49.85 | 799.85 |
| 502 | D. Kitchen | Omitted | | 4.50 |
| 503 | Yearly Total, 1878 | | 1,656.06 | 1,606.06 |
| 503 | National Tube Works | Duplication | 19.52 | Nil |
| 505 | Yearly Total, 1879 & 1880 | | 4,122.97 | 4,103.40 |
| 505 | Anderson Bros. | Duplication | 14.50 | Nil |
| 506 | Rotary Exhauster | | 7.75 | 775.00 |
| 507 | 4″ Pipe Cleveland | Omitted | | 1,207.77 |
| 508 | Dennis Long & Co. | | 392.90 | 352.90 |
| 510 | Sundries | | 250.00 | 250.60 |
| 511 | U. S. W. E. & P. Co. | Omitted | | 18.28 |
| 514 | Dennis Long & Co. | | 161.45 | 1,611.45 |
| 515 | George & Co. Iron Roof | | 42.65 | 42.85 |
| 516 | Hazelton Heater | Omitted | | 100.00 |
| 517 | Cooper & Cole Bros. | Omitted | | 78.78 |
| 520 | Wages to Men | | 137.65 | 317.65 |
| 521 | Stacey Contract | | 1,263.00 | 12,630.00 |

| | | | | |
|---|---|---|---|---|
| 521 | B. & M. Fence Paste | | 35.63 | 35.53 |
| 526 | Items omitted per list (2 Sheets) | Omitted | | 18,356.65 |
| 531 | Henry Youney | Omitted | | 30.00 |
| 532 | Weekley Wages to men | | 26.80 | 82.80 |
| 534 | Stone Masons | | 371.45 | 37.45 |
| 535 | Humphrey Bros. | | 3.15 | 2.15 |
| 535 | Jartner & Shaffer | | 2.00 | 2.10 |
| 537 | Frt. on Car pipe | Duplication | 19.75 | Nil |
| 537 | Cram, Cartage | Omitted | | .50 |
| 538 | Youney & Seaghman | Omitted | | 52.50 |
| 538 | American Meter Co. | | 162.00 | 43.20 |
| 538 | D. McDonald & Co. | Omitted | | 162.00 |
| 544 | A. J. Kaufman | Amounts ) | 27.50 | 3.75 |
| 544 | Wm. Seighman | Transposed) | 3.75 | 27.50 |
| 545 | Wm. Seighman | | 27.20 | 27.50 |
| 550 | John Schultz | Omitted | | 11.20 |
| 550 | Weekly Wages to men | Omitted | | 156.90 |
| 550 | Shaffer, Cartage | Omitted | | .75 |
| 553 | Wm. Seighman | | 31.95 | 27.50 |
| 553 | Weekly Wages to men | Omitted | | 31.95 |
| 556 | Cooper & Cole Bros. | | 32.54 | 32.57 |
| 559 | Whitebreast, fire brick | | 40.40 | 40.50 |
| 1672 | | | | |
| 560 | Cooper & Cole Bros. | | 29.16 | 129.16 |
| 561 | W. D. Sieghman | | 25.25 | 26.25 |
| 569 | Transfer Co. | | 3.75 | 4.00 |
| 569 | Young & Humphreys | Omitted | | 3.75 |
| 571 | Weekly Wages to men | | 63.85 | 62.85 |
| 574 | Western Supply Co. | Omitted | | .35 |

| Record page. | Item. | | Reads. | Should read. |
|---|---|---|---|---|
| 574 | Humphrey Bros. | | 10.95 | 10.75 |
| 575 | Weekly Wages to men | | 4.50 | 166.50 |
| 575 | Frt. on Meters | Omitted | | 4.50 |
| 575 | Cooper & Cole Bros. | | 387.97 | 378.97 |
| 577 | Weekly Wages to men | | 549.40 | 539.40 |
| 577 | October, 1900 items | Omitted | | 4,313.79 |
| 577 | Yearly Total, 1900 | | 22,538.31 | 21,448.44 |
| 577 | Yearly total, 1901 | On account of duplication | 53,343.85 | 30,805.54 |
| 578 | Fuel Connections | | 1,125.35 | 1,125.33 |
| 578 | New Blower, 1904 | | 677.76 | 697.76 |
| 578 | Yearly Total, 1902 | | 55,424.53 | |
| | Items omitted: | | | |
| | Gas Works, Leg. 2 P. 50 | 125.55 | | |
| | New Scrubber, " 2 " 60 | 279.72 | | |
| | New Condenser, " 2 " 63 | 42.02 | | |
| | | 447.29 | | 55,871.82 |

1673 Lincoln Gas and Electric Light Company.

*Items of Gas Construction Account Omitted from Printed Record for the Year* 1891, *Page* 526 *of U. S. Supreme Court Record.*

| | |
|---|---|
| Swanson & Brush | 5.50 |
| Wages to Men | 43.65 |
| J. H. Harley | 7.86 |
| Freight, #20484–10819, Pipe | 81.05 |
| Henry Youncy | 30.00 |
| Cooper & Cole Bros. | 148.41 |
| Freight, #2465, Pipe | 39.28 |
| Wages to Men | 10.80 |
| Dean & Horton | 37.05 |
| Trumbull, Oil Tank | 250.00 |
| Weekly wages to men | 472.11 |
| Wilson & Souchman | 1.00 |
| Express on Sungren Globes | 2.50 |
| Tile, Shickle, H. & H. I. Co | 1.05 |
| Lawlor (S. J. A.) | 10.00 |
| Shickle, H. & H. I. Co., on Account | 6,000.00 |
| Wages to Men | 21.60 |
| Freight on Pig lead | 15.12 |
| Wages to Men | 49.10 |
| Weekly wages to men | 429.90 |
| Carveth, cartage | .50 |
| Eck | .35 |
| Freight on 3 pieces 12″ pipe | 8.04 |
| Dimes 1.05, Coal Bill 1.70 | 2.75 |
| Omaha Pig Lead | 410.72 |
| J. Kitchen | 3.60 |
| Youncy $30.00; Seaghman $25.00 | 55.00 |
| Weekly wages to men | 378.41 |
| Wilder & Miller | 2.45 |
| Wages to men | 5.00 |
| Seeley & Parks | 3.95 |
| F. Koncer | 3.30 |
| Weekly wages to men | 360.95 |
| Express on rubber bags | .45 |
| Stoph & Regat | 4.85 |
| D. E. Thompson, wagon | 40.00 |
| Freight on 3 cars pipe | 145.38 |
| " " 1 " " | 49.62 |
| Wages to men | 9.60 |
| Barrett, Cartage 75¢; Freight on meters $4.20 | 4.95 |
| Car Tickets 60¢; Kurner $4.35 | 4.95 |
| Call $1.20; A. Rose 50¢ | 1.70 |
| State Journal Co. | 3.00 |
| Paid by C. W. Mosher | 50.00 |
| Rudge & Morris | 1.98 |

| | |
|---|---|
| Shilling $4.00; Hooker & O. $1.50 | 5.50 |
| Wages to men let off | 132.40 |
| Youncy & Seaghman | 55.00 |
| Cooper & Cole Bros. | 223.41 |
| Dean & Horton | 69.20 |

1674 Lincoln Gas and Electric Light Company.

*Items of Gas Construction Account Omitted from Printed Record for Year 1891, Page 526 of U. S. Supreme Court Record.*

| | |
|---|---|
| Weekly wages to men | 240.75 |
| Freight on Solder | .60 |
| Wages to men laid off | 29.72 |
| S. K. Martin | .20 |
| Wages to men | 55.20 |
| J. J. Griffin & Co. | 162.00 |
| Shickle, Harris & H. | 7,283.67 |
| Siemens, Langam Co. | 3.10 |
| Wages to men | 84.27 |
| Weekly wages to men | 258.90 |
| Swanson, Beth & Boak | 9.50 |
| Brush & Dydbro | 5.45 |
| Shankling, Peterson & Doland | 10.75 |
| Fagen & Ross | 2.90 |
| Kitchen & Hedges | 7.10 |
| Weekly wages to men | 256.50 |
| Younghey & Seaghman | 55.00 |
| Seeley, Miller & Car tickets | 6.60 |
| Wages to men quit | 5.25 |
| Freight on lead pipe | 1.90 |
| Freight car #18934, Pipe | 52.75 |
| " on pig lead and meters | 13.28 |
| S. Carveth | .75 |
| Weekly wages to men | 116.22 |
| Express on rubber bags | .30 |
| Engineer's permit | 1.00 |
| Total | 18,356.65 |

1675 Lincoln Gas & Electric Light Company.

1900 *Gas Construction Accounts.*

(Ledger Oct. 1, 1900, to Nov. 30, 1901) Page 702.

Debits.

| | | | | |
|---|---|---|---|---|
| Oct. | 2. | Pay Roll | 2 | 140.00 |
| | 8. | Kerr, Murray Mfg. Co. | 2 | 1,500.00 |
| | 9. | C. A. Adams | 4 | 18.80 |

| | | | | |
|---|---|---|---|---|
| 9. | R. S. Young | 4 | 44.20 | |
| 9. | G. N. Follmer | 4 | 11.85 | |
| 9. | —— —— | 4 | 437.97 | |
| 10. | Cooper & Cole | 5 | 1,352.82 | |
| 11. | D. McDonald & Co | 5 | 693.00 | |
| 11. | Pay Roll | 6 | 75.80 | |
| 15. | Wyckoff, S. & Benedict | 6 | 30.00 | |
| 15. | Pay Roll | 7 | 4.80 | |
| 31. | —— —— | 7 | 1,500.00 | |
| 31. | G. N. Follmer | 8 | 17.60 | |
| | | | 5,826.84 | |

Credits.

| | | | | |
|---|---|---|---|---|
| Oct. 8. | —— —— | 170 | 1,500.00 | |
| 31. | —— —— | 7 | 13.05 | |
| | | | 1,513.05 | 4,313.79 |

1900 *Construction.*

| | |
|---|---|
| The items on pages 574-575-576 & 577 U. S. Supreme Court Record aggregate (less credits) | 17,134.65 |
| On page 702 Ledger (no number) appear certain postings charged to Gas Construction in October 1900 aggregating (less credits) | 4,313.79 |
| Making the total charges | 21,448.44 |
| The total carried at the close of 1900 in U. S. S. C. Record is | 22,538.31 |
| Amount in excess of items | 1,089.87 |
| This is explained by the fact that the amount brought forward into Ledger (Oct. 1, 1900, to Nov. 30, 1901), page 702, Oct. 1, 1900, is | 18,224.52 |
| While the amount actually charged to Construction from Jan. 1, to Oct. 1 (less credits) as per Ledger C was only | 17,134.65 |
| Difference | 1,089.87 |

Lincoln Gas & Electric Light Company.

1901 *Gas Construction Accounts.*



Ledger Oct. 1, 1900, to Nov. 30, 1901.

| Ledger page. | Accounts. | Date. | Closed to— | | Includes 1900 const. | Correct am't. 1901. |
|---|---|---|---|---|---|---|
| 87. | Improvements..... | Oct. 31, 1900, to Sept. 30, 1901, per List. | P. & F. | 1,945.17 | 427.50 | 1,517.67 |
| | | | | | (74.87) | |
| 82. | Meters & Conn..... | Dec. 17, 1900, to Nov. 30, 1901..... | P. & F. | 7,731.56 | (2,558.56) | 5,098.13 |
| 80. | New Services..... | Nov. 10, 1900, to Nov. 30, 1901..... | P. & F. | 17,311.20 | 10,054.63 | 7,256.57 |
| 78. | New Mains..... | Jan. 1, 1901, to Nov. 30, 1901..... | P. & F. | 12,187.31 | 7,922.75 | 4,264.56 |
| 200. | Gas Works..... | Jan. 1, 1901, to Nov. 30, 1901..... | P. & F. | 3.73 | ..... | 3.73 |
| 201. | Purifying Box..... | Oct. 31, 1900, to Oct. 31, 1901..... | Works | 2,661.15 | 1,100.00 | 1,561.15 |
| 202. | Office F. & F..... | Jan., 1901, to Nov. 30, 1901..... | P. & F. | 120.00 | ..... | 120.00 |
| 203. | New Benches..... | Oct. 31, 1900, to Nov. 30, 1901..... | P. & F. | 6,278.80 | 400.00 | 5,878.80 |
| 204. | Bristol Gauge..... | Oct. 31, 1900, to Nov. 30, 1901..... | P. & F. | 54.00 | ..... | 54.00 |
| 205. | Extension Bld..... | Oct. 31, 1900, to Oct. 31, 1901..... | Works | 865.05 | ..... | 865.05 |
| 207. | Scales..... | Oct. 31, 1900, to Oct. 31, 1901..... | Works | 545.21 | ..... | 545.21 |
| 209. | Tar Well..... | Jan., 1901, to Oct. 31, 1901..... | Works | 73.70 | ..... | 73.70 |
| 211. | New Scrubber..... | Jan., 1901, to Nov. 30, 1901..... | P. & F. | 1,914.76 | ..... | 1,914.76 |
| 213. | New Blower..... | Feb., 1901, to Oct. 31, 1901..... | Works | 120.64 | ..... | 120.64 |
| 215. | New Condenser..... | Feb., 1901, to Oct. 31, 1901..... | Works | 790.70 | ..... | 790.70 |
| 217. | Water Pipe..... | Mch., 1901, to Oct. 31, 1901..... | Works | 26.08 | ..... | 26.08 |
| 218. | New Well..... | May, 1901, to Nov. 30, 1901..... | P. & F. | 708.44 | ..... | 708.44 |
| 219. | Photometer..... | June, 1901, to Oct. 31, 1901..... | Works | 6.35 | ..... | 6.35 |
| | | | | 53,343.85 | 22,538.31 | 30,805.54 |

1902 *Gas Construction Accounts, Ledger No. 2.*

| Ledger page. | Accounts. | Date. | Closed to— | Amount. |
|---|---|---|---|---|
| 50. | Gas Works | Dec. 1, 1901, to Sept. 30, 1902 | Plant | 125.55 |
| 51–107. | Street Mains | " " Dec. 31, 1902 | Works | 23,954.47 |
| 52–108. | Service Pipes | " " " | " | 15,672.61 |
| 53. | Meters & Conn | " " " | " | 6,811.22 |
| 60. | New Scrubber | " " Mch. 31, 1902 | Plant | 279.72 |
| 63. | New Water Gas Set | Jan. 1, '02 " Dec. 31, 1902 | Works | 7,466.57 |
| 63. | New Condenser | Jan., 1902 | Plant | 42.02 |
| 101. | Station Meter | Sept., 1902 | Works | 5.75 |
| 101. | Gas Works Wiring Suspense | Nov. 1, 1902, to Dec. 31, 1902 | Works | 84.83 |
| 123. | New Tar Well | " " " | " | 193.28 |
| 106. | Coke Screen Suspense | Dec., 1902 | Works | 110.47 |
| 15–98. | Fuel Appliance Connections | Dec. 1, 1901, to Dec. 31, 1902 | Works | 1,125.33 |
| | | | | 55,871.82 |

Above does not include $44.13 Street Lamps charged to Works Account.

1903 *Gas Construction Account, Ledger No. 2.*

| | | | | |
|---|---|---|---|---|
| 50. | Gas Works | Oct., 1903 | Plant | 65.00 |
| 53. | Meters & Conn | Jan. 1 to Dec. 31, 1903 | Works | 6,311.03 |
| 61. | Office F. & F | Jan. 1 to Dec. 31, 1903 | Works | 1,466.18 |
| 62 | New Store Room | Nov. & Dec. 1902 | Works | 380.49 |
| 96. | Foul Main | Feb., 1903 | " | 23.39 |
| 96. | New Wells Repr | Feb. & Mch., 1903 | " | 42.75 |

| Ledger page. | Accounts. | Date. | Closed to— | Amount. |
|---|---|---|---|---|
| 101. | Gas Works Wiring | Jan. 1 to Dec. 31, 1903 | " | 10.09 |
| 107. | Street Mains | Jan. 1 to Dec. 31, 1903 | " | 5,619.78 |
| 108. | Service Pipes | Jan. 1 to Dec. 31, 1903 | " | 8,979.50 |
| 123. | New Tar Well | " " " | " | 255.37 |
| 97. | Domestic App'l Connection | Oct. & Nov., 1903 | Acct. Pay | 511.09 |
| | | | | 23,664.67 |

Above does not include $10,429.13 Street Lamps Charged to Works Account.

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Lincoln Gas & Electric Light Company.

1904 *Gas Construction Accounts, Ledger No. 2.*

| Ledger page. | Accounts. | Date. | Closed to— | Amount. |
|---|---|---|---|---|
| 50. | Gas Works | Jan. 1 to Dec. 31, 1904 | Plant | 1,895.64 |
| 53. | Meters & Conn | " " " | " | 4,957.62 |
| 61. | Office F. & F | " " " | " | 269.57 |
| 101. | Gas Works Wiring Suspense | " " " | " | 49.31 |
| 337. | Street Mains | " " " | " | 4,198.09 |
| 338. | Service Pipes | " " " | " | 7,874.45 |
| 551. | New Sewer | Nov. & Dec., 1904 | " | 272.72 |
| 552. | New Blower | " " " | " | 697.76 |
| 553. | Economizer | Dec., 1904 | " | 143.93 |
| | | | | 20,359.09 |

Above does not include $25.61 Street Lamps charged to Works Account.

1905 *Gas Construction Accounts, Ledger No. 2.*

| | | | | | | |
|---|---|---|---|---|---|---|
| 50. | Gas Works | Jan. 1 to Dec. 31, 1905 | | Plant | | 1,569.70 |
| 53. | Meters & Conn | " | " | " | " | 241.42 |
| 61. | Office F. & F | " | " | " | " | 305.39 |
| 101. | Gas Works Wiring Suspense | " | " | " | " | 70.87 |
| 337. | Street Mains | " | " | " | " | 8,524.30 |
| 338. | Service Pipes | " | " | " | " | 8,042.30 |
| 552. | New Blower | " | " | " | " | 433.46 |
| 553. | Economizer | " | " | " | " | 1,033.57 |
| 559. | Coke Chutes | " | " June 30, 1905 | | " | 695.23 |
| | | | | | | 20,916.24 |

Above does not include $49.50 Street Lamps charged to Works Account.

1906 *Gas Construction Accounts, Ledger No. 3.*

| Ledger page. | Accounts. | Date. | | Closed to— | Amount. |
|---|---|---|---|---|---|
| 280. | Gas Works | Jan. 1 to Dec. 31, 1906 | | Plant | 2,556.57 |
| 282. | Street Mains | " | " | " | 6,341.56 |
| 284. | Services | " | " | " | 4,866.26 |
| 288. | Office F. & F | " | " | " | 321.50 |
| 300. | Gas Meters | Oct. 1 | " | " | 546.43 |
| | | | | | 14,632.32 |

1679 Lincoln Gas & Electric Light Company.

1907 *Gas Construction Accounts, Ledger No.* 3.

| Ledger page. | Accounts. | Closed to— | Amount. |
|---|---|---|---|
| 281. | Gas Works | Plant | 717.72 |
| 283. | Street Mains | " | 4,145.74 |
| 285. | Services | " | 6,469.50 |
| 289. | Office Furniture & Fixtures | " | 1,064.28 |
| 300. | Gas Meters | " | 3,620.46 |
| | Total for 1907 | | 16,017.70 |

1908 *Gas Construction Accounts, Ledger No.* 3.

| | | | |
|---|---|---|---|
| 594. | Gas Works | Plant | 63,060.52 |
| 287. | Street Mains | " | 2,972.95 |
| 286. | Services | " | 3,346.06 |
| 289. | Office Furniture & Fixtures | " | 526.21 |
| 301. | Gas Meters | " | 3,733.10 |
| | Total for 1908 | | 73,638.84 |

1909 *Gas Construction Accounts, Ledger No.* 4.

| | | | |
|---|---|---|---|
| 4. | Gas Works | Plant | 12,061.01 |
| 7. | Street Mains | " | 6,584.92 |
| 15. | Gas Meters | " | 4,228.25 |
| 19. | Office Furniture & Equip | " | 249.77 |
| | Total for 1909 | | 23,123.95 |
| 11. | Services (Credit) | Plant | 92.02 |
| | Net amount for 1909 | | 23,031.93 |

1910 *Gas Construction Accounts, Ledger No.* 4.

| | | | |
|---|---|---|---|
| 6. | Gas Works | Plant | 33,992.95 |
| 8. | Street Mains | " | 13,148.90 |
| 12. | Services | " | 393.10 |
| 16. | Gas Meters | " | 2,304.34 |
| 20. | Office Furniture & Equip | " | 408.77 |
| | Total for 1910 | | 50,248.06 |

1680 Lincoln Gas & Electric Light Company.

1911 *Gas Construction Accounts, Ledger No.* 4.

| Ledger page. | Accounts. | Closed to— | Amount. |
|---|---|---|---|
| 21. | Gas Works | Plant | 8,149.20 |
| 9. | Street Mains | " | 9,559.20 |
| 13. | Services | " | 1,643.75 |
| 16. | Gas Meters | " | 574.46 |
| 20. | Office Furniture & Fixtures | " | 406.49 |
| | Total for 1911 | | 20,333.10 |

1912 *Gas Construction Accounts, Ledger No.* 5.

| | | | |
|---|---|---|---|
| 5. | Gas Works | Plant | 11,218.43 |
| 10. | *Street Mains | " | 7,585.67 |
| 14. | Services | " | 271.81 |
| 18. | Gas Meters | " | 958.76 |
| 22. | Office Furniture & Fixtures | " | 7,133.05 |
| | Total for 1912 | | 27,167.72 |

* $267.45 should have been charged to Gas Works Account.

*Items Charged to Gas Works Construction Account Year* 1901. *Ledger, Oct.* 1, 1900 *to Nov.* 30, 1901.

| | | | | | | |
|---|---|---|---|---|---|---|
| Gas Construction Improvements; Page 87: | | | | | | |
| Jan. | 1. | Brought forward from 1900 | .... | ..... | 745.20 | |
| " | 31. | Cooper & Cole Bros. | Vo. 555 | 67 | 2.08 | |
| " | 31. | Searle & Chapin | " 559 | 68 | 16.74 | |
| " | 31. | Hardy Furniture | " 565 | 68 | 1.50 | |
| M'ch | 19. | | | 10 | .38 | |
| " | 28. | | | 11 | 2.00 | |
| " | 31. | | | 12 | 6.60 | |
| " | 31. | | | 19 | 7.00 | |
| Apr. | 30. | Cash | | 20 | 31.84 | |
| May | 31. | General Stock | | 29 | 174.11 | |
| " | 31. | Cash | | 105 | 17.23 | |
| June | 30. | Cash | | 37 | 340.68 | |
| July | 31. | General Stock | | 44 | 95.22 | |
| " | 31. | Cash | | 124 | 3.74 | |
| Aug. | 31. | " | | 52 | 294.44 | |
| Sept. | 30. | " | | 59 | 164.62 | |
| " | 30. | General Stock | | 66 | 40.89 | |
| | | | | 148 | .90 | |
| | | Total charged to Gas Constr. Improvements | | .... | ..... | 1,945.17 |
| New Scrubber; Ledger Page 211: | | | | | | |
| Jan. | 31. | | | 69 | 13.97 | |
| Apr. | 30. | Cash | | 29 | 7.50 | |
| May | 31. | Cash | | 37 | 14.25 | |

| | | | | |
|---|---|---|---|---|
| July 31. " | | 52 | 193.40 | |
| Aug. 31. " | | 52 | 144.80 | |
| Aug. 31. New Mains | | 129 | 417.28 | |
| Sept. 30. Cash | | 66 | 525.42 | |
| Oct. 31. " | | 69 | 127.00 | |
| " 31. B. P. | | 159 | 222.20 | |
| Nov. 30. Cash | | 76 | 115.81 | |
| " 30. A. P. | | 179 | 133.13 | |
| Total charged to New Scrubber, year 1901 | .... | ..... | | 1,914.76 |
| New Blower; Ledger Page 213: | | | | |
| Feb. 28. | | 5 | 67.50 | |
| " 28. | | 7 | 9.99 | |
| M'ch 11. | | 9 | 4.90 | |
| Apr. 30. Cash | | 29 | 26.25 | |
| May 31. " | | 37 | 12.00 | |
| Total charged to New Blower, year 1901 | .... | ..... | | 120.64 |
| New Condenser; Ledger Page 215: | | | | |
| Feb. 28. | | 5 | 425.00 | |
| M'ch 31. | | 12 | 80.65 | |
| " 31. | | 18 | 9.20 | |
| Apr. 30. Cash | | 29 | 270.60 | |
| June 30. " | | 44 | 5.25 | |
| Total charged to New Condenser, year 1901 | .... | ..... | | 790.70 |

Detail not found in items left blank.

*Items Charged to Gas Works Construction Account Year* 1901. *Ledger, Oct.* 1, 1900 *to Nov.* 30, 1901.

| | | | | |
|---|---|---|---|---|
| New Well; Ledger Page 218: | | | | |
| May 31. Cash | | 37 | 310.56 | |
| " 31. " | | 37 | 150.30 | |
| June 30. " | | 44 | 3.00 | |
| July 31. " | | 52 | 21.00 | |
| Aug. 31. " | | 59 | 107.90 | |
| Sept. 30. " | | 66 | 107.51 | |
| Oct. 31. P. B. | | 159 | 8.17 | |
| Total charged to New Well, year 1901 | | .... | .... | 708.44 |
| Water Pipe; Ledger page 217: | | | | |
| M'ch 31. | | 12 | 9.30 | |
| " 31. | | 20 | 16.78 | |
| Total charged to Water Pipe, year 1901 | | .... | ..... | 26.08 |
| Photometer; Ledger Pager 219: | | | | |
| June 30. Cash | | 44 | 6.35 | 6.35 |
| Gas Works; Ledger Page 200: | | | | |
| Oct. 31. B. P. | | 159 | 3.73 | 3.73 |
| Purifying Box; Ledger page 201: | | | | |
| Jan. 16. Brought forward from 1900 | | 57 | 1,100.00 | |
| " 16. " " " 1900 | | 50 | 1,561.15 | |
| Total charged to Purifying Box, year 1901 | | .... | ..... | 2,661.15 |

| | | | | |
|---|---|---|---|---|
| New Benches; Ledger page 203: | | | | |
| Jan. 16. Brought forward from 1900 | 50 | 621.25 | | |
| " 16. Missouri Fire Brick Co | 51 | 2,500.00 | | |
| " 18. From 1900 Construction | 57 | 400.00 | | |
| " 31. Missouri Fire Brick Co | 65 | 2,707.75 | | |
| " 31. C. E. Hedges | .... | 49.80 | | |
| Total charged to New Benches, year 1901 | .... | ..... | | 6,278.80 |
| Bristol Gauge; Ledger page 204: | | | | |
| Oct. 31. B. P. | 159 | 54.00 | | 54.00 |
| Extension Building; Ledger page 205: | | | | |
| Jan. 16. Brought forward from 1900 | 50 | 848.85 | | |
| " 31. | 61 | 12.00 | | |
| " 31. | 63 | 4.20 | | |
| Total charged to Extension Building, year 1901 | .... | ..... | | 865.05 |

Detail not found in items left blank.

1683 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account Year* 1901. *Ledger, Oct.,* 1, 1900 *to Nov.* 30, 1901.

| | | | | |
|---|---|---|---|---|
| Scale; Ledger page 207: | | | | |
| Jan. 16. Brought forward from 1900 | 50 | 545.21 | | 545.21 |
| Tar Well; Ledger page 209: | | | | |
| Jan. 31. | 67 | 31.85 | | |
| Apr. 30. Cash | 29 | 41.85 | | |
| Total charged to Tar Well, year 1901 | .... | ..... | | 73.70 |
| Total charged to Gas Works, year 1901 | .... | ..... | | 15,993.78 |

*Items Charged to Gas Works Construction Account Year* 1902. *Ledger No.* 2.

**Charged to Gas Works; Closed to Plant; Ledger page 50:**

| | | | | | | |
|---|---|---|---|---|---|---|
| 1901. | | | | | | |
| Dec. | —. | P. H. & F. M. Roots Co. | Exhauster | 4 | 75.90 | |
| 1902. | | | | | | |
| Jan. | 31. | Pay Roll | | .... | 3.30 | |
| " | " | R. L. Smith | Repairs | 6 | 4.75 | |
| " | " | Cooper & Cole Bros. | Pipe & Fit. | 6 | 6.63 | |
| Feb. | 28. | Lincoln Hdw. Co. | Mdse. | 9 | 12.00 | |
| " | " | R. L. Smith | Mach. & Rep. | 9 | 4.45 | |
| Aug. | 31. | Rudge & Guenzel | Sundries | 27 | 1.05 | |
| Sep. | 30. | F. W. Brown Lbr. Co. | Lumber | 30 | 3.97 | |
| " | " | Hancock Inspirator Co. | Inspirator | 30 | 13.50 | |
| | | Total charged to Gas Works | | .... | ..... | 125.55 |

Above not included in Supreme Court Record.

**Charged to New Scrubber; Closed to Works; Ledger page 60:**

| | | | | | | |
|---|---|---|---|---|---|---|
| 1901. | | | | | | |
| Dec. | 31. | Dierks Lbr. Co. | Lumber | 4 | 9.03 | |
| " | | R. S. Young Bld. Supply Co. | Sand, cement | 4 | 4.00 | |
| " | | Rudge & Guenzel Co. | Mdse. | 4 | .90 | |
| " | | Lincoln Pt. & Color Co. | Sundries | 4 | 7.88 | |
| " | | Cooper & Cole Bros. | Mdse. | 4 | 33.24 | |
| " | | Pay Roll | | 1 | 199.43 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1902. | | | | | | |
| Jan. | 31. | Pay Roll | | 2 | 7.15 | |
| " | | Rudge & Guenzel Co. | Mdse. | 6 | .40 | |
| " | | R. S. Young Bld. Sup. Co | Sand, cement | 6 | 6.50 | |
| " | | Cooper & Cole Bros. | Pipes, Fittings | 6 | 2.24 | |
| " | | Wire & Misc. Elec. Stock | | 224 | 2.40 | |
| M'ch. | 31. | F. W. Brown Lbr. Co. | Lumber | 12 | 6.55 | |
| | | Total charged to New Scrubber | | .... | ..... | 279.72 |

Above not included in Supreme Court Record.

Charged to New Water Gas Set; Closed to Works; Ledger page 63:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1902. | | | | | | |
| Jan. | 31. | Pay Roll | | 2 | 8.95 | |
| Feb. | 28. | Tom Radfore | Labor, Material | 9 | 79.75 | |
| " | | Pay Roll | | 3 | 170.75 | |
| M'ch | 31. | Western Gas Const. Co. | Advanced | 12 | 3,397.01 | |
| " | | " " " " | " | 12 | 536.67 | |
| " | | Pay Roll | | 4 | 47.07 | |
| Apr. | 30. | N. Westover & Co. | Contract | 15 | 413.00 | |
| " | | Cooper & Cole Bros. | Sundries | 15 | 1.81 | |
| " | | Ray Roll | | 5 | 22.10 | |
| May | 31. | " " | | 6 | 50.33 | |
| " | | F. W. Brown Lbr. Co. | Lumber | 18 | 3.34 | |
| " | | R. S. Young Bld. Sup. Co. | Sand, cement | " | 10.00 | |
| " | | Lincoln Sash & Door Mfg. Co. | Mdse. | .... | .50 | |
| " | | Tower Elec. Co. | Mdse. & wiring | " | 27.13 | |

*Items Charged to Gas Works Construction Account Year* 1902. *Ledger No.* 2.

| | | | | | |
|---|---|---|---|---|---|
| May 31. | Dierks Lbr. & Coal Co. | Cement & lime | 18 | 13.75 | |
| " | Lincoln Hdw. Co | Mdse. | 18 | 33.25 | |
| " | Cooper & Cole Bros | " | " | 7.47 | |
| June 30. | Western Gas Const. Co | New W. G. Set | 21 | 2,466.13 | |
| " | Lincoln Trans. Co | Frt. & Crtg | " | 16.25 | |
| " | N. Westover & Co | Beams, etc. | " | 134.71 | |
| " | Western Gas Const. Co | | " | 18.00 | |
| " | Rudge & Guenzel | | " | 8.60 | |
| | Total charged to New Water Gas Set | | .... | ..... | 7,466.57 |

Charged to New Condenser; Closed to Plant; Ledger page 63:

| | | | | | |
|---|---|---|---|---|---|
| 1902. | | | | | |
| Jan. 31. | Pay Roll | | 2 | 42.02 | 42.02 |

Above not included in Supreme Court Record.

Charged to Station Meter; Closed to Works; Ledger page 101:

| | | | | | |
|---|---|---|---|---|---|
| 1902. | | | | | |
| Sept. 30. | Accounts Payable | | .... | 5.75 | 5.75 |

Charged to Gas Works Wiring Suspense; Closed to Works; Ledger P. 101:

| | | | | | |
|---|---|---|---|---|---|
| 1902. | | | | | |
| Nov. 30. | Wire & Misc. Elec. Stock | | 332 | 33.35 | |
| " | Pole Stock | | " | 3.40 | |
| Dec. 31. | Pay Roll | | 13 | 36.18 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| " | Ross Elect. Co. | Sundries | | 39 | 2.41 | |
| " | Lincoln Hdw. Co. | " | | 39 | .50 | |
| " | I. & C. Lamp Stock | | | 344 | 6.68 | |
| " | No. 168 | | | 344 | 2.31 | |
| | Total charged to Gas Works wiring Suspense | | | .... | ..... | 84.83 |

Charged to Coke Screen Suspense; Closed to Works; Ledger P. 106:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1902. | | | | | | |
| Dec. 31. | Pay Roll | | | 13 | 45.46 | |
| " | F. W. Brown Lbr. Co. | Lumber | | 39 | 4.78 | |
| " | C. A. Adams Mach. Wks. | Repairs | | " | 18.70 | |
| " | R. L. Smith " " | Bolts, Pulleys, etc. | | " | 4.45 | |
| " | Ross Elect. Co. | Sundries | | " | .70 | |
| " | Lincoln Hdw. Co. | " | | " | 36.38 | |
| | Total charged to Coke Screen Suspense | | | .... | ..... | 110.47 |

Charged to New Tar Well; Closed to Works; Ledger Page 123:

| | | | | | | |
|---|---|---|---|---|---|---|
| 1902. | | | | | | |
| Nov. 30. | Pay Roll | | | 12 | 19.50 | |
| " | R. S. Young Bld. Sup. Co. | Sand, cement | | 36 | 10.40 | |
| Dec. 31. | Pay Roll | | | 13 | 106.26 | |
| " | F. W. Brown Lbr. Co. | Lumber | | 39 | 5.52 | |
| " | Rudge & Guenzel Co. | Sundries | | " | .90 | |

*Items Charged to Gas Works Construction Account year* 1902. *Ledger No.* 2.

| | | | | | | |
|---|---|---|---|---|---|---|
| Dec. 31. | R. S. Young Bldg. Sup. Co. | Cement & Stone | .... | 49.90 | | |
| " | Cooper & Cole Bros. | Sundries | .... | .80 | | |
| | Total charged to New Tar Well | | .... | ..... | | 193.28 |
| | Total charged to Gas Works, year 1902 | | .... | ..... | | 8,308.19 |

1687 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1903, *Ledger No.* 2.

Charged to Gas Works; Closed to Plant; Ledger page 50:

| | | | | | |
|---|---|---|---|---|---|
| 1903. | | | | | |
| Oct. 31. | Accounts Payable | | 309 | 65.00 | 65.00 |

Charged to New Store Room; Closed to Works; Ledger P. 62:

| | | | | | |
|---|---|---|---|---|---|
| 1902. | | | | | |
| Nov. 30. | Pay Roll | | 12 | 7.33 | |
| " | F. W. Brown Lbr. Co. | Lumber | 36 | 4.42 | |
| Dec. 31. | Pay Roll | | 13 | 49.10 | |
| " | " " Electric | | 13 | 157.12 | |
| " | Merchants Trans. Co. | Cartage Coke | 39 | 14.25 | |
| " | F. W. Brown Lbr. Co. | Lumber | 39 | 100.88 | |
| " | W. N. Rhealander | Ink, etc. | " | .25 | |

| | | | | | |
|---|---|---|---|---|---|
| " | O. J. King | Soap, salt | " | 1.00 | |
| " | Lincoln Hdw. Co. | Sundries | " | 16.85 | |
| " | Fittings Stock | | 343 | .90 | |
| " | Steel Pipe Stock | | 343 | 10.27 | |
| " | I. & C. Lamp Stock | | 344 | 1.50 | |
| " | Wire & Misc. Elec. Stock | | 344 | 16.62 | |
| | Total charged to New Store Room | | | | 380.49 |

Charged to New Well; Closed to Works; Ledger P. 96:

| | | | | | |
|---|---|---|---|---|---|
| 1903. | | | | | |
| Feb. 28. | Voucher Rec. | | | 13.95 | |
| March. | " " | | | 28.80 | |
| | Total charged to New Well | | | | 42.75 |

Charged to Foul Main Suspense; Closed to Works; Ledger P. 96:

| | | | | | |
|---|---|---|---|---|---|
| 1903. | | | | | |
| Feb. 28. | Voucher Rec. | | | 23.39 | 23.39 |

Charged to Gas Works Wiring Suspense; Closed to Works; Led. P. 101:

| | | | | | |
|---|---|---|---|---|---|
| 1903. | | | | | |
| Jan. 31. | Voucher Rec. | | | 4.03 | |
| July. | " " | | | 6.06 | |
| | Total charged to Gas Works Wiring Suspense | | | | 10.09 |

Charged to New Tar Well; Closed to Works; Ledger P. 123:

| | | | | |
|---|---|---|---|---|
| 1903. | | | | |
| Jan. 31. | Voucher Record | ... | 3.86 | |
| Feb. 28. | " " | ... | 166.05 | |
| Mch. | " " | ... | 93.56 | |
| | Total | .... | 263.47 | |
| | Less Credit | ... | 8.10 | |
| | Amount charged Works | ..... | | 255.37 |
| | Total charged to Gas Works, year 1903 | ..... | | 777.09 |

1688

Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1904, *Ledger No.* 2.

Accounts Closed to Plant.

Charged to Gas Works; Ledger Page 50:

| | | | | |
|---|---|---|---|---|
| 1904. | | | | |
| Apr. 30. | Lloyd Const. Co. | Main Fittings | 300 | 57.46 |
| " | Cooper & Cole Bros. | Lead | " | 25.77 |
| " | Lincoln Hdw. Co. | Washers | " | .50 |
| " | Pay Roll | | " | 56.44 |
| May 31. | " " | | " | 11.60 |
| July 31. | Cooper & Cole Bros. | Pipe Jack | " | 30.00 |

| | | | | | |
|---|---|---|---|---|---|
| Aug. 31. | Gen'l Elec. Co. | "IS 4-2 H. P. 1800-220V 60 Cyc. Motor" | " | 112.50 |
| " | Rudge & Guenzel | Tire Setter | " | 2.20 |
| " | Buffalo Forge Co. | No. 10 Blower | " | 113.00 |
| " | R. L. Smith | 2 Wood Pulleys | " | 1.80 |
| " | Lincoln Hdw. Co. | Stove Bolts | " | .10 |
| " | R. S. Young | 4 sacks | " | 3.40 |
| " | Ft. Wayne Elec. Wks. | M. P. France form 1 Motor. | " | 390.00 |
| " | Cooper & Cole Bros | Hose Couplings | " | 1.03 |
| " | Ross Electric Co. | Fuse Blocks | " | 1.70 |
| " | Lincoln Trans. Co. | Freight | " | 47.87 |
| " | Pay Roll | | " | 47.38 |
| " | Pay Roll Electric | | " | 19.51 |
| Sep. 30. | Ross Elec. Co. | 2 S. P. Switches | " | 1.00 |
| " | Paul R. Jones | Cont'g | " | 15.69 |
| " | Ft. Wayne Elec. Wks. | 1—35 H. P. 500 V. | " | 163.90 |
| " | Pay Roll Electric | | " | 35.05 |
| " | " " Gas | | " | 18.44 |
| Oct. 31. | " " | | " | 7.12 |
| Oct. 31. | Cooper & Cole Bros | Tubing | 1839 | 1.04 |
| " | " " " | Pipe | " | .75 |
| " | " " " | Fittings | " | .23 |
| " | " " " | " | " | 1.60 |
| " | " " " | Valves. | " | 3.12 |
| " | " " " | Unions Asbestos | " | .88 |
| " | " " " | Reducers | " | .35 |
| " | " " " | Pipe & Fittings | " | 5.88 |
| " | " " " | Valve | " | .12 |
| " | " " " | Fittings | " | .66 |
| " | " " " | Globe Valves | " | 1.36 |

| | | | | | |
|---|---|---|---|---|---|
| " | " " " ..... | Pipe valves, etc..... | " | | 14.95 |
| " | R. L. Smith..... | Tap ..... | " | | .50 |
| " | Order 583 ..... | | " | | .73 |
| " | Flexible Metal-ic Co. ..... | Steel Loose ..... | " | | 4.82 |
| " | Paul R. Rones..... | Cont'g ..... | " | | 10.60 |
| " | R. L. Smith..... | Cap Screws ..... | " | | .55 |
| " | Lincoln Trans. Co..... | Freight ..... | " | | 1.75 |
| " | Thorpe Co. ..... | Repair work ..... | " | | 21.95 |
| " | Pay Roll ..... | | " | | 21.39 |
| " | " " ..... | | " | | 82.29 |
| " | A. A. Barton..... | On Acct. ..... | 1840 | | 100.00 |

1689

Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1904, *Ledger No.* 2.

Accounts Closed to Plant.

| | | | | | |
|---|---|---|---|---|---|
| 1904. | | | | | |
| Nov. 30. | F. W. Brown Lbr. Co..... | Lumber ..... | 300 | | 22.69 |
| " | Pay Roll ..... | | " | | 22.38 |
| " | Denver Gas & Elec. Co..... | 5 Brass Cocks ..... | 1839 | | 15.00 |
| " | " " " " ..... | Strainer ..... | " | | 13.65 |
| " | R. L. Smith..... | 6 Screws ..... | " | | .36 |
| " | " " " ..... | Drillin- 8 Holes ..... | " | | .85 |
| " | Pay Roll ..... | | ... | | 2.12 |
| " | " " ..... | | ... | | 1.12 |
| " | H. C. Abel, A. A. Barton..... | Bal. Due ..... | 1840 | | 192.93 |
| Dec. 30. | Trans. Voucher 58D..... | | 300 | | 102.25 |

| | | | | | |
|---|---|---|---|---|---|
| " | Lincoln Hdw. Co. | Galv. Blow | " | 60.85 | |
| " | Pay Roll | Pipe | " | 22.46 | |
| | Total charged to Gas Works | | | | 1,895.64 |

Charged to Gas Works Wiring Suspense; Ledger Page 101:

| | | | | | |
|---|---|---|---|---|---|
| Feb. 29. | Acct. Pay. | | ... | 8.15 | |
| Mar. 31. | " " | Order #14 | 1914 | 12.05 | |
| Apr. 30. | " " | Pay Roll | " | 3.20 | |
| Oct. 31. | Order No. 567 | | " | 8.58 | |
| " | Pay Roll | | " | 11.83 | |
| Nov. 30. | Pay Roll | | " | 1.66 | |
| Dec. 31. | Order No. 719 | | " | 2.00 | |
| " | Pay Roll | | " | 1.84 | |
| | Total charged to Gas Works Wiring Suspense | | | | 49.31 |

Charged to New Sewer; Ledger page 551:

| | | | | | |
|---|---|---|---|---|---|
| Nov. 30. | R. S. Young | 6 Sks. Lehigh | 1842 | 4.35 | |
| " | Lincoln Hdw. Co | 50 Lbs. Oakum | " | 2.25 | |
| " | R. S. Young Co | 3 Sks. Cement | " | 2.18 | |
| " | Lincoln Hdw. Co | 15 Lbs. Nails | " | .60 | |
| " | " " " | 287' 8" Sewer Pipe | " | 51.66 | |
| " | " " " | Fittings | " | 9.24 | |
| " | Pay Roll | | " | 194.32 | |
| " | " " | | " | 6.12 | |
| Dec. 31. | Cooper & Cole Bros | Valve, Wrench | " | 2.00 | |
| | Total charged to New Sewer | | | | 272.72 |

Charged to New Blower, Ledger page 552:

| | | | | |
|---|---|---|---|---|
| Nov. 30. | Pay Roll | | 1843 | 18.66 |
| " | " " | | " | .35 |
| Dec. 31. | F. W. Brown Lbr. Co. | 320' 1 x 8 x 16 sheeting | " | 6.40 |
| " | R. S. Young Co. | 400 lbs. fire clay, etc. | " | 10.85 |
| " | R. S. Young Co. | 2 yds. sand | " | 2.20 |
| " | R. S. Young Co. | Sand, etc. | " | 14.79 |
| " | " " " " | " " | " | 27.68 |
| " | " " " " | 8 M brick, cement, etc. | " | 40.00 |
| " | R. S. Young Co. | Bu. cement 3 M brick | " | 25.25 |

1690

Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1904, *Ledger No.* 2.

Accounts Closed to Plant.

1904.

| | | | | |
|---|---|---|---|---|
| Dec. 31. | Order #707 | | 1843 | 1.89 |
| " | Cooper & Cole | Gate Valves | " | 81.00 |
| " | F. W. Brown Lbr. Co. | 50 Pc. Lbr. | " | 14.84 |
| " | " " " | 12 Pc. Lbr. | " | 1.92 |
| " | Young Co. | Yd. Sand | " | 1.10 |
| " | F. W. Brown Lbr. Co. | 12 Pc. Lbr. | " | 2.80 |
| " | Kostka Glass & Pt. Co. | 25# Red lead | " | 1.65 |
| " | Lincoln Hdw. Co. | 12 bolts | " | .54 |
| " | " " " | 12# Nails | " | .50 |
| " | " " " | 24 ft. iron | " | 1.44 |
| " | " " " | Nails | " | 1.60 |

| | | | | | | |
|---|---|---|---|---|---|---|
| " | General Elec. Co. | 1—500 V Motor Comp. | " | 172.05 | | |
| " | Paul R. Jones | Cont'g | " | 23.40 | | |
| " | Brown Lbr. Co. | 12 Pc. 2 x 10 | " | 5.88 | | |
| " | Lincoln Hdw. Co. | Lock, key | " | 1.10 | | |
| " | Lincoln Trans. Co. | Freight | " | 10.63 | | |
| " | Pay Roll | | " | 215.84 | | |
| " | " " Elec. | | " | 9.53 | | |
| " | Order No. 742 | | " | 3.87 | | |
| | Total charged to New Blower | | | | | 697.76 |

Charged to Economizer; Ledger page 553:

| | | | | | | |
|---|---|---|---|---|---|---|
| Dec. 31. | R. S. Young Co. | Yd. sand & 5 Bbl. Lime | 1844 | 7.35 | | |
| " | " " " " | 2 M Brick & 13 Sk. cement. | " | 24.70 | | |
| " | Paul R. Jones | Cont'g | " | 27.05 | | |
| " | Cooper & Cole | Valves | " | 13.11 | | |
| " | " " | Discs Jenkins | " | 1.33 | | |
| " | Pay Roll | | ... | 18.00 | | |
| " | Cooper & Cole | Pipe | " | 53.12 | | |
| | Total | | .... | 144.66 | | |
| | Less Credit | | .... | .73 | | |
| | Net Amt. charged to Economizer | | | | | 143.93 |
| | Total charged to Gas Works, Year 1904 | | | | | 3,059.36 |

*Items Charged to Gas Works Construction Account, Year* 1905.



Charged to Acct. #300, Gas Works:

| | | | |
|---|---|---|---|
| Union Supply Co. | 4 fire extinguishers | .... | 47.00 |
| C. A. Adams, Duplex pump | | .... | 81.38 |
| Lincoln Trans. Co. | Freight | .... | 1.17 |
| Pay Roll | | .... | 20.00 |
| " " | | .... | 24.50 |
| " " | | .... | 24.35 |
| Order No. 891 | | .... | 6.54 |
| Sturtevant Co. | Sides of pressure blower | .... | 20.00 |
| Pay Roll | | .... | 27.70 |
| Order No. 955 | | .... | 5.11 |
| R. S. Young | 1,000 Brick | .... | 9.00 |
| Pay Roll | | .... | 21.75 |
| Cooper & Cole Bros. | Galvanized Pipe | .... | 17.07 |
| Pay Roll | | .... | 20.00 |
| Reddig Moss Co. | | .... | 1.20 |
| Humph. Hdw. Co. | | .... | 1.42 |
| Nurderfer Miller | Boring two plugs | .... | 2.70 |
| Western Supply Co. | 98′ 3″ 33′ ½ | .... | 5.28 |
| Pay Roll | | .... | 30.10 |
| The Akron Cult. Co. | Hopper Barrow | .... | 45.00 |
| Pay Roll | | .... | 20.00 |
| " " | | .... | 20.00 |
| " " | | .... | 21.75 |
| | New Block | .... | 20.95 |

| | | | | |
|---|---|---|---|---|
| " " | " " | .... | 4.30 | |
| Order #1210 | | .... | 1.20 | |
| " #1211 | | .... | 3.04 | |
| Western Glass & Paint Co | Glass | .... | 2.75 | |
| Cooper & Cole | Fittings | .... | 1.13 | |
| Pay Roll | | .... | 41.45 | |
| Lincoln Hdw. Co | Nails, etc | .... | 1.69 | |
| Cooper & Cole | 168' ½ Blk. Pipe | .... | 4.20 | |
| Koska Glass & Paint Co | Linseed Oil, Lead | .... | 3.35 | |
| Brown Lumber Co | Lumber | .... | 14.00 | |
| " " " | " | .... | 8.40 | |
| Lincoln Trans. Co | Freight | .... | 9.00 | |
| Yankee Hill Company | Brick 1,000 | .... | 8.50 | |
| Pay Roll | | .... | 24.80 | |
| Cooper & Cole Bros | Fittings & Hanger | .... | .28 | |
| Total charged to Gas Works account | | | | 622.06 |
| **Charged to Acct. #1839, Oil Spray:** | | | | |
| Lincoln Trans. Co | Freight | .... | 1.85 | 1.85 |
| **Charged to Acct. #1840, Oil Spray Suspense:** | | | | |
| Order #894 | | .... | 105.00 | 105.00 |
| **Charged to Acct. #1842, Sewer:** | | | | |
| Young Bldg. Co | Sand & Cement | .... | 9.40 | |
| Pay Roll | | .... | 9.76 | |
| " " | | .... | 2.63 | |
| Total charged to Sewer account | | | | 21.79 |

*Items Charged to Gas Works Construction Account, Year 1905.*

Charged to Acct. #1847, Barn:

| | | | | |
|---|---|---|---|---|
| Cooper & Cole | Galv. Pipe | .... | 1.38 | |
| Humphrey Hdw. Co | 2 Spades | .... | 1.70 | |
| E. W. Brown Lbr. Co | Lumber | .... | 5.24 | |
| Pay Roll | | .... | 26.04 | |
| " " | | .... | 28.44 | |
| Cooper & Cole | Pipe & Fittings | .... | 13.02 | |
| Lincoln Hdw. Co | Nails | .... | .30 | |
| " " " | " | .... | .65 | |
| Lincoln Sign Works | Lettering 3 Wagons | .... | 9.00 | |
| Humphrey Hdw. Co | 3 Delivery Wagons | .... | 180.00 | |
| F. W. Brown | Lumber | .... | 40.02 | |
| W. B. Mann | Horse | .... | 101.60 | |
| J. N. Philpott | Set Harness | .... | 26.00 | |
| Pay Roll | | .... | 24.12 | |
| " " | New Shed | .... | 9.05 | |
| " " | | .... | 2.60 | |
| Order #1023 | | .... | 8.30 | |
| " #1025 | | .... | 1.80 | |
| " #1027 | | .... | 20.83 | |
| Jas. S. Dales | Team of horses | .... | 100.00 | |
| G. N. Reed | Horse | .... | 125.00 | |
| R. W. Harber | " | .... | 75.00 | |
| Total charged to Barn account | | | | 800.09 |

Charged to Acct. #1849, Tar House:

| | | | |
|---|---|---|---|
| Pay Roll | | 15.37 | |
| " " | | 3.54 | |
| Total charged to Tar House account | | | 18.91 |
| Total charged to Works account, Year 1905 | | | 1,569.70 |

1693 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1906.

Charged to Acct. #300, Gas Works:

| | | | |
|---|---|---|---|
| F. W. Brown Lbr. Co. | L | 9.60 | |
| Wardorfer Kearl | Labor | 5.20 | |
| Cooper Cole | Fittings | 4.84 | |
| " " | " | 4.83 | |
| " " | Valves, Tees, etc | 12.71 | |
| " " | " " " " | .54 | |
| " " | Reducers | .58 | |
| " " | Tees | .14 | |
| " " | Unions | 1.26 | |
| C. A. Adams | Duplex Pump | 81.15 | |
| Pay Roll | | 20.00 | |
| " " | New Tar Burner | 33.25 | |
| " " | | 20.00 | |
| " " | | 20.00 | |
| " " | Sewer | 18.70 | |
| " " | | 20.00 | |
| Lincoln Hdw. Co. | Nails | .70 | |

| | | | |
|---|---|---|---|
| F. W. Brown Lbr. Co. | Lumber | .... | 135.88 |
| " " " " " | " | .... | 5.27 |
| " " " " " | " | .... | 34.59 |
| " " " " " | " | .... | 21.38 |
| " " " " " | " | .... | 20.66 |
| Lincoln Hdw. Co. | Keg Nails | .... | 2.95 |
| Pay Roll | | .... | 128.15 |
| Cooper Cole Bros. | Fittings | .... | 1.03 |
| R. S. Young Co. | Sand, etc | .... | 4.35 |
| Pay Roll | | .... | 24.00 |
| " " | Tar Separator | .... | 53.47 |
| Geo. A. Wilson | Repairs for sewer | .... | 36.00 |
| Lincoln Hdw. Co. | Nails | .... | 4.75 |
| Enterprise Mill. Co. | Tank for separator | .... | 141.50 |
| F. A. Brown Lbr. Co. | Lumber | .... | 2.16 |
| Pay Roll | | .... | 30.75 |
| " " | Tar Separator | .... | 35.23 |
| C. J. Rowan | Painting Wagon | .... | 14.00 |
| Cooper, Cole Bros. | Fittings | .... | 56.07 |
| " " " | Fittings, Pipe, etc | .... | 6.29 |
| " " " | Valves | .... | 1.76 |
| " " " | 2—45 Ells | .... | .87 |
| " " " | Union | .... | .34 |
| " " " | 6—1½ C. I. Ells | .... | .36 |
| " " " | Fittings. | .... | .60 |
| " " " | 2 x 6 Nip | .... | .10 |
| " " " | Fittings. | .... | .99 |
| Capital Boiler Works | Cut Off Bar | .... | 1.15 |
| Lincoln Hdw. Co. | Doz. Bolts | .... | .10 |
| Brown Lumber Co. | Lumber | .... | 10.06 |

*Items Charged to Gas Works Construction Account Year* 1906.

| | | | |
|---|---|---|---|
| " " " | " | 7.92 | |
| W. M. Keanon | Trays | 7.00 | |
| Lincoln Transfer Co | Freight | 6.30 | |
| Pay Roll | | 71.48 | |
| " " | For Separator | 58.15 | |
| " " | " " | 5.62 | |
| Taylor Fowler Eng. Co | Fittings, etc. | 39.95 | |
| Cooper, Cole Bros | Galv. Valve 1½" | 1.75 | |
| Cooper, Cole Bros | Gauge | 2.00 | |
| " " " | Union | 3.78 | |
| " " " | 2 ½" Valves | 1.60 | |
| R. L. Smith | No. 5 Reliance Pump | 25.00 | |
| Cooper, Cole Bros | Pipe, 2 Ells | .08 | |
| Pay Roll | | 32.04 | |
| " " | For Separator | 9.52 | |
| " " | | 20.00 | |
| Geo. A. Wilson | Labor | 8.00 | |
| Pay Roll | | 20.00 | |
| Ætna Fire Extinguisher Co | 1 Fire Extinguisher | 75.00 | |
| Phillip Bourelle | Horse | 112.50 | |
| Pay Roll | | 10.00 | |
| Total chgd. Gas Works Cost 1906 % #300 | | 1,546.10 | |
| Less credits | | 62.95 | |
| | | | 1,483.15 |

| | | | |
|---|---|---|---|
| Charged to Acct. #300; Washer Cooler: | | | |
| Wm. Krause | Trays | 1.80 | |
| F. W. Brown Lbr. Co | Lumber | 7.30 | |
| " " " " " | " | 2.50 | |
| Cooper, Cole Bros | 2" Valve | 4.54 | |
| " " " | Fittings | 3.68 | |
| " " " | " | 2.95 | |
| Nebr. Hdw. Co. | Solder, etc. | .78 | |
| Nichols Roofing Co. | Roll Tar Paper | 1.35 | |
| State Journal | Blue Print | 2.50 | |
| Postal Telegraph | Services | 1.04 | |
| Harry Porter | Stationery | 4.25 | |
| Pay Roll | | 10.73 | |
| Trans. Voucher 296 | | 300.00 | |
| Gross (and net) charged to Acct. #300 | | ..... | 343.42 |
| Charged to Acct. #300; Tar Still: | | | |
| Capital Boiler Sheet Iron Co. | Building Still | 185.00 | 185.00 |
| Charged to Acct. #1843; New Blower: | | | |
| General Electric Co. | Speed Regulator | 99.00 | 99.00 |
| Charged to Acct. #1847; Barn: | | | |
| Robert Witehem | 3 head Horses | 350.00 | |

| | | | |
|---|---|---|---|
| Nebr. Hdw. Co. | New Wagon | 60.00 | |
| Barlow Allen | Set Harness | 36.00 | |
| Gross (and net) charged to Acct. #1847 | | | 446.00 |
| Total charged to Works Accounts, year 1906 | | | 2,556.57 |

1695 Lincoln Gas & Electric Light Company.

*Items Charged in "Gas Works" Account 1907 to 1912 Inclusive.*

| Year constructed. | Title and number of account. | | | Amount. |
|---|---|---|---|---|
| *1907 | Gas Works Additions | # | 300 | $501.92 |
| *1908 | " " " | " | | 75.00 |
| *1909 | " " " | " | | 256.46 |
| 1911 | " " " | " | | 128.00 |
| **1912 | " " " | " | | 267.45 |
| 1909 | New Horses & Wagons (in works %) | G | 1 | 122.50 |
| 1910 | " " " " " " " | G | 1 | 339.20 |
| 1911 | " " " " " " " | G | 1 | 259.54 |
| 1912 | " " " " " " " | G | 1 | 268.94 |
| 1908 | Washer Cooler | | | 331.89 |
| 1908 & 1909 | New Water Gas Machine | G | 5 | 13,365.72 |
| 1908 & 1909 | New Water Gas House | G | 6 | 5,472.83 |
| 1908 & 1909 | New Gas Holder | G | 7 | 42,938.77 |
| 1908 & 1909 | Governor & Conn. New Holder | G | 8 | 5,024.72 |
| 1908 & 1909 | Uptown Booster | G | 9 | 550.43 |
| 1908–9 & 19 | New Water Gas Exhauster | G | 10 | 975.67 |
| 1909–10–11–12 | Service Governors | G | 11 | 15,422.92 |
| 1909 | Blower for Old Water Gas Machine | G | 12 | 463.54 |

| | | | | |
|---|---|---|---|---|
| 1909 | New Oil Tank | G | 13 | 1,189.32 |
| 1909 & 10 | Turbine Blower | G | 14 | 1,336.87 |
| 1910 & 11 | Gas Meter Shop & Additions | G | 15 | 177.38 |
| 1910 | Pyrometer for W. G. Machine | G | 16 | 53.10 |
| 1910–11 & 12 | New District Holder | G | 17 | 18,815.38 |
| 1910 | Pressure Indicator | G | 18 | 419.84 |
| 1910 | New Blacksmith Shop | G | 19 | 161.68 |
| 1911 & 12 | New Gas Meter Shop | G | 20 | 1,349.78 |
| 1912 | New Gas Machine | G | 21 | 7,897.84 |
| 1912 | New Blower | G | 22 | 183.37 |
| 1909 | Havelock Main Extension | H | 1 | 883.50 |
| 1910 | " " " | H | 1 | 9,871.03 |
| 1911 | " " " | H | 1 | 205.29 |
| | Total | | | 129,309.88 |
| | Less Credits direct to ledger, % not indicated: | | | |
| 1909 | .90 | | | |
| 1911 | 57.50 | | | |
| | | | | 58.40 |
| | Total Charged to Gas Works Accts. | | | 129,251.48 |

* 1907, 1908 and 1909 includes $644.38 for New Horses and Wagons, % G 1.
** 1912, 267.45 charged in error to Street Mains.

*Items Charged to Gas Works Construction Account, Year 1907.*

Charged to Gas Works Additions, Acct. #300:

| | | | |
|---|---|---|---|
| Pay Roll | | 10.98 | |
| " " | | 10.00 | |
| Trans. Voucher 341 | Imp. Equip. Co. | 100.00 | |
| Pay Roll | | 10.00 | |
| " " | | 10.00 | |
| B. C. Adams | Back Salary | 22.50 | |
| Beeman C. Fox | M Street | 125.00 | |
| Pay Roll | | 10.00 | |
| Trans. Voucher 390 | | 7.50 | |
| Pay Roll | | 10.00 | |
| Trans. Voucher 406 | | 7.50 | |
| Pay Roll | | 10.00 | |
| " " | | 10.00 | |
| " " | | 10.00 | |
| Gross amount charged to Acct. #300 | | 353.48 | |
| Less Credits | | 15.00 | |
| Net Amount charged to Acct. #300 | | | 338.48 |

Charged to Acct. #G1, New Horses & Wagons:

| | | | |
|---|---|---|---|
| J. Stewart | 1 Horse | 125.00 | |
| Geo. Reid | Horse | 37.50 | |

| | | | |
|---|---|---|---|
| J. Shamp Imp. | Gear & Springs | 37.00 | |
| Nebr. Buggy Co. | Delivery Wagon | 62.50 | |
| Camp Sign Co. | Lettering Wagon | 4.25 | |
| R. M. Phillips | Horse | 100.00 | |
| C. C. Barlow | " | 75.63 | |
| J. E. Kirk | " | 80.00 | |
| Gross (and net) charged to Acct. G1 | | | 521.88 |
| Charged to Acct. #G2, Water Meter: | | | |
| Lincoln Water Works Dept | Meter | 21.75 | 21.75 |
| Charged to Acct. #G3, Armature Water Gas Blower: | | | |
| Lincoln Trans. Co. | Frt. & Drayage | 6.61 | |
| Ft. Wayne Elec. Works | Armature, etc | 179.00 | |
| Gross (and net) charged to Acct. G3 | | | 185.61 |
| Charged to Acct. #G4, New Benches: | | | |
| Missouri Fire Brick Co | On Acct. | 200.00 | |
| " " " " | " " | 150.00 | |
| Trans. Voucher 440 | | 11.05 | |
| Nebraska Material Co. | Lime | 6.50 | |
| Gross amount charged to New Benches, 1907 | | 367.55 | |
| Less Credits | | 717.55 | |

| | | |
|---|---|---|
| Net credit on account of New Benches, 1907 | | 350.00 |
| Additional Credits 1907 a/c entered Jan. 24, 1908 | | 215.80 |
| Total Charged to Works Accounts, year 1907 | | 501.92 |



*Items Charged to Gas Works Construction Account, Year* 1908.

Charged to Acct. #G5, New Water Gas Machine:

| | | |
|---|---|---|
| Pay Roll | | 1.09 |
| C. B. & Q. | Freight | 594.60 |
| F. W. Brown Lbr. Co. | Lumber | 17.84 |
| Nebr. Hdw. Co | Misc. Hdw. | 1.40 |
| Western Supply Co. | Fittings | 4.38 |
| Pay Roll | | 120.19 |
| Trans. Voucher 533 | | 15.00 |
| D. J. Sweeney | Advance | 50.00 |
| D. J. Sweeney | " | 250.00 |
| " " " | " | 175.00 |
| Trans. Voucher 540 | | 5,500.00 |
| D. J. Sweeney | Advance | 200.00 |
| C. B. & Q. | Frt. & Dem. | 237.76 |
| R. S. Young Co. | Bldg. material | 177.60 |
| Linc. Trans. Co | Frt. & Dray | 16.20 |
| Sullivan-Schaberg | Men & Teams | 70.00 |
| Pay Roll | | 29.10 |
| C. B. & Q. | Freight | 9.14 |
| D. J. Sweeney | Advance | 100.00 |

| | | | |
|---|---|---|---|
| " " " | ..... | " ..... | 100.00 |
| " " " | ..... | " ..... | 125.00 |
| " " " | ..... | " ..... | 160.00 |
| Nebr. Hdw. Co. | ..... | Misc. Hdw. ..... | 1.68 |
| Western Gas Const. Co. | ..... | Blast Pipings ..... | 190.00 |
| O. R. Mallat | ..... | Photos ..... | 3.00 |
| Pay Roll | ..... | | 13.37 |
| Trans. Voucher 567 | ..... | | 182.83 |
| D. J. Sweeney | ..... | Advance ..... | 250.00 |
| " " " | ..... | " ..... | 50.00 |
| " " " | ..... | " ..... | 175.00 |
| " " " | ..... | " ..... | 175.00 |
| F. W. Brown Co. | ..... | Lumber ..... | 10.00 |
| Cooper & Cole | ..... | Fittings ..... | 23.77 |
| Crane Co. | ..... | Fittings ..... | 50.00 |
| Dahsen & Ress | ..... | Machine Works ..... | 3.50 |
| Lincoln Trans. Co. | ..... | Frt. & Dray ..... | 1.30 |
| Nebr. Hdw. Co. | ..... | Misc. Hdw. ..... | 17.46 |
| Western Supply Co. | ..... | Fittings ..... | 107.74 |
| R. S. Young Co. | ..... | Stone, Cement ..... | 17.74 |
| Western Supply Co. | ..... | Fittings ..... | 1.49 |
| Order No. 73 | ..... | | 7.44 |
| Pay Roll | ..... | | 98.31 |
| Lincoln G. & E. L. Co. | ..... | Contg. ..... | 1.75 |
| D. J. Sweeney | ..... | Advance ..... | 175.00 |
| " " " | ..... | " ..... | 125.00 |
| " " " | ..... | " ..... | 75.00 |
| " " " | ..... | " ..... | 50.00 |
| Order No. 81 | ..... | | 37.36 |
| F. W. Brown Co. | ..... | Lumber ..... | 35.25 |

| | | |
|---|---|---|
| Crane Co. | Gate Valve | 10.00 |
| Cooper & Cole | Fittings | 22.32 |
| Dahlsen & Ress | Machine Works | 3.00 |
| Lincoln G. & E. L. Co. | Contg. | .25 |



*Items Charged to Gas Works Construction Account, Year* 1908.

| | | |
|---|---|---|
| Nebr. Paper & Bag Co. | Cardboard | .60 |
| Cooper & Cole Bros. | Valves & -ells | 3.61 |
| Nebr. Paper & Bag Co. | Cardboard | .15 |
| Western Supply | Fittings | 108.54 |
| Nebr. Hdw. Co. | Misc. Hdw. | 5.63 |
| Trans. Voucher 587 | 7.5 Tons Coke @ 5.25 | 39.38 |
| Pay Roll | | 197.94 |
| Trans. Voucher 583 | | 15.00 |
| D. J. Sweeney | Advance | 40.00 |
| Order No. 89 | | .59 |
| " " 92 | | .13 |
| Sunderland Roofing Co. | Belting | 107.26 |
| Western Supply Co. | Fittings | 29.57 |
| Nichols Roofing Co. | Tar Paper | 5.66 |
| F. W. Brown Co. | Lumber | 5.57 |
| Riggs Pharmacy | Litherage | .45 |
| Western Supply Co. | Fittings | 41.04 |
| Lincoln Water Works Dept. | Water | 66.00 |
| Pay Roll | | 69.84 |
| Lincoln G. & E. L. Co. | Cont'g | 5.26 |
| Korsmeyer Co. | Wire, Fuses | 23.45 |

| | | | |
|---|---|---|---|
| Nebr. Hdw. Co. | Misc. Hdw. | 2.09 | |
| Lincoln G. & E. L. Co. | Contg. | .60 | |
| Order No. 98 | | 4.01 | |
| Lincoln Trans. Co. | Frt. & Dray | 2.77 | |
| Order No. 100 | | 45.15 | |
| Water Commissioner | Pipe | 4.60 | |
| T. J. Thorpe Co. | Machine Work | 12.50 | |
| Western Supply Co. | Fittings | 71.59 | |
| Pay Roll | | 33.19 | |
| Gross (and net) charged to Acct. G5 | | | 10,811.03 |

Charged to Acct. #—, Washer Cooler:

| | | | |
|---|---|---|---|
| H. L. Doherty & Co | Expenses Barton & Wagner, Aug. & Sept. | 327.45 | |
| Lincoln G. & E. L. Co | Rebates | 4.44 | |
| Gross (and net) charged to Washer Cooler | | | 331.89 |

Charged to Acct. #G6, New Water Gas House:

| | | | |
|---|---|---|---|
| Nebr. State Journal Co. | Blue Print Paper | 1.50 | |
| Star. Pub. Co. | Legal Notice | 2.50 | |
| Pay Roll | | 59.61 | |
| Nebr. Hdw. Co. | Misc. Hdw. | 1.05 | |
| R. S. Young Co. | Bldg. Material | 21.24 | |
| R. S. Young Co. | " " | 257.12 | |
| Pay Roll | | 204.63 | |
| Trans. Voucher 547 | | 20.00 | |

| | | |
|---|---|---|
| C. P. Hahn | Money Advances | 500.00 |
| Lincoln G. & E. L. Co. | Contg. | 1.75 |
| Nebr. Hdw. Co. | Misc. Hdw. | 1.77 |
| Lincoln Trans. Co. | Frt. & Dray | 6.60 |
| Trans. Voucher 559 | | 20.00 |
| O. R. Mallat | Photos | 3.00 |
| Jno. Davis Co. | One Tee | 8.75 |
| Western Gas. Const. Co. | Tee | 46.95 |

1699 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1908.

| | | |
|---|---|---|
| Order No. 68 | | 17.64 |
| Pay Roll | | 109.49 |
| C. P. Hahn | Advance | 1,100.00 |
| Pay Roll | | 38.52 |
| Trans. Voucher 572 | | 20.00 |
| Gooden & Hahn | Advance | 350.00 |
| Gooden & Hahn | Final Payment | 1,101.38 |
| F. W. Brown Co. | Lumber | 15.25 |
| Nebr. Material Co. | Sand | 6.57 |
| R. S. Young Co. | Cement | 3.06 |
| Order No. 85 | | 9.90 |
| Western Glass & Pt. Co. | Paint | 9.70 |
| F. W. Brown Co. | Lumber | 3.36 |
| Nebr. Hdw. Co. | Misc. Hdw. | 1.65 |
| Pay Roll | | 95.45 |
| R. S. Young Co. | Cement | 14.61 |
| Pay Roll | | .80 |

| | | | |
|---|---|---|---|
| Korsmeyer Co. | Shades & Receptacles | 1.40 | |
| Otis Elevator Co. | Payment on elevator | 470.00 | |
| " " " | Final Payment | 470.00 | |
| R. S. Young Co. | Cement | 17.83 | |
| F. W. Brown Co. | Lumber | 136.09 | |
| Western Glass & Pt. Co. | Linseed Oil | .55 | |
| Pay Roll | | 46.83 | |
| Lincoln Trans. Co. | Frt. & Dray | 38.68 | |
| Nebr. Hdw. Co. | Misc. Hdw. | 72.05 | |
| A. L. Gooden | Labor | 157.45 | |
| Capital City Iron Works | Weights | 3.12 | |
| Nichols Roofing Co. | Tar Paper | 4.10 | |
| Gross ch'g'd new water Gas House, 1908 | | 5,471.95 | |
| Less credits | | 224.97 | |
| Net ch'g'd new water Gas House, 1908 | | | 5,246.98 |

Charged to Acct. #G7, New Gas Holder:

| | | | |
|---|---|---|---|
| Pay Roll | | 1.53 | |
| Chg. & North Western | Frt. | 618.71 | |
| S. Koch | Advance | 200.00 | |
| Chg. & North Western | Frt. | 189.14 | |
| City Garbage Co. | Digging Vaults | 19.20 | |
| Chg. & North Western | Frt. | 344.25 | |
| C. B. & Q. | Frt. | 911.65 | |
| O. R. Mallat | Photos | 1.50 | |
| Star Pub. Co. | Legal Notice to Cont. | 3.00 | |
| Chg. Northwestern | Frt. | 474.66 | |

| | | |
|---|---|---|
| Pettit Cabinet & Fix. Co. | Stakes | 3.00 |
| Robt. Malone | Excavating | 191.00 |
| Pay Roll | | 65.43 |
| S. Koch | Advance | 100.00 |
| " " | " | 50.00 |
| " " | " | 50.00 |
| Reimers & Kauffman | Foundation for holder | 1,000.00 |
| C. B. & Q. | Frt. Dem. | 203.02 |
| G. P. Abel | Survey & Estimate | 10.00 |
| F. W. Brown Co. | Lumber | 18.39 |
| State Journal Co. | Blue Print Paper | 5.00 |
| Pay Roll | | 67.79 |
| Trans. Voucher 572 | | 10.00 |
| " " 571 | | 19,000.00 |

1700 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1908.

| | | |
|---|---|---|
| Reimers & Kauffman | Foundation | 1,000.00 |
| Chg. & N. W. Ry. | Frt. | 189.95 |
| Reimers & Kauffman | Foundation | 1,500.00 |
| S. Koch | Advance | 200.00 |
| " " | " | 350.00 |
| City of Lincoln | Permit | 15.00 |
| S. Koch | Advance | 300.00 |
| Lincoln G. & E. L. Co. | Contg. | .90 |
| O. V. P. Stout | Consultation | 30.00 |
| Western Glass & Pt. Co. | Glass | 6.75 |
| State Journal Co. | Blue Print Paper | 5.00 |

| | | |
|---|---|---|
| Pay Roll | | 62.38 |
| Trans. Voucher 583 | | 15.00 |
| S. Koch | Advance | 600.00 |
| " " | " | 600.00 |
| " " | " | 275.00 |
| " " | " | 300.00 |
| O. R. Mallat | Photos | 11.00 |
| Reimers & Kauffman | Foundation | 802.37 |
| Pay Roll | | 7.90 |
| Trans. Voucher 603B | | 39.90 |
| S. Koch | Advance | 600.00 |
| " " | " | 300.00 |
| " " | " | 375.00 |
| " " | " | 275.00 |
| " " | " | 275.00 |
| Pay Roll | | 1.36 |
| Trans. Voucher 616 | | 22.80 |
| S. Koch | Advance | 250.00 |
| " " | " | 200.00 |
| " " | " | 250.00 |
| Order No. 106 | | 29.22 |
| " " 108 | " | 1.26 |
| S. Koch | Advance | 150.00 |
| F. W. Brown Lbr. Co. | Lumber | 22.02 |
| Nebr. Hdw. Co. | Misc. Hdw. | 4.38 |
| Western Supply | Fittings | 73.80 |
| Order No. 111 | | 10.69 |
| Western Supply Co. | Fittings | 84.75 |
| Pay Roll | | 151.00 |
| Trans. Voucher 632 | | 29.00 |

| | | | |
|---|---|---|---|
| S. Koch | Advance | 150.00 | |
| Trans. Voucher 634C | | 9,000.00 | |
| Western Gas Const. Co. | Payment | 626.92 | |
| Lincoln G. & E. L. Co. | Cont'g | 4.50 | |
| R. S. Young Co. | Bldg. Material | 2.45 | |
| Dahsen & Ress | Machine Work | 2.00 | |
| Western Supply Co. | Fittings | .30 | |
| Pay Roll | | 8.30 | |
| Gross Amount charged to New Gas Holder | | 42,748.17 | |
| Less Credits direct to ledger | | 6.75 | |
| Net Amount charged to New Gas Holder | | | 42,741.42 |

1701 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1908.

Charged to Acct. #G8, Governor and Connections; New Holder:

| | | |
|---|---|---|
| Pay Roll | | 7.00 |
| C. R. I. & P. | Freight | 115.78 |
| Pay Roll | | 18.82 |
| C. B. & Q. | Freight | 2.00 |
| Lincoln G. & E. L. Co. | Contg. | .70 |
| Lincoln Trans. Co. | Frt. & Dray | 45.85 |
| Order No. 98 | | .80 |
| B. F. Goodrich | Gas Bags | 66.00 |
| Reynolds Gas Reg. Co. | Holder Governor | 360.00 |
| F. W. Brown Co. | Lumber | 34.11 |

| | | |
|---|---|---|
| Western Glass & Pt. Co. | Red Lead | 1.00 |
| Western Gas Const. Co. | Pipe & Valves | 1,044.90 |
| Pay Roll | | 193.37 |
| Western Glass & Pt. Co. | Red Lead | 2.00 |
| D. D. Price | Running Levels | 5.00 |
| Lincoln Trans. Co. | Frt. & Dray | 60.01 |
| Nebr. Hdw. Co. | Mis. Hdw. | 11.64 |
| Western Supply Co. | Fittings | 2.50 |
| Order No. 100 | | 5.92 |
| Order No. 101 | | 22.40 |
| C. P. Hahn | Brick, Sand, Lime, Lbr., Labor. | 294.38 |
| C. R. I. & P. | Freight | 10.34 |
| Order No. 106 | | 31.58 |
| Lincoln G. & E. L. Co. | Contg. | .88 |
| F. W. Brown Co. | Lumber | 2.78 |
| Dr. E. B. Finney | Medical services | 1.80 |
| Nebr. Hdw. Co. | Misc. Hdw. | 8.45 |
| Western Supply | Fittings | 2.50 |
| Western Glass & Pt. Co. | Red Lead and White | 2.00 |
| R. S. Young Co. | Sand, Clay, Cement | 70.66 |
| Lincoln Trans. Co. | Frt. & Dray | 3.24 |
| Western Gas Const. Co. | C. I. Pipe & Fittings | 476.80 |
| Western Glass & Pt. Co. | White lead | 1.00 |
| Nebr. Hdw. Co. | Misc. Hdw. | 2.97 |
| R. S. Young Co. | Sand, Clay, Cement | 15.98 |
| Pay Roll | | 325.68 |
| Order No. 117 | | 23.13 |
| " " 118 | | 5.47 |
| C. P. Hahn | Brickwork, Sand, etc. | 79.71 |
| Capital City Iron Works | Castings | 23.85 |

| | | | |
|---|---|---|---|
| John Westover | Circles | 9.30 | |
| R. S. Young Co. | Building Material | 2.45 | |
| Dahsen & Ress | Machine work | 13.80 | |
| Nebr. Hdw. Co. | Misc. Hdw. | 2.96 | |
| Western Supply Co. | Fittings | 13.64 | |
| Western Glass & Pt. Co. | White & red lead | 2.00 | |
| Pay Roll | | 98.41 | |
| Trans. Voucher 645 | | 32.62 | |
| Gross Amount charged Acct. #G8 | | 3,558.18 | |
| Less Credits | | 169.38 | |
| Net Amount charged to Acct. #G8, 1908 | | | 3,388.80 |

1702 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1908.

Charged to Acct. #G9, Uptown Booster:

| | | | |
|---|---|---|---|
| Western Gas Cons. Co. | Valves & Pipe | 147.05 | |
| Western Supply | Fittings | 23.00 | |
| Order No. 112 | | 6.77 | |
| Nebr. Hdw. Co. | Misc. Hdw. | 2.11 | |
| Korsmeyer Co. | Misc. Elect. | 7.16 | |
| Pay Roll | | 111.09 | |
| Order No. 117 | | 1.34 | |
| " " 118 | | 16.87 | |
| C. P. Hahn | Roof, sand, cement, etc. | 28.34 | |
| Eng. Dept. | Permits & Asphalt | 8.20 | |

| | | | |
|---|---|---|---|
| R. L. Smith | Split Collar | 1.50 | |
| Dahsen & Ress | Machine Work | 6.00 | |
| Korsmeyer Co. | Conduit & Bushings | 2.38 | |
| Nebr. Hdw. Co. | Misc. Hdw. | 9.00 | |
| Western Supply Co. | Fittings | 3.30 | |
| Pay Roll | | 32.21 | |
| Trans. Voucher 645 | | 18.13 | |
| Gross (and net) charged to Uptown Booster, 1908 | | | 424.54 |
| Charged to Acct. #G10, New Water Gas Exhauster: | | | |
| Lincoln Trans. Co. | Frt. & Dray | 40.86 | 40.86 |
| Charged to Acct. #300, Gas Works; Additions: | | | |
| Geo. Dayton, City Treas., Third Street | | 150.00 | 150.00 |
| Less credit direct from Ledger, Acct. #G1 | | ..... | 75.00 |
| Total Charged Works Accounts, year 1908 | | | 63,060.52 |

1703

Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year 1909.*

Charged to Acct. #300; Gas Works; Additions:

| | | |
|---|---|---|
| Trans. Voucher 764 | 300.00 | |
| Trans. Voucher 784 | 124.20 | |

| | | | |
|---|---|---|---|
| Gross Amount charged Gas Works, 1909 | | 424.20 | |
| Less Credits | | 167.74 | |
| Net amount charged Gas Works, 1909 | | | 256.46 |

**Charged to Acct. #G1; New Horses & Wagons:**

| | | | |
|---|---|---|---|
| Jno Sullivan | Horse & Cart | 22.50 | |
| Forbes Stables | One Horse | 100.00 | |
| Gross (and net) amount charged Acct. G1 | | | *122.50* |

**Charged to Acct. #G5; New Water Gas Machine:**

| | | | |
|---|---|---|---|
| Dahsen & Ress | Machine Work | 20.00 | |
| Nebr. Hdw. Co | Misc. Hdw. | 1.43 | |
| Pay Roll | | 7.92 | |
| Western Supply Co | Fittings | 29.24 | |
| Western Gas Cons. Co | Payment | 500.00 | |
| Order No. 25 | | 4.50 | |
| Western Gas Cons. Co | Payment | 1,000.00 | |
| " " " " | " | 1,000.00 | |
| Gross amount charged Acct. G5 | | 2,563.09 | |
| Less Credits | | 8.40 | |
| Net amount charged Acct. G5 | | | 2,554.69 |

| | | | |
|---|---|---|---|
| **Charged to Acct. #G7; New Gas Holder:** | | | |
| Lincoln Water Wks. Dept. | Water | 214.71 | |
| Am. Metal Hose Co. | Copper Hose | 88.50 | |
| Gross amount charged Acct. G7 | | 303.21 | |
| Less Credits | | 105.86 | |
| Net amount charged Acct. G7 | | ..... | 197.35 |
| **Charged to Acct. #G6; New Water Gas House:** | | | |
| Otis Elevator Co. | Semi auto Gales | 30.00 | |
| Western Supply Co. | Fittings | 6.26 | |
| R. S. Young Co. | Bldg. Material | 31.98 | |
| Nebr. Material Co. | Sand, Stone, etc. | 31.85 | |
| R. S. Young Co. | Bldg. Material | 28.62 | |
| Pay Roll | | 60.08 | |
| Baker Hdw. Co. | Misc. Hdw. | 1.80 | |
| Cooper & Cole | Fittings | .90 | |
| Pay Roll | | 16.86 | |
| Arthur Gaddis | Labor | 15.00 | |
| R. S. Young Co. | Bldg. Material | 12.50 | |
| Gross Amount charged Acct. G6 | | 235.85 | |
| Less Credits | | 10.00 | |
| Net amount charged Acct. G6 | | ..... | 225.85 |
| **Charged to Acct. #G8; Governor and Connection; New Holder:** | | | |
| Lincoln G. & E. L. Co. | Contg. | .90 | |

*Items Charged to Gas Works Construction Account, Year* 1909.

| | | |
|---|---|---|
| Dahsen & Ress | Machine Work | 3.75 |
| Western Gas Cons. Co. | Lumber | 12.00 |
| Pay Roll | | 5.63 |
| B. F. Sturtevant Co | #8 Gas Exhauster | 450.00 |
| R. S. Young Co. | Stone | 18.00 |
| Linc. Trans. Co. | Frt. & Dray | 24.00 |
| Pay Roll | | 14.58 |
| Order No. 68 | | 1.14 |
| Baker Hdw. Co. | Misc. Hdw. | 4.10 |
| Linc. Trans. Co. | Frt. & Dray | 36.37 |
| Western Gas Cons. Co. | Ells, Tees, Plugs, Etc. | 168.00 |
| Western Glass & Pt. Co. | Paint, etc. | .80 |
| R. S. Young Co | Bldg. Material | 9.00 |
| Pay Roll | | 107.98 |
| Order No. 76 | | 11.23 |
| Baker Hdw. Co | Misc. Hdw. | 1.40 |
| Crane Co. | ⅜ medium straightway valve screwed | 7.50 |
| Lincoln Trans. Co. | Frt. & Dray | 5.40 |
| Western Glass & Pt. Co. | Lead & Oil | 2.30 |
| Western Brick & Supply Co. | Clay, sand, cement, etc. | 22.50 |
| Nickols Roofing Co. | Tar Paper | 1.65 |
| Pay Roll | | 20.82 |
| Crane Co. | Blk. Pipe | 198.18 |
| B. F. Sturtevent Co. | Exhauster | 317.50 |
| Western Supply Co. | Fittings | 25.00 |

| | | | |
|---|---|---|---|
| H. W. Johns Manville Co. | Vitribestos Cong. | 14.26 | |
| Linc. Trans. Co. | Frt. & Dray | 4.95 | |
| Pay Roll | | 40.63 | |
| F. W. Brown Lbr. Co. | Lumber | 12.06 | |
| Baker Hdw. Co. | Misc. Hdw. | 2.15 | |
| Lincoln Trans. Co. | Frt. & Dray | .65 | |
| Rudge & Guenzel Co | 15 yds. Drilling | 2.25 | |
| Sunderland Roofing Co. | Leather Belt | 26.21 | |
| Western Supply Co | Fittings | 2.26 | |
| Order No. 92 | | 4.83 | |
| Pay Roll | | 70.36 | |
| Nichols Roofing Co. | Asbestos covering | 30.00 | |
| Rudge & Guenzel Co | Muslin | 1.65 | |
| Western Brick & Supply Co. | Clay, sand, cement | 6.50 | |
| Pay Roll | | 29.93 | |
| Gross amount charged Acct. G8 | | 1,718.42 | |
| Less Credits | | 82.50 | |
| Net amount charged Acct. G8 | | ..... | 1,635.92 |

Charged to Acct. #G9; Uptown Booster:

| | | | |
|---|---|---|---|
| Order No. 5 | | 19.16 | |
| Western Gas Const. Co. | Reducers | 10.00 | |
| Eng. Dept. | Permit | 1.00 | |
| Linc. Trans. Co. | Frt. & Dray | 1.48 | |
| Pay Roll | | 24.86 | |
| Nebr. Tel. Co. | Service | 2.35 | |
| Pay Roll | | 60.00 | |

| | | | |
|---|---|---|---|
| Hardy Furn. Co. | Bolts | 10 | |
| Linc. Trans. Co. | Frt. & Dray | 4.60 | |
| Am. Blower Co. | Frt. on exhauster | 2.34 | |
| Gross (and net) amt. charged to Acct. G9 | | ..... | 125.89 |

1705 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1909.

Charged to Account # G10, New Water Gas Exhauster:

| | | |
|---|---|---|
| John Westover | Beams | 11.13 |
| Western Glass & Pt. Co. | Red Lead | 1.00 |
| Western Supply | Fittings | 24.46 |
| Pay Roll | | 96.40 |
| Western Gas Cons. Co. | Lumber | 25.00 |
| Nebr. Hdw. Co. | Misc. Hdw. | .53 |
| B. F. Sturtevant Co. | Exhauster | 535.00 |
| R. S. Young Co. | Bldg. Material | 6.86 |
| Lincoln Trans. Co. | Frt. & Dray | 9.34 |
| Nebr. Hdw. Co. | Misc. Hdw. | 1.90 |
| Pay Roll | | 20.07 |
| Western Gas Cons. Co. | Pipe, etc. | 86.00 |
| Western Glass & Pt. Co. | Red Lead | 1.00 |
| Pay Roll | | 57.18 |
| Order No. 39 | | 11.80 |
| Cooper & Cole | Fittings | 9.94 |
| Lincoln Trans. Co. | Frt. & Dray | 28.48 |
| Order No. 45 | | 8.00 |

| | | | |
|---|---|---|---|
| Jno. Westover | Iron work | 2.00 | |
| Lincoln Trans. Co | Frt. & Dray | .94 | |
| Gross amount charged Acct. G10 | | 937.03 | |
| Less Credits | | 2.76 | |
| Net amount charged Acct. G10 | | | 934.27 |

Charged to Acct. # G11, Service Governors:

| | | | |
|---|---|---|---|
| Pay Roll | | 9.16 | |
| Order No. 15 | | 1.20 | |
| Reynolds Gas Reg. Co | Governors | 69.90 | |
| Western Union Co | Telegram | .76 | |
| Order No. 19 | | 4.17 | |
| Linc. Trans. Co | Frt. & Dray | 3.00 | |
| Pay Roll | | 20.58 | |
| Drs. Everett | Medical service | 2.00 | |
| Reynolds Gas Reg. Co | Governors | 712.50 | |
| Order No. 28 | | 33.25 | |
| Lincoln Trans. Co | Frt. & Dray | 32.65 | |
| Western Glass Co | Lead | .20 | |
| Pay Roll | | 69.26 | |
| Reynolds Gas Reg. Co | Governors | 407.40 | |
| Pay Roll | | 52.93 | |
| Order No. 39 | | 17.24 | |
| Lincoln Trans. Co | Frt. & Dray | 15.63 | |
| Order No. 45 | | 6.32 | |
| " " 47 | | 5.93 | |
| " " 48 | | 1.74 | |

| | | | |
|---|---|---|---|
| Reynolds Gas Reg. Co. | Governors | 375.00 | |
| Lincoln Trans. Co. | Frt. & Dray | 33.74 | |
| Order No. 52 | | 1.94 | |
| Pay Roll | | 32.41 | |
| Order No. 56 | | 9.61 | |
| Lincoln Trans. Co. | Frt. & Dray | 1.35 | |
| Pay Roll | | 27.23 | |
| Reynolds Gas Reg. Co. | Governors | 99.90 | |
| Pay Roll | | 91.11 | |
| Lincoln Trans. Co. | Frt. & Dray | 16.45 | |

1706 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1909.

| | | | |
|---|---|---|---|
| Lincoln Trans. Co. | Frt. & Dray | 2.55 | |
| Reynolds Gas Reg. Co. | Governors | 442.50 | |
| Western Glass & Pt. Co. | White lead | .10 | |
| Pay Roll | | 77.78 | |
| Cooper & Cole | Fittings | .16 | |
| Pay Roll | | 19.85 | |
| Lincoln Trans. Co. | Frt. & Dray | 1.15 | |
| Newell Novelty Co. | Repair Seal | 3.50 | |
| Pay Roll | | 9.01 | |
| Pay Roll | | 28.77 | |
| Lincoln Trans. Co. | Frt. & Dray | 15.50 | |
| Reynolds Gas Reg. Co. | Governors | 375.00 | |
| Pay Roll | | 55.32 | |
| Gross (and Net) charged to Acct. G11 | | ..... | 3,185.75 |

3570

Charged to Acct. # G12, Blower for Old Water Gas Machine:

| | | | |
|---|---|---|---|
| Baker Hdw. Co. | Misc. Hdw. | .65 | |
| B. F. Sturtevant Co. | Gas Blower | 225.00 | |
| Pay Roll | | 48.09 | |
| Cooper & Cole | Fittings | .90 | |
| Lincoln Trans. Co. | Frt. & Dray | 14.65 | |
| C. P. Hahn | Labor & Brick | 76.05 | |
| T. J. Thorpe Co. | Machine work | 6.30 | |
| R. S. Young Co. | Building Material | 15.12 | |
| Nebr. Material Co. | Sand, Stone | 6.17 | |
| F. W. Brown Lbr. Co. | Lumber | 4.52 | |
| Baker Hdw. Co. | Misc. Hdw. | 2.75 | |
| Pay Roll | | 35.48 | |
| Nichols Roofing Co. | Tar Paper & Pitch | 4.00 | |
| Nebr. Hdw. Co. | Blower pipe & time | 23.86 | |
| Gross (and net) charged to Acct. # G12 | | ..... | 463.54 |

Charged to Acct. # G13, New Oil Tanks:

| | | | |
|---|---|---|---|
| Pay Roll | | 22.20 | |
| R. S. Young Co. | Stone | 50.32 | |
| F. W. Brown Lbr. Co. | Lumber | 23.23 | |
| Baker Hdw. Co. | Misc. Hdw. | 3.70 | |
| Pay Roll | | 172.55 | |
| C. & N. W. Ry. | Frt. | 84.00 | |
| Wm. Graver Tank Works | Frt. on V. T. Car 115 | 5.86 | |
| R. S. Young Co. | Bldg. Material | 49.29 | |
| Pay Roll | | .40 | |

| | | | |
|---|---|---|---|
| Order No. 76 | | .48 | |
| Cooper & Cole Bros | Fittings | 11.64 | |
| Wm. Graver Tank W'ks | 2 Cyl. Tanks | 630.00 | |
| Riggs Pharmacy | Litherage, glycerine | 1.75 | |
| Sullivan & Schaberg Co | Unloading Tanks | 54.45 | |
| Tran. Voucher 770 | | 18.33 | |
| Pay Roll | | 28.16 | |
| F. H. Freeman | Caulking Tanks | 11.55 | |
| Lincoln Steam Paste Co | Corn Meal | 1.00 | |
| Cooper & Cole | Fittings | 20.41 | |
| Gross (and net) charged to Acct. G13 | | | 1,189.32 |

1707 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year 1909.*

Charged to Acct. #G14; Turbine Blower:

| | | | |
|---|---|---|---|
| Baker Hdw. Co. | Misc. Hdw. | 2.02 | |
| Lincoln G. & E. L. Co | Contg. | .38 | |
| Lincoln Trans. Co. | Frt. & Dray | 82.14 | |
| Western Supply Co | Fittings | 7.78 | |
| Pay Roll | | 57.93 | |
| Baker Hdw. Co. | Misc. Hdw. | .20 | |
| Nebr. Hdw. Co | Pipe, elbows and time | 56.82 | |
| B. F. Sturtevant Co. | Slide blast gate | 28.05 | |
| Western Glass & Pt. Co. | Plaster paris | .30 | |
| Sunderland Roofing Co | Globe valve | 4.95 | |
| Lincoln Trans. Co. | Frt. & Dray | 1.70 | |

| | | | |
|---|---|---|---|
| Pay Roll | | 13.71 | |
| Nebr. Hdw. Co. | | 28.52 | |
| Pay Roll | | 2.37 | |
| Gross (and net) charged to Acct. G14 | | ..... | 286.87 |
| Charged to Acct. #H1; Havelock Main Extension: | | | |
| State Journal Co. | Blue Print Paper | 1.25 | |
| Lincoln G. & E. L. Co. | Contg. | 2.00 | |
| Western Supply Co. | Plumbers oakum | 2.50 | |
| Harry Porter | Profile paper | 1.25 | |
| Pay Roll | | 31.86 | |
| Baker Hdw. Co. | Misc. Hdw. | 1.65 | |
| Brown Lbr. Co. | Lumber | 21.85 | |
| Cooper & Cole | Fittings | 10.50 | |
| Order No. 109 | | 100.57 | |
| Pay Roll | | 810.57 | |
| Lincoln G. & E. L. Co. | Contg. | 4.50 | |
| Gross amount charged to Acct. #H1 | | 988.50 | |
| Less Credits Transfer Vo. 846 | | 105.00 | |
| Net amount charged to Account #H1 | | ..... | 883.50 |
| Less Credit direct from Ledger | | ..... | .90 |
| Total charged Works Accounts, year 1909 | | ..... | 12,061.01 |

*Items Charged to Gas Works Construction Account, Year* 1910.

Charged to Acct. #G1; New Horses & Wagons:

| | | | |
|---|---|---|---|
| R. G. Barrett | Wagon & Harness | 22.50 | |
| Girard Cycle Co. | One Motorcycle | 76.00 | |
| Forbes Stables | Team of horses | 81.25 | |
| H. Tubman | One motorcycle | 148.00 | |
| J. H. Tubman | 1 motor lamp & Licence No. | 5.20 | |
| Girard Cycle Co. | Bicycle | 6.25 | |
| Gross (and net) charged to Acct. G1 | | | 339.20 |

Charged to Acct. #G10; New Water Gas Exhauster:

| | | | |
|---|---|---|---|
| Western Supply | Fittings | .54 | .54 |

Charged to Acct. #G11; Service Governors:

| | | | |
|---|---|---|---|
| Pay Roll | | 76.68 | |
| Lincoln Trans. Co. | Frt. & Dray | 3.02 | |
| " " " | " " | 15.40 | |
| Reynolds Gas Reg. Co. | Governors | 442.50 | |
| Pay Roll | | 37.50 | |
| " " | | 24.18 | |
| " " | | 45.88 | |
| Lincoln Trans. Co. | Frt. & Dray | 15.46 | |
| Reynolds Gas Reg. Co. | Governors | 375.00 | |

| | | | |
|---|---|---|---|
| Pay Roll | | 19.32 | |
| Pay Roll | | 36.01 | |
| Reynolds Gas Reg. Co. | Governors | 442.50 | |
| Pay Roll | | 65.82 | |
| Lincoln Trans. Co. | | 2.82 | |
| Lincoln G. & E. L. Co. | Contg. | 1.35 | |
| Lincoln Trans. Co. | Frt. & Dray | 26.96 | |
| Reynolds Gas Reg. Co. | Governors | 375.00 | |
| Pay Roll | | 61.92 | |
| Lincoln Trans. Co. | Frt. & Dray | 1.00 | |
| Pay Roll | | 5.36 | |
| Lincoln Trans. Co. | Frt. & Dray | 18.54 | |
| Pay Roll | | 56.07 | |
| Reynolds Gas Reg. Co. | Governors | 375.00 | |
| Order No. 188 | | .23 | |
| Lincoln Trans. Co. | Frt. & Dray | 16.82 | |
| Reynolds Gas Reg. Co. | Governors | 407.40 | |
| Pay Roll | | 103.18 | |
| Order No. 197 | | 71.18 | |
| Lincoln Trans. Co. | Frt. & Dray | 15.37 | |
| Reynolds Gas Reg. Co. | Governors | 356.04 | |
| Pay Roll | | 135.99 | |
| Order No. 208 | | 136.05 | |
| Gross (and net) charged to Acct. #G11 | | ..... | 3,765.55 |
| Charged to Acct. #G14; Turbine Blower: | | | |
| Western Gas Const. Co. Final Payment | | 1,050.00 | 1,050.00 |

*Items Charged to Gas Works Construction Account, Year 1910.*



Charged to Acct. #G15; Gas Meter Shop; Additions:

| | | | |
|---|---|---|---|
| Lincoln Trans. Co. | Frt. & Dray | 9.37 | |
| Maryland Meter Co | Standard meter prover | 125.00 | |
| Pay Roll | | 18.18 | |
| Rudge & Guenzel Co | Drawer Cabinet | 15.00 | |
| F. W. Brown Co | Lumber | 5.24 | |
| Gross (and net) charged Acct. #G15 | | ..... | 172.79 |

Charged to Acct. #G16; Pyrometer for W. G. Machine:

| | | | |
|---|---|---|---|
| Bristol Co. | Pyrometer | 53.10 | 53.10 |

Charged to Acct. #G17; New District Holder:

| | | | |
|---|---|---|---|
| Lincoln G. & E. L. Co. | Contg. | 2.75 | |
| State Journal Co. | Blue Print Paper | 2.50 | |
| Harry Porter | Detail Paper | .85 | |
| W. S. Scott | Surveying lots | 6.00 | |
| Mo. Pac. Ry. Co. | Frt. | 147.02 | |
| Hall Bros. Co. | Misc. Hdw. | 1.25 | |
| Lallie Surveying Inst. Co. | Level & Leveling Rod | 51.00 | |
| Rudge & Guenzel | Steel Tape | 3.90 | |
| Pay Roll | | 29.08 | |
| Lincoln Trans. Co. | Frt. & Dray | 12.00 | |

| | | |
|---|---|---|
| Western Supply | Fittings | 15.66 |
| Hall Bros. Co. | Misc. Hdw. | 1.20 |
| Lincoln G. & E. L. Co. | Contg. | 14.00 |
| C. P. Hahn | Governor house | 458.64 |
| Mo. Pac. Ry. Co. | Dem. | 1.00 |
| Trans. Voucher 960 | Note W. G. C. Co. | 3,500.00 |
| Order No. 171 | | 5.19 |
| Clark Lbr. Co. | Lumber, paper, etc. | 2.84 |
| Clark & Livi Co. | Labor & Material | 33.50 |
| Lincoln G. & E. L. Co. | Contg. | 5.70 |
| Jno. Westover | 8 Beams | 31.20 |
| Pay Roll | | 15.90 |
| Robt. Malone | Contract for Excavating | 2,900.00 |
| C. P. Hahn | Masonry work | 1,000.00 |
| Nebr. Tel. Co. | Service | 6.80 |
| Order No. 178 | | .18 |
| T. J. Thorpe Co. | Machine work | 2.80 |
| Pay Roll | | 25.47 |
| Lincoln G. & E. L. Co. | Contg. | 7.00 |
| Mo. Pac. Ry. Co. | Frt. | 254.14 |
| Henry Schremser | Cash advance | 150.00 |
| C. P. Hahn | Masonry Work | 5,500.00 |
| Henry Schremser | Cash advance | 200.00 |
| " " | " " | 275.00 |
| Mo. Pac. Ry. Co. | Demurrage | 2.00 |
| Hall Bros. Co. | Misc. Hdw. | .70 |
| Lincoln G. & E. L. Co. | Contg. | 6.50 |
| Western Supply Co. | Fittings | 1.50 |
| Pay Roll | | 139.74 |
| Order No. 188 | | 56.06 |

| | | |
|---|---|---|
| Henry Schremser | Cash advance | 275.00 |
| " " | " " | 350.00 |

1710 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1910.

| | | |
|---|---|---|
| Nebr. Telephone Co | Service | 4.00 |
| Clark Lumber Co. | Lumber | 1.47 |
| C. P. Hahn | Labor & Material | 183.27 |
| Baker Hdw. Co. | Misc. Hdw. | 2.08 |
| Hall Bros. | " " | .70 |
| Hardy Furn. Co. | Bolts | .45 |
| Korsmeyer Co. | Misc. Elec. | 7.87 |
| Lincoln Trans. Co. | Frt. & Dray | 5.36 |
| T. J. Thorpe Co | Machine work | 2.75 |
| Lincoln G. & E. L. Co. | Contg. | 3.50 |
| Western Gas Const. Co. | Pipe, etc. | 49.50 |
| Western Glass & Pt. Co. | Red lead | 1.15 |
| Western Supply Co. | Fittings | .39 |
| Reimers-Kaufman Co. | Labor & material | 8.80 |
| Pay Roll | | 144.67 |
| Order No. 197 | | 15.75 |
| " " 198 | | 147.17 |
| Robt. Malone | Contract excavating | 27.96 |
| Mo. Pac. Ry. Co. | Steel tank & truck | 177.18 |
| Western Gas Const. Co. | Dist. Holder (Note) | 2,250.00 |
| Hall Bros. | Screen wire | 1.80 |
| Keens & Sharp | Muslin & paste | 6.45 |
| Lincoln G. & E. L. Co. | Contg. | 4.00 |

| | | | |
|---|---|---|---|
| R. L. Smith | Pulley | 1.35 | |
| Western Supply | Fittings | 17.16 | |
| John Westover | Iron | 2.90 | |
| Pay Roll | | 145.23 | |
| Order No. 208 | | 128.88 | |
| " " 209 | | 2.84 | |
| Gross amount charged account #G17 | | 18,838.70 | |
| Less Credits | | 662.64 | |
| Net amount charged Account #G17 | | ..... | 18,176.06 |
| Charged to Acct. #G18; Pressure Indicator: | | | |
| Lincoln Trans. Co. | Frt. & Dray | 5.56 | |
| " " " | " " | 8.61 | |
| Connelly Iron Sponge Gov. Co. | Pressure Gauge | 300.00 | |
| Illinois Elect. Co. | Batteries | 55.50 | |
| Korsmeyer Co. | Misc. Elec. | 1.80 | |
| Lincoln Drug Co. | Blue Vitriol | 7.00 | |
| Lincoln G. & E. L. Co. | Contg. | 2.60 | |
| Riggs Pharmacy | Paraline | .25 | |
| Pay Roll | | 24.07 | |
| Order No. 208 | | .27 | |
| " " 209 | | 4.42 | |
| Gross (and net) charged to Acct. #G18 | | ..... | 410.08 |
| Charged to Acct. #G19, New Blacksmith Shop: | | | |
| F. W. Brown Lbr. Co. | Lumber | 43.74 | |
| Rudge & Guenzel Co. | Misc. Hdw. | 5.11 | |
| Pay Roll | | 38.25 | |

*Items Charged to Gas Works Construction Account, Year 1910.*

| | | | |
|---|---|---|---|
| Nichols Roofing Co. | Tar Paper | 7.23 | |
| Western Supply Co. | Fittings | 39.04 | |
| Pay Roll | | 21.23 | |
| Gross (and net) charged to Acct. #G19 | | ..... | 154.60 |

Charged to Acct. #H1; Havelock Main Extension:

| | | | |
|---|---|---|---|
| Order No. 123 | | 2,034.96 | |
| F. W. Brown Co. | Lumber | 4.74 | |
| Cooper & Cole | Fittings | 12.60 | |
| Lincoln G. & E. L. Co. | Contg. | 5.00 | |
| State Oil Co. | Oil | 2.25 | |
| Pay Roll | | 677.35 | |
| Order No. 134 | | 404.82 | |
| Pay Roll | | 299.51 | |
| Order No. 136 | | 449.92 | |
| Cooper & Cole | 5 bales oakum | 10.50 | |
| Order No. 141 | | 2,853.43 | |
| Western Supply Co. | Fittings | 10.00 | |
| Pay Roll | | 1,504.69 | |
| Lincoln G. & E. L. Co. | Contg. | 5.50 | |
| Penn Tank Line Co. | Gasoline & Oil | .75 | |
| Pay Roll | | 87.07 | |
| Lincoln Trans. Co. | Frt. & Dray | 1.50 | |
| Lincoln G. & E. L. Co | Contg. | 7.50 | |

| | | | |
|---|---|---|---|
| Order No. 149 | | 200.40 | |
| T. J. Thorpe Co. | Machine work | 1.20 | |
| Lincoln G. & E. L. Co. | Contg. | 1.50 | |
| Pay Roll | | 137.83 | |
| T. J. Thorpe Co. | Drill & Tap drip boxes | 1.80 | |
| T. J. Thorpe Co. | Machine work | .90 | |
| Pay Roll | | 36.85 | |
| Penn Tank Line Co. | Coal oil & Gasoline | .75 | |
| Order No. 171 | | 608.44 | |
| Penn Tank Line Co. | Gasoline & Oil | .75 | |
| Pay Roll | | 305.00 | |
| C. R. I. & P. Ry. Co. | Permit for pipe line under R. W. | 5.00 | |
| Order No. 177 | | 12.58 | |
| Pay Roll | | 26.97 | |
| " " | | 34.20 | |
| Crane Co. | Pipe | 10.40 | |
| Lincoln Trans. Co. | Frt. & Dray | 3.50 | |
| Lloyd Const. Co. | Pressure Control | 90.00 | |
| Pay Roll | | 20.87 | |
| Gross (and net) charged to Acct. #H1 | | ..... | 9,871.03 |
| Total charged Works Accounts, Year 1910 | | ..... | 33,992.95 |

*Items Charged to Gas Works Construction Account, Year* 1911.

Charged to Acct. #G1, New Horses & Wagons:

| | | | |
|---|---|---|---|
| Harvey Tubman | One motorcycle | 150.00 | |
| Henkle & Joyce Hdw. Co | Misc. Hdw. | 47.14 | |
| Forbes Stables | Buggy | 52.00 | |
| J. H. Tubman | Generator & Cyclometer | 10.40 | |
| Gross (and net) charged to Acct. #G1 | | | 259.54 |

Charged to Acct. #G11, Service Governors:

| | | | |
|---|---|---|---|
| Lincoln Trans. Co. | Frt. & Dray | 20.03 | |
| " " " | " " | 15.56 | |
| Reynolds Gas Reg. Co. | Governors | 417.00 | |
| Order No. 216 | | 89.80 | |
| Pay Roll | | 140.12 | |
| Ted Schlessinger | Use of horse & wagon | 32.00 | |
| Lincoln Trans. Co. | Frt. & Dray | 14.63 | |
| Reynolds Gas Reg. Co. | Governors | 817.50 | |
| Order No. 220 | | 94.10 | |
| Pay Roll | | 101.25 | |
| Ted Schlessinger | Horse & Wagon | 30.00 | |
| C. B. & Q. Ry. Co. | Freight | 8.62 | |
| Reynolds Gas Reg. Co. | Governors | 375.00 | |
| Order No. 226 | | 27.68 | |
| Pay Roll | | 29.86 | |

| | | |
|---|---|---|
| C. B. & Q. Ry. Co. | Freight | 6.22 |
| C. B. & Q. Ry. Co. | " | 14.63 |
| Reynolds Gas Reg. Co. | Governors | 375.00 |
| Order No. 235 | | 75.24 |
| Pay Roll | | 75.38 |
| Order No. 240 | | 75.94 |
| Pay Roll | | 72.87 |
| C. & N. W. Rv. Co. | Freight | 20.70 |
| Reynolds Gas Reg. Co. | Governors | 442.50 |
| Pay Roll | | 49.67 |
| Order No. 245 | | 13.66 |
| C. B. & Q. Ry. Co. | Freight | 14.63 |
| Reynolds Gas Reg. Co. | Governors | 375.00 |
| Pay Roll | | 61.56 |
| Order No. 254 | | 52.34 |
| Pay Roll | | 86.32 |
| Order No. 259 | | 61.87 |
| " " 263 | | 9.84 |
| Pay Roll | | 2.40 |
| C. & N. W. Ry. Co. | Frt. | 14.63 |
| Kostka Glass & Pt. Co | Enamel & Brush | .75 |
| Pay Roll | | 38.03 |
| Order 269 | | 14.32 |
| Reynolds Gas Reg. Co. | Governors | 1,125.00 |
| C. & N. W. Ry. Co. | Freight | 28.71 |
| Pay Roll | | 96.41 |
| Order No. 276 | | 105.67 |
| C. & N. W. Rv. Co. | Freight | 3.51 |
| Reynolds Gas Reg. Co. | Governors | 79.02 |
| Order No. 284 | | 76.74 |

| | | | |
|---|---|---|---|
| Pay Roll | | 54.58 | |
| Gross amount charged account G11 | | 5,736.29 | |
| Less credits | | 21.09 | |
| Net amount charged account G11 | | | 5,715.20 |



Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1911.



Charged to Acct. #G15, Gas Meter Shop Additions:

| | | | |
|---|---|---|---|
| F. W. Brown Co. | Lumber | 4.59 | 4.59 |

Charged to Acct. #G17, New District Holder:

| | | | |
|---|---|---|---|
| Lincoln Water Works Dept | Water | 233.83 | |
| Nebr. Material Co. | Material | 25.84 | |
| Clark Lumber Co. | Lumber | 6.25 | |
| Hall Bros. Co. | Brushes & pails | 6.80 | |
| Lincoln G. & E. L. Co. | Contg. | .50 | |
| Nichols Roofing Co. | Material | 70.80 | |
| Western Glass & Pt. Co. | Paint | 13.30 | |
| Order No. 216 | | 3.99 | |
| Pay Roll | | 25.04 | |
| C. Wilson | Cement | 160.00 | |
| Order No. 220 | | 1.60 | |
| Pay Roll | | 10.24 | |
| Western Brick & Supply Co. | Stone & Sand | 5.40 | |

| | | | |
|---|---|---|---|
| Pay Roll | | 28.98 | |
| C. B. & Q. Ry. Co. | Freight | 2.67 | |
| Griswold Seed Co. | Seed | 6.97 | |
| Harrison's Select Nursery Co. | Trees | 78.18 | |
| Pay Roll | | 22.74 | |
| Hall Bros. Co. | Hardware | 9.65 | |
| Lincoln G. & E. L. Co | Contg. | .40 | |
| Gross amount charged acct. #G17 | | 713.18 | |
| Less Credits | | 24.20 | |
| Net Amount charged Acct. #G17 | | | 688.98 |

Charged to Acct. #G18, Pressure Indicator:

| | | | |
|---|---|---|---|
| Clark Lumber Co. | Lumber | 6.72 | |
| Lincoln G. & E. L. Co | Contg. | .50 | |
| Order No. 216 | | .62 | |
| Order No. 220 | | .02 | |
| " " 221 | | 1.35 | |
| " " 226 | | .55 | |
| Gross (and net) charged to Acct. #G18 | | | 9.76 |

Charged to Acct. #G19, New Blacksmith Shop:

| | | | |
|---|---|---|---|
| Order No. 217 | | 4.85 | |
| Pay Roll | | 2.23 | |
| Gross (and net) charged to Acct. #G19 | | | 7.08 |

Charged to Acct. #G20, New Gas Meter Shop:

| | | | |
|---|---|---|---|
| F. W. Brown Lbr. Co. | Lumber | 2.25 | |
| Baker Hardware Co. | Nails | 1.60 | |
| Nebr. Material Co. | Sand & cement | 27.70 | |
| Pay Roll | | 38.97 | |
| " " | | 23.54 | |
| Geo. Knotts & F. A. Fuike | Labor & material | 975.00 | |
| Nebr. Material Co. | Sand & Cement | 6.43 | |
| Rudge & Guenzel | Soldering Iron | .35 | |

1714 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1911.

| | | | |
|---|---|---|---|
| Western Glass & Pt. Co. | Brushes | .40 | |
| Order No. 284 | | 23.28 | |
| Pay Roll | | 88.74 | |
| Gross (and net) charged to Acct. #G20 | | | 1,188.26 |

Charged to Acct. #H1, Havelock Main Extension:

| | | | |
|---|---|---|---|
| Lincoln Trans. Co. | Frt. & Dray | 1.26 | |
| T. J. Thorpe Co. | Keys | .40 | |
| Pay Roll | | 4.50 | |
| C. B. & Q. Ry. Co. | Freight | 2.22 | |
| Baker Hdw. Co. | Misc. Hdw. | .90 | |
| Butler Bros. | Cement & Sand | 12.96 | |
| Lloyd Const. Co. | Diaphra-m Control | 95.50 | |

| | | | |
|---|---|---|---|
| Western Gas Const. Co. | Valves | 16.50 | |
| Pay Roll | | 55.89 | |
| Clark Lbr. Co. | Lumber | 5.13 | |
| Nebr. Material Co. | Material | 10.03 | |
| Gross (and net) charged to Acct. #H1 | | | 205.29 |

Charged to Acct. #300, Gas Works; Additions:

| | | | |
|---|---|---|---|
| Lincoln G. & E. L. Co. | Uni. Place and Havelock franchises | 128.00 | 128.00 |
| Less credits direct from Ledger | | ..... | 57.50 |
| Total charged Works Accounts, Year 1911 | | | 8,149.20 |

1715

Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1912.

Charged to Acct. #G1, New Horses & Wagons:

| | | | |
|---|---|---|---|
| Forbes Stables | Horse | 58.75 | |
| J. H. Tubman | 1 Thor "5" Motorcycle | 210.19 | |
| Gross (and net) charged to Acct. #G1 | | | 268.94 |

Charged to Acct. #G11, Service Governors:

| | | | |
|---|---|---|---|
| C. & N. W. Ry. | Frt. | 29.26 | |
| Reynolds Gas Reg. Co. | Governors | 750.00 | |

| | | |
|---|---|---|
| Pay Roll | | 2.56 |
| Order No. 288 | | 19.15 |
| " " 293 | | 50.70 |
| Pay Roll | | 36.66 |
| Order No. 304 | | 45.63 |
| Pay Roll | | 19.80 |
| Order No. 310 | | 22.52 |
| Pay Roll | | 2.19 |
| Reynolds Gas Reg. Co. | Governors | 750.00 |
| Order No. 317 | | 8.45 |
| Pay Roll | | .80 |
| C. & N. W. Ry. Co | Frt. | 27.69 |
| Order No. 324 | | 32.68 |
| Pay Roll | | 23.89 |
| Order No. 330 | | 22.44 |
| Pay Roll | | 18.71 |
| C. B. & Q. Ry. Co | Frt. | 1.09 |
| Order No. 337 | | 31.44 |
| Pay Roll | | 14.20 |
| Reynolds Gas Mach. Co | Governors | 27.00 |
| Order No. 345 | | 36.81 |
| Pay Roll | | 12.49 |
| Reynolds Gas Reg. Co. | Governors | 742.50 |
| C. B. & Q. Ry. Co | Frt. | 31.00 |
| Order No. 352 | | 15.15 |
| Pay Roll | | 12.54 |
| Order No. 357 | | 12.71 |
| Pay Roll | | 3.59 |

| | | |
|---|---|---|
| Order No. 363 | 22.67 | |
| Pay Roll | 3.59 | |
| Gross amount charged account #G11 | 2,829.91 | |
| Less Credits | 73.49 | |
| Net amount charged account #G11 | | 2,756.42 |

Charged to Acct. #G17, New District Holder:

| | | |
|---|---|---|
| Order No. 357 | 27.92 | |
| Western Supply Co. | 7.57 | |
| Gross amount charged to Acct. #G17 | 35.49 | |
| Less Credits | 85.15 | |
| Net Credit on account #G17, 1912 | | 49.66 |



Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1912.

Charged to Acct. #G20, New Gas Meter Shop:

| | | |
|---|---|---|
| F. W. Brown Lbr. Co. | Lumber | .42 |
| Baker Hdw. Co. | Hdw. | 7.29 |
| Dierks Lbr. Co. | Lumber | 14.95 |
| Western Supply Co. | Fittings | 8.04 |
| Nebr. Material Co. | Cement | 45.75 |
| Rudge & Guenzel | Locks | 5.00 |

| | | | |
|---|---|---|---|
| Pay Roll | | 12.00 | |
| Order No. 288 | | .19 | |
| Brown Lbr. Co. | Lumber | 5.40 | |
| Rudge & Guenzel | Window Catch | .10 | |
| Pay Roll | | .60 | |
| Baker Hdw. Co. | Misc. Hdw. | 2.46 | |
| Henkle & Joyce | " " | 4.22 | |
| Lincoln Tent & Awning Co. | Awnings | 31.00 | |
| Pay Roll | | 7.82 | |
| Baker Hdw. Co. | Hdw. | 5.73 | |
| Pay Roll | | 3.93 | |
| Korsmeyer Co. | Misc. Elec. | .59 | |
| Order No. 331 | | 7.38 | |
| Pay Roll | | 2.37 | |
| Gross amount charged to Acct. #G20 | | 165.24 | |
| Less Credits | | 3.72 | |
| Net amount charged to Acct. #G20 | | | 161.52 |

Charged to Acct. #G21, New Gas Machine:

| | | | |
|---|---|---|---|
| F. W. Brown Lbr. Co. | Lumber | 4.68 | |
| Henkle & Joyce Co. | Hdw. | 5.13 | |
| Nichols Roofing Co. | Roofing | 1.75 | |
| Rudge & Guenzel Co. | Sledge Handles | 1.50 | |
| Pay Roll | | 68.90 | |
| Western Gas Const. Co. | New Gas Machine | 1,100.00 | |
| " " " " | " " " | 1,100.00 | |
| Baker Hdw. Co. | Hdw. | 12.55 | |

| | | | |
|---|---|---|---|
| F. W. Brown Lbr. Co. | Lumber | 5.40 | |
| Nebr. Material Co. | Stone, Sand & Cement | 99.32 | |
| Pay Roll | | 21.49 | |
| Western Gas Const. Co. | New Gas Machine | 1,700.00 | |
| Western Supply Co. | Valves | 20.82 | |
| C. & N. W. Ry. Co. | Frt. | 3.35 | |
| Johns Manville Co. | Retort Current | 34.83 | |
| Nebr. Material Co. | Sand | 2.73 | |
| C. B. & Q. R. R. Co. | Frt. | .93 | |
| J. R. Lehmer Co. | Pressure blocks | 2.20 | |
| Rudge & Guenzel Co. | Nails | .20 | |
| Searle Chapin Co. | Lumber | 2.00 | |
| Western Supply Co. | Unions | 6.00 | |
| Order No. 345 | | .69 | |
| Western Supply Co. | Union | .92 | |
| Western Gas Const. Co. | Contract | 1,884.54 | |
| Pay Roll | | 17.05 | |
| Nebr. Material Co. | Material | 10.40 | |
| Trans. Voucher 1644 | S. E. | 1,790.46 | |
| Gross (and net) charged to Acct. #G21 | | | 7,897.84 |

1717 Lincoln Gas & Electric Light Company.

*Items Charged to Gas Works Construction Account, Year* 1912.

Charged to Acct. #G22, New Blower:

| | | | |
|---|---|---|---|
| Western Gas Const. Co. | Pipe & Fittings | 135.73 | |
| Baker Hdw. Co. | Washer | .20 | |

| | | | |
|---|---|---|---|
| Hall Bros. Co. | Bolts & Washers | 1.25 | |
| Nebr. Material Co. | Material | 6.92 | |
| M. P. Ry. Co. | Frt. | 26.69 | |
| Clark Lumber Co. | Lumber | 1.60 | |
| Rudge & Guenzel Co. | Bolts & pipe | 5.10 | |
| Western Supply Co. | Pig lead | 5.88 | |
| Gross (and net) charged to Acct. #G22 | | | 183.37 |

Charged to Acct. #300, Gas Works; Additions:

| | | | |
|---|---|---|---|
| Geo. A. Wilson | Carpenter Work | 241.56 | |
| Hy. L. Doherty & Co | Fire Extinguishers | 25.89 | |
| Gross (and net) charged to Acct. #300 | | | 267.45 |
| Total charged Works Accounts, year 1912 | | | 11,485.88 |

1718 *Interest Paid Manufacturers 1907 to 1912, Inclusive.*

| | | | |
|---|---|---|---|
| 1907. | 7/6 | Underfeed Stoker Co. | $7.00 |
| | 8/6 | " " " | 14.05 |
| 1909. | 1/13 | Western Gas & Const. Co. | 11.95 |
| | 2/2 | " " " " " | 17.50 |
| | 3/2 | " " " " " | 35.00 |
| | 4/2 | " " " " " | 35.00 |
| | 5/3 | " " " " " | 35.00 |
| | 6/2 | " " " " " | 52.50 |
| 1910. | 5/25 | Maryland Meter Co. | 2.56 |
| | 6/25 | " " " | 5.12 |
| | 7/25 | " " " | 7.68 |
| | 8/26 | " " " | 10.23 |
| | 9/26 | " " " | 12.80 |
| | 9/28 | Western Gas Const. Co. | 17.50 |
| | 10/25 | Maryland Meter Co. | 15.35 |
| | 11/25 | " " " | 17.91 |
| 1911. | 3/20 | Western Gas Const. Co. | 22.90 |
| | | | $320.05 |

1719 *Replacements.*

Jan. 31, 1908. Sale of purifying boxes to Childs-Hulswit Co., Grand Rapids, Mich. ..... $500.00
Credited to Gas Plant construction account.

Feb. 29, 1912. Paid Enterprise Planing Mill Co. ..... $2,340.40
Charged as follows:

| | |
|---|---|
| Investment ..... | $1,840.40 |
| Expense ..... | 500.00 |
| | $2,340.40 |

The expense item of $500.00 representing the value of the old fixtures previously charged to construction.

Mar. 25, 1912. Paid Otis Elevator Co. ..... $525.00
First payment on elevator charged as follows:

| | |
|---|---|
| Investment ..... | $475.00 |
| Expense ..... | 50.00 |
| | $525.00 |

The expense item of $50.00 representing the value of the old elevator discarded which had previously been charged to construction.

1720 *Repairs and Maintenance.*

1903.

| | Labor. | Material. | Total. |
|---|---|---|---|
| Bench Renewals | $97.48 | $350.00 | $447.48 |
| Misel. Bench Repairs | 51.28 | 34.66 | 85.94 |
| W. G. Gen. Apparatus | 234.90 | 183.33 | 418.23 |
| Gen. Ws. Repairs, Bldgs | 368.95 | 319.42 | 688.36 |
| Gen. Wks. Repairs, Apparatus | 464.47 | 840.89 | 1,305.36 |
| Mains | 437.98 | 33.94 | 471.92 |
| Services | 214.23 | 78.77 | 293.00 |
| Meters | 574.91 | 157.31 | 732.22 |
| Harness (96.13) 80% to Gas. | ..... | 76.90 | 76.90 |
| Wagons (93.42) 80% " " . | ..... | 74.74 | 74.74 |
| Boiler Repairs | ..... | 8.89 | 8.89 |
| Total | $2,444.19 | $2,158.85 | $4,603.04 |

1904.

| | | | |
|---|---|---|---|
| Bench Renewals | $..... | $600.00 | $600.00 |
| Misel. Bench Repairs | 72.96 | 141.41 | 214.37 |
| W. G. Gen. Apparatus | 658.74 | 454.95 | 1,113.69 |
| Gen. Wks. Repairs, Bldgs | 50.42 | 261.39 | 311.81 |
| Gen. Wks. Repairs, Apparatus | 669.77 | 1,487.54 | 2,157.31 |
| Mains | 441.06 | 73.98 | 515.04 |
| Services | 286.35 | 164.01 | 450.36 |
| Meters | 796.34 | 412.59 | 1,208.93 |
| Lamps | 2,110.20 | 1,727.25 | 3,837.45 |
| Harness (38.95) 80% to Gas. | ..... | 31.16 | 31.16 |
| Wagons (83.24) 80% " " . | ..... | 66.60 | 66.60 |
| Total | $5,085.84 | $5,420.88 | $10,506.72 |

1905.

| | | | |
|---|---|---|---|
| Bench Renewals | $..... | $1,130.00 | $1,130.00 |
| Misel. Bench Repairs | 37.90 | 74.00 | 111.90 |
| W. G. Generating Apparatus. | 689.54 | 1,263.74 | 1,953.28 |
| Genl. Works Repairs, Bldgs. | 110.69 | 157.12 | 267.81 |
| " " " Apparatus | 707.22 | 975.02 | 1,682.24 |
| Mains | 511.54 | 437.91 | 949.45 |
| Services | 629.37 | 430.99 | 1,060.36 |
| Meters | 702.70 | 166.00 | 868.70 |
| Lamps | 1,460.80 | 1,230.13 | 2,690.93 |
| Barn Repairs (27.90) 80% | ..... | 22.32 | 22.32 |
| Harness " (67.15) 80% | ..... | 53.72 | 53.72 |
| Wagon " (103.30) 80% | ..... | 82.64 | 82.64 |
| Total | $4,849.76 | $6,023.59 | $10,873.35 |

1721 *Repairs and Maintenance.*

1906.

| | Labor. | Material. | Total. |
|---|---|---|---|
| Bench Renewals | ..... | $1,850.00 | $1,850.00 |
| Miscl. Bench Repairs | $54.73 | 71.66 | 126.39 |
| W. G. Generating Apparatus. | 1,025.00 | 1,034.31 | 2,059.31 |
| Genl. Wks. Repairs, Bldgs... | 140.91 | 311.01 | 452.92 |
| Genl. Wks. Repairs, Apparatus | 487.44 | 979.22 | 1,466.66 |
| Mains | 404.92 | 232.72 | 637.64 |
| Services | 243.27 | 153.33 | 396.60 |
| Meters | 840.53 | 196.83 | 1,037.36 |
| Barn (10.24) 80% to Gas... | ..... | 8.20 | 8.20 |
| Harness (125.54) 80% to Gas | ..... | 100.44 | 100.44 |
| Wagons (223.82) 80% to Gas | ..... | 179.06 | 179.06 |
| Total | $3,196.80 | $5,116.78 | $8,314.58 |

1907.

| | | | |
|---|---|---|---|
| Coal Yard Apparatus | $10.09 | $5.00 | $15.09 |
| Tar Dept. " | 147.31 | 51.79 | 199.10 |
| Bench Renewals | ..... | 3,813.48 | 3,813.48 |
| Miscl. Bench Repairs | 87.52 | 121.24 | 208.76 |
| W. G. Genl. Apparatus | 364.79 | 570.85 | 935.64 |
| Genl. Wks. Repairs, Bldgs... | 171.17 | 728.76 | 899.93 |
| " " " Apparatus | 558.26 | 1,249.73 | 1,807.99 |
| Mains | 1,003.86 | 141.80 | 1,145.66 |
| Services | 244.33 | 139.58 | 383.91 |
| Meters | 1,028.44 | 319.16 | 1,347.60 |
| Barn (39.27) 80% to Gas.... | ..... | 31.42 | 31.42 |
| Harness (125.66) 80% to Gas | ..... | 100.53 | 100.53 |
| Wagons (222.94) 80% to Gas. | ..... | 178.35 | 178.35 |
| Total | $3,615.77 | $7,451.69 | $11,067.46 |

1908.

| | | | |
|---|---|---|---|
| Tar Dept. Apparatus | $16.25 | $25.71 | $41.96 |
| Bench Renewals | ..... | 2,296.25 | 2,296.25 |
| Miscl. Bench Repairs | 81.38 | 33.90 | 115.28 |
| W. G. Genl. Apparatus | 505.37 | 625.22 | 1,130.59 |
| Gen. Wks. Repairs, Bldgs.... | 30.82 | 157.88 | 188.70 |
| Gen. Wks. Repairs, Apparatus | 229.25 | 774.83 | 1,004.08 |
| Mains | 800.61 | 61.26 | 861.87 |
| Services | 240.20 | 54.52 | 294.72 |
| Meters | 1,607.81 | 294.91 | 1,902.72 |
| Barn (13.49) 80% to Gas... | ..... | 10.84 | 10.84 |
| Harness (99.45) 80% to Gas | ..... | 79.56 | 79.56 |
| Wagons (145.13) 80% " " | ..... | 116.11 | 116.11 |
| Total | $3,511.69 | $4,530.99 | $8,042.68 |

1722 *Repairs and Maintenance.*

1909.

| | Labor. | Material. | Total. |
|---|---|---|---|
| Bench Renewals | $..... | $780.00 | $780.00 |
| Misel. Bench Repairs | 31.37 | 5.84 | 37.21 |
| W. G. Gen. Apparatus | 690.80 | 795.69 | 1,486.49 |
| Gen. Wks. Reps. Bldgs | 14.32 | 129.02 | 143.34 |
| " " " Apparatus | 59.39 | 982.53 | 1,041.92 |
| Mains | 709.91 | 78.35 | 788.26 |
| Services | 422.95 | 123.71 | 546.66 |
| Meters | 1,897.92 | 1,072.54 | 2,970.46 |
| Barn (3.60) 80% to Gas | ..... | 2.88 | 2.88 |
| Harness (130.80) 80% to Gas | ..... | 104.64 | 104.64 |
| Wagon (321.41) 80% to Gas. | ..... | 257.13 | 257.13 |
| Total | $3,826.66 | $4,332.33 | $8,158.99 |

1910.

| | | | |
|---|---|---|---|
| W. G. Gen. Apparatus | $359.84 | $449.69 | $809.53 |
| Gen. Wks. Repairs, Bldgs | 84.87 | 177.18 | 262.05 |
| " " " Apparatus | 69.85 | 1,650.05 | 1,719.90 |
| Mains | 987.84 | 755.93 | 1,743.77 |
| Services | 360.70 | 86.28 | 446.98 |
| Meters | 2,913.40 | 695.39 | 3,608.79 |
| Harness (232.00) 80% to Gas | ..... | 185.60 | 185.60 |
| Wagon (251.75) 80% to Gas. | ..... | 201.40 | 201.40 |
| Total | $4,776.50 | $4,201.52 | $8,978.02 |

1911.

| | | | |
|---|---|---|---|
| W. G. Gen. Apparatus | $273.50 | $274.78 | $548.28 |
| Gen. Wks. Repairs, Bldgs | 393.80 | 425.42 | 819.22 |
| Gen. Wks. Repairs, Apparatus | 76.83 | 4,923.63 | 5,000.46 |
| Mains | 871.36 | 38.39 | 909.75 |
| Services | 566.91 | R1.17 | 565.74 |
| Meters | 3,025.60 | 1,225.06 | 4,250.66 |
| Barn (34.56) 80% to Gas | ..... | 27.65 | 27.65 |
| Harness (90.52) 80% to Gas. | ..... | 72.42 | 72.42 |
| Wagons (394.95) 80% to Gas | ..... | 315.96 | 315.96 |
| Total | $5,208.00 | $7,302.14 | $12,510.14 |

1723 *Repairs and Maintenance.*

1912.

| | Labor. | Material. | Total. |
|---|---|---|---|
| W. G. Generating Apparatus. | $468.15 | $970.58 | $1,438.73 |
| Genl. Wks. Repairs, Bldgs... | ..... | 237.55 | 237.55 |
| " " " Apparatus | 50.55 | 378.48 | 429.03 |
| Mains ..... | 1,102.74 | 30.80 | 1,133.54 |
| Services ..... | 693.96 | 720.41 | 1,414.37 |
| Meters ..... | 3,593.44 | 640.44 | 4,233.88 |
| Barn Repairs (15.97) 80%.. | ..... | 12.78 | 12.78 |
| Harness Repairs (179.85) 80% ..... | ..... | 143.88 | 143.88 |
| Wagon Repairs (361.81) 80% | ..... | 289.45 | 289.45 |
| Total ..... | $5,908.84 | $3,424.37 | $9,333.21 |

1724 *Summary.*

Occupation Taxes Levied Upon the Lincoln Gas & Electric Light Company by the City of Lincoln, Upon the Business of Selling Gas and Included in the Decree of the District Court of Lancaster County, Nebraska, Entered — Against said Company and Appealed from By It, Exclusive of Interest and Penalties.

| Year. | From— | To— | Lincoln. |
|---|---|---|---|
| 1907 | Jan. 1st | Dec. 31st ..... | $4,267.27 |
| 1908 | Jan. 1st | Dec. 31st ..... | 4,924.47 |
| 1909 | Jan. 1st | Dec. 31st ..... | 5,094.96 |
| 1910 | Jan. 1st | Dec. 31st ..... | 6,170.53 |
| 1911 | Jan. 1st | Dec. 31st ..... | 6,647.16 |
| 1912 | Jan. 1st | Dec. 31st ..... | 6,801.84 |
| 1913 | Jan. 1st | Feb. 28th ..... | 1,189.24 |
| | Total ..... | | $35,095.47 |

1725 *Reproduction Cost of Buildings.*

By Wm. J. Assemacher.

1726 *Estimate of Reproduction Costs of Buildings of Lincoln Gas and Electric Light Company?*

By William J. Assemacher.

Summary.

| | |
|---|---|
| Stable and Blacksmith Shop | $907.50 |
| Generator House | 3,308.50 |
| Booster-House, 33rd St | 471.25 |
| Purifying House | 12,482.95 |
| Meter Shop and Booster-House | 2,589.63 |
| Retort House | 6,080.00 |
| Coal Shed | 1,892.00 |
| Oil Tank House | 1,276.66 |
| Total | 29,008.49 |
| Estimate for Brick Work | 14.85 |

1727 *Stable and Blacksmith Shop.*

| | |
|---|---|
| Stable 18′ x 24′—11 high shed on side 6′ to 10′ high, 24′ long 14′ wide, shed on other side 6′ to 10′ high, 49′ feet long all paper roof 10,000 feet lumber $28 | $280.00 |
| Few stone for foundation | 10.00 |
| Hardware and nails | 50.00 |
| Carpenter work | 125.00 |
| Rubber roofing, 17 sq. $3.00 | 51.00 |
| Painting | 30.00 |
| Wagon shop 18′ x 18′—10 to 9′ flat roof; Blacksmith Shop 18′ x 18′—10 gable 6′ high: | |
| 1 Brick flue | 10.00 |
| 5,000 sq. ft. Lumber 28 | 140.00 |
| Carpenter work | 80.00 |
| Shingles 5 M at $3.50 | 17.50 |
| Rubber roofing 4 squares 3½ | 14.00 |
| Hardware and nails | 25.00 |
| Incidentals and per cent | 75.00 |
| Total | $907.50 |

1728 *Generator House.*

| | |
|---|---|
| Excavating 200 yd. 40 | $80.00 |
| Concrete footings 12 yards at $7.50 | 90.00 |
| Brick and Hollow 80 M at 15.00 | 1,200.00 |
| Cement floor 1,500—12 | 180.00 |
| Steel trusses | 250.00 |
| Galvanized Iron roof 20 sq. at $10.00 | 200.00 |
| 28 Openings at $10.00 | 280.00 |
| Roof on Ennex 5 squares | 22.50 |
| 1,000 feet Lumber $28 | 28.00 |
| Carpenter work openings | 200.00 |
| Seven foot porch on side Elevator, Incloser and run to coal shed, 6,000 feet | 168.00 |
| Carpenter work | 60.00 |
| Incidentals and per cent | 400.00 |
| Painting | 100.00 |
| Hardware and nails | 50.00 |
| Total | $3,308.50 |

1729 *Booster House, 33rd Street.*

21' 4" x 17'4"—13 High, 9" Wall.

| | |
|---|---|
| Brick work 14 M at $15.00 | $210.00 |
| foundation 7 yd. concrete at $7.50 | 52.50 |
| 5 openings | 50.00 |
| Gravel roof 3½ sq. at $4.50 | 15.75 |
| Lumber 1,500 feet $28 | 42.00 |
| Excavating 40 yd. 40 cents | 16.00 |
| Carpenter work $15.00 $20.00 | 35.00 |
| Incidentals and per cent | 50.00 |
| Total | $471.25 |

1730 *Purifying House.*

176′ x 36′ 6″ x 18′ High 13″ Brick and Stone Walls, One Cross-partition Basement to Roof, Two Cross-partitions First Floor to Roof.

Gables 12 High.

| | |
|---|---|
| 3,660 cu. ft. stone foundation 16 1/3 cu. fet. $3.00 | $1,774.50 |
| Footings under columns 26 yd. $7.50 | 195.00 |
| 6,000 sq. ft. cement floor at 12 cents | 720.00 |
| 222 M Common brick $15.00 | 3,330.00 |
| 2 Brick piers 10′ x 2′ x 11 high 9,240*b* $15.00 | 138.60 |
| 1 " pier 7′ x 3½—11 ft. 5670*b* | 85.05 |
| 1 " pier 10′ x 4′—11′ " 9240*b* | 138.60 |
| 50 openings $10.00 per opening | 500.00 |
| 12,500 sq. ft. Lumber first floor, $30.00 | 375.00 |
| 24,000 " " " roof trusses | 720.00 |
| Carpenter work $12½ per M Lumber | 456.20 |
| Carpenter work setting 50 openings | 250.00 |
| Galvanized Iron roof 80 Squares $10 | 800.00 |
| Excavating and grading 1,000 yds. 40 cents | 400.00 |
| Painting interior wall and exterior roof | 500.00 |
| Hardware and nails | 200.00 |
| Bond and Insurance | 200.00 |
| Incidental and Contractor per cent | 1,700.00 |
| Total | $12,482.95 |

1731 *Meter Shopand Booster House.*

Booster House 15′ 8″ x 22′ 6″ 14′ High.

| | |
|---|---|
| Excavating 85 yds. 40 | $34.00 |
| Concrete footings 5 yds. 7 50/100 | 37.50 |
| Brick 20 M at $15.00 | 300.00 |
| Lumber for floor and roof 2,500 feet $28 | 70.00 |
| Gravel Roof 3½ squares $4.50 | 15.75 |
| Painting | 50.00 |
| Five openings | 50.00 |
| Carpenter work $10 M | 25.00 |
| Carpenter work placing windows and doors | 50.00 |

Odd Booster House 14′ 3″ x 11′ 4″ Shingle Roof.

| | |
|---|---|
| Excavating 50 yds. 40 cents | 20.00 |
| Brick work 11 M at 15 | 165.00 |
| Lumber for roof and stairs shingles | 50.00 |
| Carpenter work and painting | 50.00 |

Motor Shed 9′ x 14′ 3 Sides 8′ High.

| | |
|---|---|
| Lumber for roof and sides 1,000 feet | 28.00 |
| Paper roof and carpenter work | 50.00 |

Meter Shop 42′ x 22′ 9″ 14 High.

| | |
|---|---|
| Excavating 100 yds. 40 cents | 40.00 |
| Concrete footings 15 cu. yd. 7.50 | 112.50 |
| Brick 36 M 15 | 540.00 |
| Cement floor 924 feet 12 cents | 110.88 |

1732

| | |
|---|---|
| Brought forward | 1,828.63 |
| Lumber roof and joists 3,000 | $84.00 |
| Carpenter work 3 M $10 | 30.00 |
| Carpenter work windows and doors | 40.00 |
| Gravel roof 10 squares 4.50 | 45.00 |
| 14 openings $8.00 | 112.00 |
| Hardware and nails | 100.00 |
| Painting | 50.00 |
| Incidentals and per cent | 300.00 |
| Total | $2,589.63 |

1733 *Retort House.*

Retort House 70′ 6″ x 34′ 0″ Brick 3 Sides.

| | |
|---|---|
| Excavating 500 yds. 40 cents | $200.00 |
| Stone wall 1,645 cu. ft | 302.10 |
| Brick 70 M $15.00 | 1,050.00 |
| 9 steel trusses $40.00 | 360.00 |
| Galv. Iron roof 30 squares $10.00 | 300.00 |

Other Bldg. 33′ x 48′—28 H.

| | |
|---|---|
| Excavating 500 yds. 40 cents | 200.00 |
| Stone walls 3,500 cu. ft | 642.90 |
| Brick 95 M $15.00 | 1,425.00 |
| 3 steel trusses and hips, etc | 300.00 |
| Galvanized Iron roof 25 squares $10.00 | 250.00 |
| Painting and Hardware | 250.00 |
| Bond and Insurance | 100.00 |
| Incidentals and per cent | 700.00 |
| Total | $6,080.00 |

1734 *Coal Shed.*

Coal Shed 110 x 23—11′ High.

| | |
|---|---|
| Stone Piers 1,200 cu. Ft. | $212.00 |
| 30 M feet Lumber at $28 | 840.00 |
| Carpenter work 30 M $10.00 | 300.00 |
| 30 sq. rubberoid $3.00 | 90.00 |
| Nails and Hardware | 100.00 |
| Painting | 50.00 |
| Incidentals and per cent | 300.00 |
| Total | $1,892.00 |

1735 *Oil Tank House.*

35′ x 24′—12 H., Side 17″ Wall.

| | |
|---|---|
| Excavating 45 yds. at 50 cents | $22.50 |
| Brick 46 M at $15.00 | 690.00 |
| Cement floor in bottom 118 feet | 14.16 |
| Steel trusses under roof | 150.00 |
| Lumber and shingles | 100.00 |
| Carpenter work and paint | 150.00 |
| Incidentals and per cent | 150.00 |
| Total | $1,276.66 |

Estimate for Brick Work.

| | |
|---|---|
| Common brick per M | $7.00 |
| Brick mason 70 cents per hr | 3.50 |
| Mortar Mixer, 35 cents per hr | .70 |
| Labor, 25 cents per hr | 1.25 |
| Expense | .50 |
| Mortar lime | 1.25 |
| Sand | .65 |
| Total | $14.85 |

| No. | Lots. | Blk. | Kind of deed. | Expressed consideration. | Date of deed. | Where recorded. Book. | Page. |
|---|---|---|---|---|---|---|---|
| 1. | 3, 4. 5, 6. | 47. | W. D. | $400.00 | Mch. 25, 1908 | 154 | 29 |
| 2. | 14, 15, 16. | 47. | Tax Deed | $..... | (Jan. 24, 1906 | 148 | 302 |
| | | | | | )Jan. 23, 1906 | 148 | 22 |
| 3. | 8, 9. | 47. | Referee's Deed in Partition Suit. | (each lot) $70.00 | Nov. 3, 1910 | 157 | 515 |
| 4. | 7, 8, 9, 10. | 48. | W. D. | $700.00 | Aug. 7, 1912 | 172 | 138 |
| 5. | 13, 14, 15. | 48. | W. D. | $1.00 | Dec. 12, 1908 | 137 | 98 |
| 6. | 13, 14, 15. | 48. | W. D. | $1.00 | Feb. 24, 1912 | 157 | 493 |
| 7. | 10. | 46. | Referee's Deed | $30.00 | July 1, 1910 | 166 | 25 |
| 8. | 1, 2. | 46. | Referee's Deed | $56.00 | July 2, 1910 | 166 | 242 |
| 9. | 13, 14. | 46. | Tax Deed | (Each) ..... | Jan. 23, 1906 | 148 | 22 |
| 10. | 3, 4, 5, 6, 7. | 47. | W. D. | $1.00 | Dec. 26 1908 | 176 | 201 |
| 11. | 1, 2, 3, 5. | 76. | Tax Deed | $..... | Jan. 24, 1906 | 148 | 302 |
| 12. | 4. 6, 9, 10. | 77. | Tax Deed | $..... | Jan. 24, 1906 | 148 | 302 |
| 13. | 11, 12. | 232. | Q. C.—Aug. 1913 | $347.50 | Apr. 6, 1909 | 155 | 37 |
| 14. | 10. | 232. | Aug. 1913 | $150.00 | Sept. 18, 1913 | 179 | 449 |

(Here follow diagrams marked pages 1737 to 1742, inclusive.)

| 1907. | | | | | |
|---|---|---|---|---|---|
| Jan'y 31. | Tr. Vo. 318 | Emp. Liability ins. | 13.32 | | |
| " | H. F. Rose | Jan'y salary | 41.67 | | |
| | | | | 54.99 | |
| Feb'y 28. | Tr. Vo. 325 | Emp. liability ins. | 13.32 | | |
| " | H. F. Rose | Feb'y salary | 41.67 | | |
| | | | | 54.99 | |
| M'ch 30. | do. | March salary | 41.66 | | |
| " | L. G. & E. L. Co | Rebate C. O. W. | 4.44 | | |
| " | Tr. Vo. 339c | Emp. liab. ins. | 13.32 | | |
| | | | | 59.42 | |
| Ap'l 30. | Tr. Vo. 357 | do. | 13.32 | | |
| " | Tr. Vo. 357 | Appeal to Fed. Court | 20.83 | | |
| " | H. F. Rose | April salary | 41.67 | | |
| | | | | 75.82 | |
| May 31. | do. | May salary | 41.66 | | |
| " | Tr. Vo. 371b | Emp. liability ins. | 7.34 | | |
| " | Tr. Vo. 371c | Appeal to Fed. Court | 20.83 | | |
| " | Tr. Vo. 371c | Supersedeas bond | 125.00 | | |
| " | Tr. Vo. 378 | Liab. ins. | 11.37 | | |
| | | | | 206.20 | |
| June 30. | Tr. Vo. 389c | Appeal to Fed. Court | 20.83 | | |
| " | Tr. Vo. 389c | Supersedeas bond | 125.00 | | |
| " | Tr. Vo. 389d | Emp. liability ins. | 7.34 | | |
| " | L. G. & E. L. Co | Rebate C. O. W. | 15.56 | | |
| " | H. F. Rose | June salary | 41.67 | | |
| | | | | 210.40 | |

| | | | | | |
|---|---|---|---|---|---|
| July | 31. | Tr. Vo. 407*c* | Appeal to Fed. Court | 20.83 | |
| " | | do. | Supersedeas bond | 125.00 | |
| " | | Tr. Vo. 407*d* | Emp. liability ins. | 7.34 | |
| " | | L. G. & E. L. Co. | City occup'n tax case | 5.00 | |
| " | | H. F. Rose | July salary | 41.66 | |
| | | | | | 199.83 |
| Aug. | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 5.35 | |
| " | | H. F. Rose | August salary | 41.67 | |
| " | | Tr. Vo. 419*c* | Appeal to Fed. Court | 20.83 | |
| " | | do. | Supersedeas bond | 125.00 | |
| " | | Tr. Vo. 419*d* | Emp. liab. ins | 7.34 | |
| | | | | | 200.19 |
| Sept. | 21. | Wm. Grant | "Legal expense" no explanation on Vo. #3600 | 100.00 | |
| " | 30. | Tr. Vo. 434*c* | Appeal to Fed. Court | 20.83 | |
| " | | do. | Supersedeas bond | 125.00 | |
| " | | Tr. Vo. 434*d* | Emp. liability ins. | 7.34 | |
| " | | H. F. Rose | Sept. salary | 41.67 | |
| | | | | | 294.84 |
| Oct. | 8. | M. E. Wheeler | Reporting and transcribing Co. v. City | 117.40 | |
| " | | Mrs. W. E. Gosper | | | |
| " | | Mrs. W. E. Gosper | Stove explosion | 10.05 | |
| " | 28. | J. E. Ferris | Trans. testimony, objection to assessment, Board of Equalization | 10.00 | |
| " | 31. | Tr. Vo. 450*c* | Fed Court appeal | 20.83 | |
| " | 31. | do. | Supersedeas bond | 125.00 | |
| " | 31. | Tr. Vo. 450*d* | Emp. liability ins. | 7.34 | |
| " | 31. | H. L. Doherty & Co. | C. A. Frueauff's exp. | 30.00 | |
| " | 31. | Lincoln Hotel | M. E. Malone's expenses | 10.00 | |
| " | 31. | H. F. Rose | October salary | 41.67 | |
| | | | | | 372.29 |

| | | | | | |
|---|---|---|---|---|---|
| Nov. | 30. | Tr. Vo. 467*c* | Appeal Fed. Court | 20.83 | |
| " | | do. | Supersedeas bond | 125.00 | |
| " | | do. | Emp. liability ins. | 7.34 | |
| " | | H. F. Rose | November salary | 41.66 | |
| | | | | | 194.83 |
| Dec. | 31. | Tr. Vo. 479*c* | Appeal Fed. Court | 20.83 | |
| " | | do. | Supersedeas bond | 125.00 | |
| " | | do. | Emp. liability ins. | 7.34 | |
| " | | H. F. Rose | December salary | 41.66 | |
| | | | | | 194.83 |

1744 *Legal Expense—Gas Acct. No. 1505.*

1908.

| | | | | | |
|---|---|---|---|---|---|
| Jan'y | 31. | Tr. Vo. 492*c* | Fed Court appeal | 20.83 | |
| " | | do. | Emp. liability ins. | 7.34 | |
| " | | H. F. Rose | Jan'y salary | 41.66 | |
| | | | | | 69.83 |
| Feb'y | 29. | Tr. Vo. 503*c* | Fed Court appeal | 20.83 | |
| " | | do. | Emp. liability ins. | 7.34 | |
| " | | H. F. Rose | Feb'y salary | 41.66 | |
| | | | | | 69.83 |
| M'ch. | 31. | Tr. Vo. 514*c* | Emp. liability ins. | 9.15 | |
| " | | do. | Feb. Court appeal | 20.87 | |
| " | | H. F. Rose | March salary | 41.66 | |
| " | | L. G. & E. L. Co. | Rebate C. O. W. | 39.27 | |
| | | | | | 110.95 |

| | | | | | |
|---|---|---|---|---|---|
| Ap'l | 21. | Kate Bottrell | Settlement of claim for injuries | 25.00 | |
| " | 30. | Tr. Vo. 529c | Emp. liability ins. | 9.15 | |
| " | | Tr. Vo. 530 | Expenses Gardiner and Frueauff Vou. 5507-8 | 45.10 | |
| " | | H. F. Rose | April salary | 41.66 | |
| " | | L. G. & E. L. Co. | Rebate C. O. W. | 21.09 | |
| | | | | | 142.00 |
| May | 26. | M. E. Malone | Hotel expenses | 65.00 | |
| " | 30. | Tr. Vo. 543c | Emp. liab. ins. | 9.15 | |
| " | | L. G. & E. L. Co. | Rebate C. O. W. | 12.07 | |
| " | | H. F. Rose | May salary | 66.66 | |
| " | | Tr. Vo. 545 | Gardiner and Frueauff | 45.10 | |
| | | | | | 197.98 |
| June | 8. | G. H. Thummel | Court costs | 10.00 | |
| " | 25. | do. | do. | 1.00 | |
| " | 30. | L. G. & E. L. Co. | Rebate C. O. W. | 14.49 | |
| " | | H. F. Rose | June salary | 66.66 | |
| " | | Tr. Vo. 556c | Emp. liability ins. | 9.15 | |
| " | | Tr. Vo. 557 | Gardiner and Frueauff | 45.10 | |
| " | 26. | M. E. Wheeler | Reporting testimony—Co. v. City before U. S. Examiner | 152.40 | |
| | | | | | 298.80 |
| July | 31. | Tr. Vo. 569c | Emp. liability ins. | 9.15 | |
| " | | E. C. Strode | July salary | 66.66 | |
| " | | L. G. & E. L. Co. | Rebate C. O. W. | 13.12 | |
| " | | Tr. Vo. 570 | Gardiner & Frueauff | 45.10 | |
| | | | | | 134.03 |
| Aug. | 31. | Tr. Vo. 580c | Emp. liability ins. | 9.15 | |
| " | | Tr. Vo. 581 | Gardiner & Frueauff | 45.10 | |
| " | | E. C. Strode | August salary | 66.66 | |
| | | | | | 120.91 |

| | | | | | |
|---|---|---|---|---|---|
| Sept. | 30. | Tr. Vo. 593c | Emp. liability ins. | 9.15 | |
| " | | Tr. Vo. 594 | Gardiner & Frueauff | 45.10 | |
| " | | E. C. Strode | Sept. salary | 66.66 | |
| " | | L. G. & E. L. Co. | Rebate C. O. W. | 28.35 | |
| | | | | | 149.26 |
| Oct. | 31. | Tr. Vo. 606c | Emp. liability ins. | 9.15 | |
| " | | Tr. Vo. 607 | Gardiner & Frueauff | 45.10 | |
| " | | E. C. Strode | October salary | 66.66 | |
| | | | | | 120.91 |
| Nov. | 7. | H. Honeywell | Copying briefs Co. v. City | 29.20 | |
| " | 30. | Tr. Vo. 621c | Emp. liability ins. | 9.15 | |
| " | | Tr. Vo. 622 | Gardiner & Frueauff | 45.10 | |
| " | | L. G. & E. L. Co. | Regate C. O. W. | 36.79 | |
| " | | E. C. Strode | November salary | 66.66 | |
| " | | Tr. Vo. 628 | Distribution rent and heat | 1.00 | |
| | | | | | 196.90 |
| Dec. | 16. | Benton Bros. | P't'g brief—Co. v. City | 38.25 | |
| | 31. | Tr. Vo. 636 | Gardiner & Frueauff | 45.10 | |
| | 31. | Tr. Vo. 635a | Emp. liability ins. | 8.17 | |
| | 31. | E. C. Strode | December salary | 66.66 | |
| | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 16.75 | |
| | 31. | Tr. Vo. 642 | Rent and heat | 10.00 | |
| | | | | | 184.93 |

1745

*Legal Expense—Gas Acct. #1505.*

1909.

| | | | | | |
|---|---|---|---|---|---|
| Jan'y | 25. | L. G. & E. L. Co. | Rebate C. O. W. | 12.81 | |
| | 31. | Tr. Vo. 651c | Emp. liability ins. | 6.81 | |
| | 31. | E. C. Strode | Jan'y salary | 66.66 | |
| | 31. | Tr. Vo. 661 | Rent & heat | 10.00 | |
| | | | | | 96.28 |

| | | | | | |
|---|---|---|---|---|---|
| Feb'y | 27. | Tr. Vo. 667*c* | Emp. liability ins. | 6.81 | |
| | 27. | E. C. Strode | Feb'y salary | 66.66 | |
| | 27. | L. G. & E. L. Co. | Rebate C. O. W. | 11.88 | |
| | 27. | Tr. Vo. 673 | S. B. Peckham | 2.50 | |
| | | | | | 87.85 |
| M'ch | 31. | Tr. Vo. 683*c* | Emp. liability ins. | 6.81 | |
| | 31. | E. C. Strode | March salary | 66.66 | |
| | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 8.16 | |
| | | | | | 81.63 |
| Ap'l | 12. | M. E. Wheeler | Copy of testimony Vo. 36081 | 2.50 | |
| | 30. | Tr. Vo. 699*c* | Emp. liability ins. | 6.81 | |
| | 30. | L. G. & E. L. Co. | Rebate C. O. W. | 14.87 | |
| | 30. | E. C. Strode | April salary | 66.66 | |
| | | | | | 90.84 |
| May | 31. | Tr. Vo. 715*c* | Emp. liability ins. | 6.81 | |
| | 31. | E. C. Strode | May salary | 66.66 | |
| | | | | | 73.47 |
| June | 30. | Tr. Vo. 731*c* | Emp. liability ins. | 6.81 | |
| | 30. | Tr. Vo. 731*d* | Voucher missing | 42.33 | |
| | 30. | do. | Supersedeas bond | 62.50 | |
| | 30. | L. G. & E. L. Co. | Rebate C. O. W. | 12.72 | |
| | 30. | E. C. Strode | June salary | 66.66 | |
| | | | | | 191.02 |
| July | 31. | Tr. Vo. 749*c* | Emp. liability ins. | 6.81 | |
| | 31. | Tr. Vo. 751 | Vouchers missing from file | 44.60 | |
| | 31. | do. | Appeal and bond | 75.00 | |
| | 31. | E. C. Strode | July salary | 66.66 | |
| | | | | | 193.07 |

| | | | | | |
|---|---|---|---|---|---|
| Aug. | 31. | Tr. Vo. 766 | Voucher missing | 44.60 | |
| | 31. | do. | Appeal and bond | 75.00 | |
| | 31. | Tr. Vo. 767*c* | Emp. liability ins | 6.81 | |
| | 31. | E. C. Strode | August salary | 66.66 | |
| | | | | | 193.07 |
| Sept. | 30. | Tr. Vo. 781 | Voucher missing | 44.60 | |
| | 30. | do. | Appeal and bond | 75.00 | |
| | 30. | Tr. Vo. 783*a* | Empl. liability ins. | 12.94 | |
| | 30. | L. G. & E. L. Co. | Rebate C. O. W. | 21.00 | |
| | 30. | E. C. Strode | Sept. salary | 66.66 | |
| | | | | | 220.20 |
| Oct. | 30. | Tr. Vo. 799 | Vouchers missing | 44.60 | |
| | 30. | do. | Appeal and bond | 75.00 | |
| | 30. | Tr. Vo. 801*c* | Emp. liability ins. | 12.94 | |
| | 30. | E. C. Strode | October salary | 66.66 | |
| | | | | | 199.20 |
| Nov. | 18. | E. G. Maggi | "Legal service rendered" Vou. #7268 | 12.00 | |
| | 20. | L. G. & E. L. Co. | Rebate C. O. W. | 15.00 | |
| | 30. | Tr. Vo. 816 | Voucher missing | 44.60 | |
| | 30. | do. | Appeal and bond | 75.00 | |
| | 30. | Tr. Vo. 818*c* | Emp. liability | 12.94 | |
| | 30. | E. C. Strode | November salary | 66.66 | |
| | | | | | 226.20 |
| Dec. | 14. | Wm. Bradford | Filing fee—mandamus for new holder | 6.50 | |
| | 31. | Tr. Vo. 832 | Voucher missing | 44.60 | |
| | 31. | do. | Appeal and bond | 75.00 | |
| | 31. | Tr. Vou. 834*c* | Emp. liability ins. | 12.94 | |
| | 31. | E. C. Strode | December salary | 66.66 | |
| | | | | | 205.70 |

| | | | | | |
|---|---|---|---|---|---|
| 1910. | | | | | |
| Jan'y | 31. | Tr. Vo. 850 | Voucher missing | 44.60 | |
| " | | do. | Appeal and bond | 75.00 | |
| " | | Tr. Vo. 851*c* | Employers' Liab. ins. | 23.33 | |
| " | | L. G. & E. L. Co. | Rebate C. O. W. | 27.17 | |
| " | | E. C. Strode | Jan'y salary | 66.66 | |
| | | | | | 236.76 |
| Feb'y | 28. | Tr. Vo. 865 | Voucher missing | 44.60 | |
| " | | do. | Appeal and bond | 75.00 | |
| " | | Tr. Vo. 866*c* | Emp. liability ins. | 23.33 | |
| " | | E. C. Strode | Feb'y salary | 66.66 | |
| " | | Star Pub. Co. | Legal notice Reubenstein | 3.20 | |
| | | | | | 212.79 |
| M'ch | 15. | J. W. Brewster | Reporting testimony | 5.60 | |
| | 17. | E. C. Strode | Balance Feb'y salary | 133.33 | |
| | 31. | Tr. Vo. 879*c* | Emp. liability ins. | 29.22 | |
| | 31. | Tr. Vo. 881 | Voucher missing | 44.60 | |
| | 31. | do. | Appeal and bond | 75.00 | |
| | 31. | E. C. Strode | March salary | 200.00 | |
| | 31. | C. A. Frueauff | Jan'y, Feb'y and March s'ly | 120.00 | |
| | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 33.49 | |
| | | | | | 641.24 |
| Ap'l | 30. | Tr. Vo. 896*c* | Emp. liability ins. | 29.83 | |
| " | | Tr. Vo. 898 | Voucher missing | 44.60 | |
| " | | do. | Appeal and bond | 75.00 | |
| " | | C. A. Frueauff | April salary | 40.00 | |
| " | | E. C. Strode | do. | 200.00 | |
| | | | | | 389.43 |

| | | | | | |
|---|---|---|---|---|---|
| May | 6. | do. | Expenses filing bond, Cooper & Cole case, and trip to Fremont | 3.70 | |
| | 18. | A. W. Richardson | Reporting C. & C. case | 48.40 | |
| | 31. | Tr. Vo. 913*a* | Emp. liability ins. | 29.83 | |
| | 31. | Tr. Vo. 915 | Voucher missing | 44.60 | |
| | 31. | do. | Appeal and bond | 75.00 | |
| | 31. | C. A. Frueauff | May salary | 40.00 | |
| | 31. | E. C. Strode | do. | 200.00 | |
| | 31. | Hovey & Fawell | Premium on appeal bond | 8.52 | |
| | | | | | 450.05 |
| June | 2. | E. C. Strode | Telegrams to Armstrong, Doherty and Frueauff | 5.70 | |
| | 30. | C. A. Frueauff | June salary | 40.00 | |
| | 27. | E. C. Strode | do. | 200.00 | |
| | 30. | Tr. Vo. 931*c* | Emp. liability ins. | 29.83 | |
| | 30. | Tr. Vo. 932 | Voucher missing | 44.60 | |
| | 30. | Tr. Vo. 935 | Appeal and bond | 219.33 | |
| | | | | | 539.46 |
| July | 12. | E. C. Strode | Legal expenses Cooper & Cole case, transcript | 19.80 | |
| | 28. | C. A. Frueauff | July salary | 40.00 | |
| | 28. | E. C. Strode | do. | 200.00 | |
| | 29. | J. S. Baer | Gas holder case | 4.56 | |
| | 30. | Tr. Vo. 947*c* | Emp. liab. ins. | 29.83 | |
| | 30. | Tr. Vo. 949 | Voucher missing | 44.60 | |
| | 30. | do. | Appeal and bond | 219.33 | |
| | 30. | Tr. Vo. 950 | Myron B. Jenkins exp. | 10.00 | |
| | 30. | L. G. & E. L. Co. | Court costs Goodyear Co. v. Reubenstein | 9.24 | |
| | 30. | do. | Rebate C. O. W. | 8.38 | |
| | | | | | 585.74 |

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|---|---|---|---|---|---|
| Aug. | 31. | Tr. Vo. 961c | Emp. liab. ins. | 29.83 | |
| | 31. | Tr. Vo. 963 | Voucher missing | 44.60 | |
| | 31. | do. | Appeal and bond | 219.33 | |
| | 31. | Tr. Vo. 964 | Myron B. Jenkins exp. | 10.00 | |
| | 31. | C. A. Frueauff | August salary | 40.00 | |
| | 31. | E. C. Strode | do. | 200.00 | |
| | 31. | do. | Costs—Hayward case | 4.56 | |
| | | | | | 548.32 |

1747 *Legal Expense—Gas Acct.* #1505.

1910.

| | | | | | |
|---|---|---|---|---|---|
| Sept. | 30. | Tr. Vo. 976c | Emp. liability ins. | 29.83 | |
| | 30. | Tr. Vo. 978 | Voucher missing | 44.60 | |
| | 30. | do. | Appeal and bond | 219.33 | |
| | 30. | Tr. Vo. 979 | Myron B. Jenkins exp. | 10.00 | |
| | 30. | C. A. Frueauff | September salary | 40.00 | |
| | 30. | E. C. Strode | do. | 200.00 | |
| | 30. | L. G. & E. L. Co. | | .80 | |
| | | | | | 578.42 |
| Oct. | 31. | Tr. Vo. 993 | Emp. liability ins. | 29.83 | |
| | 31. | Tr. Vo. 998 | Voucher missing | 44.60 | |
| | 31. | do. | Appeal and bond | 219.33 | |
| | 31. | Tr. Vo. 999 | Myron B. Jenkins exp. | 10.00 | |
| | 31. | do. | Strode—Denver trip | 26.66 | |
| | 31. | C. A. Frueauff | October salary | 40.00 | |
| | 31. | E. C. Strode | do. | 200.00 | |
| | 31. | do. | Filing trans. C. & C. case | 18.00 | |
| | | | | | 578.42 |

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|---|---|---|---|---|---|
| Nov. | 21. | D. F. Cook—damage | No gas, stop'd meter | 2.00 | |
| | 30. | Tr. Vo. 1016*b* | Emp. liability ins. | 29.83 | |
| | 30. | Tr. Vo. 1021 | Voucher missing | 44.60 | |
| | 30. | do. | Appeal and bond | 219.33 | |
| | 30. | Tr. Vo. 1022 | Myron B. Jenkins exp. | 10.00 | |
| | 30. | do. | Strode Denver trip | 26.67 | |
| | 30. | C. A. Frueauff | Nov. salary | 40.00 | |
| | 30. | E. C. Strode | do. | 200.00 | |
| | 30. | Lincoln Herald | Publishing indebtedness | 2.00 | |
| | 30. | L. G. & E. L. Co. | Rebate C. O. W. | 40.008 | |
| | | | | | 614.50 |
| Dec. | 31. | C. A. Frueauff | December salary | 40.00 | |
| | 31. | E. C. Strode | do. | 200.00 | |
| | 31. | Tr. Vo. 1039 | Strode Denver trip | 26.67 | |
| | 31. | Tr. Vo. 1040 | Myron B. Jenkins exp. | 10.00 | |
| | 31. | do. | Voucher missing | 44.60 | |
| | 31. | Tr. Vo. 1041 | Appeal and bond | 219.33 | |
| | 31. | Tr. Vo. 1046*b* | Emp. liability ins. | 29.83 | |
| | | | | | 570.43 |

1748 *Legal Expense—Gas Acct.* #1505.

1911.

| | | | | | |
|---|---|---|---|---|---|
| Jan'y | 31. | C. A. Frueauff | January salary | 40.00 | |
| | 31. | E. C. Strode | do. | 200.00 | |
| | 31. | Tr. Vo. 1060 | Appeal and bond | 219.33 | |
| | 31. | Tr. Vo. 1065*a* | Employers' Liability ins. | 29.83 | |
| | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 34.78 | |
| | | | | | 523.94 |

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|---|---|---|---|---|---|
| Feb'y | 28. | E. C. Strode | Feb'y salary | 200.00 | |
| | 28. | C. A. Frueauff | do. | 40.00 | |
| | 28. | Tr. Vo. 1086 | Appeal and bond | 219.33 | |
| | 28. | Tr. Vo. 1091*a* | Emp. liability ins. | 29.83 | |
| | 28. | L. G. & E. L. Co. | Contingent | .50 | |
| | 28. | do. | Rebate C. O. W. | 20.04 | |
| | | | | | 509.70 |
| M'ch | 31. | E. C. Strode | March salary | 200.00 | |
| | 31. | C. A. Frueauff | do. | 40.00 | |
| | 31. | Tr. Vo. 1112*a* | Appeal and bond | 219.33 | |
| | 31. | Tr. Vo. 1116*b* | Emp. liability ins. | 29.83 | |
| | 31. | H. L. Doherty Co. | Legislation | 40.00 | |
| | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 10.74 | |
| | | | | | 539.90 |
| Ap'l | 29. | Tr. Vo. 1139 | Appeal and bond | 219.33 | |
| | 29. | Tr. Vo. 1144*b* | Emp. liability ins. | 31.82 | |
| | 29. | E. C. Strode | April salary | 200.00 | |
| | 29. | C. A. Frueauff | do. | 40.00 | |
| | 29. | L. G. & E. L. Co. | Rebate C. O. W. | 11.16 | |
| | | | | | 497.35 |
| May | 31. | E. C. Strode | May salary | 200.00 | |
| | 31. | C. A. Frueauff | do. | 40.00 | |
| | 31. | Tr. Vo. 1167 | Appeal and bond | 219.33 | |
| | 31. | Tr. Vo. 1172*b* | Emp. liab. ins. | 31.82 | |
| | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 6.20 | |
| | | | | | ..... |

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| June | 30. | E. C. Strode | June salary | 200.00 | |
| | 30. | C. A. Frueauff | do. | 40.00 | |
| | 30. | Tr. Vo. 1196*b* | Emp. liability ins. | 31.82 | |
| | 30. | L. G. & E. L. Co. | Rebate C. O. W. | 6.53 | |
| | 30. | Tr. Vo. 1190 | Clerk's costs and printing record $ gas case | 138.33 | |
| | | | | | 416.68 |
| July | 31. | E. C. Strode | July salary | 200.00 | |
| | 31. | C. A. Frueauff | do. | 40.00 | |
| | 31. | Tr. Vo. 1224 | Costs $ Gas case | 138.33 | |
| | 31. | Tr. Vo. 1229 | Emp. liability | 31.82 | |
| | 31. | Tr. Vo. 1247 | Supersedeas Bond ($1,500) | 125.00 | |
| | 31. | Sec'y of State | Copy | 1.40 | |
| | 31. | Verne Hedge | Abstract | 16.00 | |
| | 31. | L. G. & E. L. Co. | Certified copy of franchise | .90 | |
| | 31. | do. | Rebate C. O. W. | 1.20 | |
| | 31. | E. C. Strode | Costs, Cooper & Cole case | 14.72 | |
| | | | | | 569.37 |
| Aug. | 31. | do. | August salary | 200.00 | |
| | 31. | C. A. Frueauff | do. | 40.00 | |
| | 31. | Tr. Vo. 1288*b* | Emp. liab. ins. | 31.82 | |
| | 31. | Tr. Vo. 1297 | Supersedeas bonds | 125.00 | |
| | 31. | Verne Hedge | Abstract | 4.00 | |
| | 31. | E. C. Strode | Telegrams Frueauff | 2.35 | |
| | 31. | L. G. & E. L. Co. | Rebate C. O. W. | 9.57 | |
| | | | | | 412.74 |

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| Oct. | 31. | E. C. Strode | October salary | 200.00 | |
| | 31. | C. A. Frueauff | do. | 40.00 | |
| | 31. | Tr. Vo. 1313*a* | Emp. liability ins. | 31.82 | |
| | 31. | Tr. Vo. 1320 | Supersedeas bond | 125.00 | |
| | 31. | Tr. Vo. 1323 | Frueauff & Robinson—apportionment of expense on $500.000 notes ($573.95) | 76.53 | |
| 1749 | | | *Legal Expense—Gas Acct.* #1505. | | |
| 1911. | | | | | |
| Oct. | 31. | L. G. & E. L. Co. | Certified copies appeal $ Gas case to Dist. Ct. | 3.70 | |
| | 31. | do. | Rebate C. O. W. | 11.07 | |
| | | | | | 488.12 |
| Nov. | 29. | Tr. Vo. 1338*b* | Emp. liability ins. | 31.82 | |
| | 29. | Tr. Vo. 1343 | Supersedeas bond | 125.00 | |
| | 29. | Tr. Vo. 1344 | Frueauff & Robinson, expense on notes | 76.53 | |
| | 29. | E. C. Strode | November salary | 200.00 | |
| | 29. | C. A. Frueauff | do. | 40.00 | |
| | 29. | E. C. Strode | Filing brief | .50 | |
| | 29. | L. G. & E. L. Co. | Rebate C. O. W. | 13.36 | |
| | 29. | do. | Certified copy ordinance #439 | 1.25 | |
| | | | | | 488.46 |
| Dec. | 30. | E. C. Strode | December salary | 200.00 | |
| | 30. | C. A. Frueauff | do. | 40.00 | |
| | 30. | Tr. Vo. 1359*b* | Emp. liability insurance | 31.84 | |
| | 30. | Tr. Vo. 1364 | Supersedeas bond | 125.00 | |
| | 30. | Tr. Vo. 1365 | Frueauff & Robinson—notes expense account | 76.53 | |
| | 30. | L. F. N. Easterday | Figuring $ Gas case | 8.00 | |
| | 30. | Frueauff & Robinson | Frueauff's Washington expense account | 66.36 | |
| | 30. | L. G. & E. L. Co. | Rebate C. O. W. | 13.30 | |

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|---|---|---|---|---|---|---|
| 30. | do. | Costs, case Robt. Wade, gas stealing | | | 2.00 | |
| 30. | Tr. Vo. 1380 | Balance due Frueauff & Robinson on note exp. acct. | | 229.58 | | |
| | | And on Supersedeas bond | | 750.00 | | |
| | | | | | 979.58 | |
| | | | | | | 1542.61 |

1750 *Gas—Legal Expense Acct. No.* 1505.

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|---|---|---|---|---|---|---|
| 1912. | | | | | | |
| Jan'y 31. | E. C. Strode | Jan'y salary | | | 200.00 | |
| " " | C. A. Frueauff | do. | | | 40.00 | |
| " " | Trans. Vo. 1383 | Employers' Liability | | | 13.00 | |
| " " | L. G. & E. L. Co. | Rebate C. O. W. | | | 13.75 | |
| " " | E. C. Strode | Filing brief | | | .50 | |
| | | | | | | 267.25 |
| Feb'y 29. | do. | Feb'y salary | | | 200.00 | |
| " " | C. A. Frueauff | do. | | | 40.00 | |
| " " | Tr. Vo. 1405*b* | Emp. Liability | | | 13.00 | |
| " " | L. G. & E. L. Co. | Rebate C. O. W. | | | 13.23 | |
| | | | | | | 266.23 |
| M'ch 30. | Tr. Vo. 1424*b* | Emp. Liability | | | 13.00 | |
| " 29. | E. C. Strode | Justice Court, Wm. A. Diehl case | | | 6.32 | |
| " 31. | Tr. Vo. 1432 | Stout & Rose Acct. $ Gas case ($3,122.37) | | | 260.20 | |
| " " | C. A. Frueauff | March salary | | | 40.00 | |
| " " | L. G. & E. L. Co. | Rebate C. O. W. | | | 11.39 | |
| " " | E. C. Strode | March salary | | | 200.00 | |
| | | | | | | 530.91 |

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| Ap'l | 30. | do. | April " | | 200.00 | |
| " | " | C. A. Frueauff | " " | | 40.00 | |
| " | " | H. L. Doherty Co. | Voucher #12104 missing | | 27.96 | |
| " | " | L. G. & E. L. Co. | Rebate C. O. W. | | 10.25 | |
| " | " | Tr. Vo. 1446*b* | Emp. Liability | | 13.00 | |
| " | " | Tr. Vo. 1453 | Stout & Rose Acct. $ gas | | 260.20 | |
| | | | | | | 551.41 |
| May | 31. | E. C. Strode | Copy of application for approval of bond $ gas case | 1.00 | | |
| | | | E. C. Strode's exp. to Omaha, $ gas case | 8.10 | | |
| | | | Filing motion in Cizek v. Gas Co. | .50 | | |
| | | | | | 9.60 | |
| " | " | E. C. Strode | May salary | | 200.00 | |
| " | " | C. A. Frueauff | do. | | 40.00 | |
| " | " | Tr. Vo. 1468 | Emp. Liability | | 13.00 | |
| " | " | Tr. Vo. 1475 | Stout & Rose Acct. $ gas | | 260.20 | |
| " | " | L. G. & E. L. Co. | Rebate C. O. W. | | 8.71 | |
| " | " | do. | Notary bond fee | | 1.60 | |
| | | | | | | 533.11 |
| June | 29. | Tr. Vo. 1486 | Paid to F. D. Blenderman for securing rate in $ gas bond | | 100.00 | |
| " | " | do. | Apportionment premium Nat'l Security Co. bond ($ gas) | | 136.36 | |
| " | " | Tr. Vo. 1489*b* | Emp. Liability | | 13.00 | |
| " | " | Tr. Vo. 1498 | Stout & Rose | | 260.20 | |
| " | " | Tr. Vo. 1948 | Telegrams $ gas case | | 4.44 | |
| " | " | Tr. Vo. 1499 | Services of Frueauff & Robinson $ gas case | | 208.33 | |
| " | 19. | E. C. Strode | Telegram Frueauff $ gas | | .90 | |
| " | 29. | C. A. Frueauff | June salary | | 40.00 | |

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| " | " | E. C. Strode | " | 200.00 | |
| " | " | L. G. & E. L. Co. | Rebate C. O. W. | 7.41 | |
| | | | | | 970.64 |
| July | 31. | Tr. Vo. 1510 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1514*b* | Emp. Liability | 13.00 | |
| " | " | Tr. Vo. 1519 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1551 | Frueauff & Robinson | 208.33 | |
| " | " | C. A. Frueauff | July salary | 40.00 | |
| " | " | L. G. & E. L. Co. | Rebate C. O. W. | 7.53 | |
| " | " | E. C. Strode | July salary | 200.00 | |
| | | | | | 865.42 |

1751 *Gas—Legal Expense Acct. No. 1505.*

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| 1912. | | | | | |
| Aug. | 31. | Tr. Vo. 1541 | National Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1545*b* | Emp. Liability | 13.00 | |
| " | " | Tr. Vo. 1548 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1551 | Frueauff & Robinson | 208.33 | |
| " | " | E. C. Strode | August salary | 200.00 | |
| " | " | C. A. Frueauff | do. | 40.00 | |
| " | " | L. G. & E. L. Co | Rebate C. O. W. | 10.70 | |
| | | | | | 868.59 |
| Sept. | 30. | Tr. Vo. 1566 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1568 | Liability insurance on electric motor truck | 7.51 | |
| " | " | Tr. Vo. 1570*a* | Empl. Liability | 13.00 | |
| " | " | Tr. Vo. 1573 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1575 | Frueauff & Robinson | 208.33 | |
| " | " | C. A. Frueauff | Sept. salary | 40.00 | |
| " | " | L. G. & E. L. Co | Rebate C. O. W. | 13.92 | |

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| " | " | E. C. Strode | Costs and telephone in Co. v. Lancaster Milk Prod. Co. | 2.24 | |
| " | " | E. C. Strode | Sept. salary | 200.00 | |
| | | | | | 881.56 |
| Oct. | 31. | Tr. Vo. 1592 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1594 | Liab. ins. elec. truck | 7.51 | |
| " | " | Tr. Vo. 1597 | Empl. liability ins. | 13.00 | |
| " | " | Tr. Vo. 1599 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1602 | Frueauff & Robinson | 208.33 | |
| " | " | L. G. & E. L. Co | Rebate C. O. W. | 8.32 | |
| " | " | E. C. Strode | October salary | 200.00 | |
| " | " | C. A. Frueauff | do. | 40.00 | |
| | | | | | 873.72 |
| Nov. | 30. | " " " | November salary | 40.00 | |
| " | " | E. C. Strode | " | 201.20 | |
| " | " | Tr. Vo. 1617 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1619 | Lib. ins. elec. truck | 7.51 | |
| " | " | Tr. Vo. 1621*b* | Empl. liability | 13.00 | |
| " | " | Tr. Vo. 1624 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1626 | Frueauff & Robinson | 208.33 | |
| " | " | L. G. & E. L. Co | Damages—escaping gas 805 A St. | 10.00 | |
| " | " | do. | Rebate C. O. W. | 8.02 | |
| | | | | | 884.62 |
| Dec. | 31. | Tr. Vo. 1874 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1646 | Liab. ins. auto truck | 7.51 | |
| " | " | Tr. Vo. 1648*a* | Emp. liability | 13.00 | |
| " | " | Tr. Vo. 1651 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1653 | Frueauff & Robinson | 208.33 | |
| " | " | C. A. Frueauff | December salary | 40.00 | |

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| " | " | L. G. & E. L. Co. | Rebate C. O. W. | | 9.50 | |
| " | " | E. C. Strode | December salary | | 200.00 | |
| | | | | | | 874.90 |

1752 *Rebates and Allowances—Gas and Electricity Furnished Free of Charge as Shown by Vouchers on File of Lincoln Gas & Electric Light Co.*

| 1907. | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|
| Jan'y 31. | Voucher #2616: | | | | | |
| | S. H. Burnham | Gas and elec... | 47.15 | | | |
| | H. Honeywell | do. ... | 16.88 | | | |
| | S. H. Burnham | Gas ..... | 10.44 | | | |
| | C. O. Whedon | Gas and elec... | 13.67 | #1503 | 44.07 | |
| | | | | #3229 | 44.07 | 88.14 |
| Feb'y 28. | Voucher #2723: | | | | | |
| | H. Honeywell | Gas and elec... | 14.99 | | | |
| | S. H. Burnham | Gas ..... | 12.12 | | | |
| | C. O. Whedon | Gas and elec... | 15.13 | | | |
| | J. K. Honeywell | Gas and elec... | 13.68 | #1503 | 27.96 | |
| | | | | #3229 | 27.96 | 55.92 |
| March 29. | Voucher #2838: | | | | | |
| | S. H. Burnham | Gas and elec... | 47.12 | | | |
| | C. O. Whedon | do. ... | 8.87 | | | |
| | J. K. Honeywell | do. ... | 6.36 | #1503 | 26.17 | |
| | | | | #3229 | 26.18 | 52.35 |
| April 30. | Voucher #2983: | | | | | |
| | J. K. Honeywell | Elec. ..... | 51.42 | | | |
| | J. K. Honeywell | Gas ..... | 8.76 | | | |
| | H. Honeywell | Gas and elec... | 12.75 | #1503 | 36.46 | |
| | | | | #3229 | 36.47 | 72.93 |

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| " | " | E. C. Strode | Costs and telephone in Co. v. Lancaster Milk Prod. Co. | 2.24 | |
| " | " | E. C. Strode | Sept. salary | 200.00 | |
| | | | | | 881.56 |
| Oct. | 31. | Tr. Vo. 1592 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1594 | Liab. ins. elec. truck | 7.51 | |
| " | " | Tr. Vo. 1597 | Empl. liability ins. | 13.00 | |
| " | " | Tr. Vo. 1599 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1602 | Frueauff & Robinson | 208.33 | |
| " | " | L. G. & E. L. Co | Rebate C. O. W. | 8.32 | |
| " | " | E. C. Strode | October salary | 200.00 | |
| " | " | C. A. Frueauff | do. | 40.00 | |
| | | | | | 873.72 |
| Nov. | 30. | " " " | November salary | 40.00 | |
| " | " | E. C. Strode | " | 201.20 | |
| " | " | Tr. Vo. 1617 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1619 | Lib. ins. elec. truck | 7.51 | |
| " | " | Tr. Vo. 1621*b* | Empl. liability | 13.00 | |
| " | " | Tr. Vo. 1624 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1626 | Frueauff & Robinson | 208.33 | |
| " | " | L. G. & E. L. Co | Damages—escaping gas 805 A St. | 10.00 | |
| " | " | do. | Rebate C. O. W. | 8.02 | |
| | | | | | 884.62 |
| Dec. | 31. | Tr. Vo. 1874 | Nat'l Sec. Co. bond | 136.36 | |
| " | " | Tr. Vo. 1646 | Liab. ins. auto truck | 7.51 | |
| " | " | Tr. Vo. 1648*a* | Emp. liability | 13.00 | |
| " | " | Tr. Vo. 1651 | Stout & Rose | 260.20 | |
| " | " | Tr. Vo. 1653 | Frueauff & Robinson | 208.33 | |
| " | " | C. A. Frueauff | December salary | 40.00 | |

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| " | " | L. G. & E. L. Co | Rebate C. O. W. | 9.50 | | |
| " | " | E. C. Strode | December salary | 200.00 | | 874.90 |

1752 *Rebates and Allowances—Gas and Electricity Furnished Free of Charge as Shown by Vouchers on File of Lincoln Gas & Electric Light Co.*

| 1907. | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|
| Jan'y 31. | Voucher #2616: | | | | | |
| | S. H. Burnham | Gas and elec... | 47.15 | | | |
| | H. Honeywell | do. ... | 16.88 | | | |
| | S. H. Burnham | Gas ..... | 10.44 | | | |
| | C. O. Whedon | Gas and elec... | 13.67 | #1503 | 44.07 | |
| | | | | #3229 | 44.07 | 88.14 |
| Feb'y 28. | Voucher #2723: | | | | | |
| | H. Honeywell | Gas and elec... | 14.99 | | | |
| | S. H. Burnham | Gas ..... | 12.12 | | | |
| | C. O. Whedon | Gas and elec... | 15.13 | | | |
| | J. K. Honeywell | Gas and elec... | 13.68 | #1503 | 27.96 | |
| | | | | #3229 | 27.96 | 55.92 |
| March 29. | Voucher #2838: | | | | | |
| | S. H. Burnham | Gas and elec... | 47.12 | | | |
| | C. O. Whedon | do. ... | 8.87 | | | |
| | J. K. Honeywell | do. ... | 6.36 | #1503 | 26.17 | |
| | | | | #3229 | 26.18 | 52.35 |
| April 30. | Voucher #2983: | | | | | |
| | J. K. Honeywell | Elec. ..... | 51.42 | | | |
| | J. K. Honeywell | Gas ..... | 8.76 | | | |
| | H. Honeywell | Gas and elec... | 12.75 | #1503 | 36.46 | |
| | | | | #3229 | 36.47 | 72.93 |

| | | | | | | |
|---|---|---|---|---|---|---|
| May 31. | Voucher #3134: | | | | | |
| | J. K. Honeywell | Gas and elec... | 16.07 | | | |
| | H. Honeywell | do. ... | 10.73 | | | |
| | S. H. Burnham | do. ... | 28.93 | | | |
| | C. O. Whedon | do. ... | 13.03 | #1503 | 34.38 | |
| | | | | #3229 | 34.38 | 68.76 |
| June 30. | Voucher #3270: | | | | | |
| | C. O. Whedon | Gas and elec... | 30.12 | | | |
| | S. H. Burnham | Gas ..... | 15.36 | | | |
| | J. K. Honeywell | Gas and elec... | 13.86 | | | |
| | H. Honeywell | do. ... | 6.84 | #1503 | 33.09 | |
| | | | | #3229 | 33.09 | 66.18 |

1753 *Rebates and Allowances.*

1907. Accts. charged.

| | | | | | | |
|---|---|---|---|---|---|---|
| July 31. | Voucher #3407: | | | | | |
| | C. O. Whedon | Gas ..... | 5.40 | | | |
| | S. H. Burnham | Gas ..... | 13.08 | | | |
| | H. Honeywell | Gas and elec... | 10.89 | | | |
| | J. K. Honeywell | do. ... | 12.12 | #1503 | 20.79 | |
| | | | | #3229 | 20.80 | 41.59 |
| Aug. 31. | Voucher #3588: | | | | | |
| | S. H. Burnham | Gas and elec... | 26.06 | | | |
| | H. Honeywell | Electricity .... | 6.50 | | | |
| | J. K. Honeywell | Gas and elec... | 10.25 | #1503 | 21.40 | |
| | | | | #3229 | 21.41 | |
| | C. O. Whedon | Gas and elec... | 10.69 | #1505 | 5.34 | |
| | | | | #3228 | 5.35 | 53.50 |

In addition to these items, Voucher #2787, March 28, 1907, contains the following rebate slips for gas furnished free to T. H. Pratt:

| | | | |
|---|---|---|---|
| Jan'y | 8, 1907 | 4.92 | |
| Feb'y | 13, " | 4.80 | |
| April | 5, " | 4.32 | |
| May | 17, " | 7.68 | |
| June | 15, " | 1.92 | |
| Aug. | 8, " | 9.66 | |
| | | 33.30 | 33.30 |
| Total for 1907 | | | $532.67 |

1753½ *Rebates and Allowances.*

| 1908. | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|
| Jan'y 31. | Voucher #4165: | | | | | |
| | "Honeywell for W. L. D." | | 5.89 | | | 5.89 |
| March 31. | Voucher #4430: | | | | | |
| | C. O. Whedon | Gas and elec | 78.54 | #1505 | 39.27 | |
| | | | | #3228 | 39.27 | |
| | S. H. Burnham | Gas and elec | 224.10 | | | |
| | J. K. Honeywell | do. | 121.03 | | | |
| | H. Honeywell | do. | 77.15 | #1503 | 211.14 | |
| | | | | #3229 | 211.14 | 500.82 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| April 30. | Voucher #4567: | | | | | | |
| | C. O. Whedon | Gas and elec... | 12.91 | | | | |
| | C. O. Whedon | Elec. | 8.17 | | | | |
| | C. O. Whedon | Gas | 5.28 | | | | |
| | | | | #1505 | 21.09 | | |
| | | | | #3229 | 5.27 | | |
| | H. Honeywell | Gas | 6.60 | | | | |
| | S. H. Burnham | Gas and elec... | 24.63 | | | | |
| | J. K. Honeywell | do. ... | 12.43 | | | | |
| | H. Honeywell | do. ... | 14.11 | | | | |
| | J. K. Honeywell | do. ... | 18.25 | #1503 | 60.81 | | |
| | | | | #3229 | 15.21 | 102.38 | |
| May 30. | Voucher #4691: | | | | | | |
| | H. Honeywell | Gas and elec... | 11.31 | | | | |
| | S. H. Burnham | do. ... | 34.66 | | | | |
| | J. K. Honeywell | do. ... | 12.37 | #1503 | 46.67 | | |
| | | | | #3229 | 11.67 | 58.34 | |
| | C. O. Whedon | do. ... | 15.09 | #1505 | 12.07 | | |
| | | | | #3228 | 3.02 | 15.09 | |
| June 30. | Voucher #4882: | | | | | | |
| | C. O. Whedon | Gas and elec... | 18.12 | #1505 | 14.49 | | |
| | | | | | 3.63 | | |
| | S. H. Burnham | do. ... | 29.34 | | | | |
| | J. K. Honeywell | do. ... | 9.26 | | | | |
| | H. Honeywell | do. ... | 11.39 | #1503 | 40.00 | | |
| | | | | #3229 | 9.99 | 68.11 | |
| July 31. | Voucher #4997: | | | | | | |
| | C. O. Whedon | Gas and elec... | 16.40 | #1505 | 13.12 | | |
| | | | | #3228 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | J. K. Honeywell | | do. | ... | 9.29 | | |
| | S. H. Burnham | | do. | ... | 36.19 | | |
| | H. Honeywell | | do. | ... | 10.90 | | |
| | E. Bignell | | do. | ... | 32.28 | #1503 70.93 | |
| | | | | | | #3229 17.73 | 105.06 |
| | Carried forward | | | | | | $855.69 |

1754 *Rebates and Allowances.*

1908. Accts. charged.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Bro't for'd | | | | | | $855.69 |
| Sept. 30. | Voucher #5285: | | | | | | |
| | E. Bignell | Gas | ... | 5.52 | | | |
| | H. Honeywell | Gas and elec | ... | 10.56 | | | |
| | J. K. Honeywell | do. | ... | 6.69 | | | |
| | S. H. Burnham | do. | ... | 22.95 | | | |
| | H. Honeywell | do. | ... | 9.49 | | | |
| | J. K. Honeywell | do. | ... | 7.29 | | | |
| | E. Bignell | Gas do. | ... | 6.36 | | | |
| | S. H. Burnham | Gas and elec | ... | 22.61 | #1503 73.18 | | |
| | | | | | #3229 18.29 | | |
| | C. O. Whedon | Gas and elec | ... | 20.06 | | | |
| | C. O. Whedon | do. | ... | 15.39 | #1505 28.35 | | |
| | | | | | #3228 7.10 | | 126.92 |
| Nov. 30. | Voucher 5512: | | | | | | |
| | J. K. Honeywell | Gas and elec | ... | 13.69 | | | |
| | S. H. Burnham | do. | ... | 29.63 | | | |
| | H. Honeywell | do. | ... | 15.12 | | | |
| | J. K. Honeywell | do. | ... | 10.66 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | H. Honeywell | do. | ... | 9.85 | | | |
| | S. H. Burnham | do. | ... | 22.39 | | | |
| | E. Bignell | Gas | ... | 4.68 | #1503 | 85.62 | |
| | | | | | #3229 | 21.40 | |
| | C. O. Whedon | Gas and elec | ... | 20.83 | | | |
| | C. O. Whedon | do. | ... | 25.17 | #1505 | 36.79 | |
| | | | | | #3228 | 9.21 | 153.02 |
| Dec. 31. | Voucher #5691: | | | | | | |
| | J. K. Honeywell | Gas and elec | ... | 12.93 | | | |
| | H. Honeywell | do. | ... | 15.01 | | | |
| | E. Bignell | Gas | ... | 18.00 | | | |
| | S. H. Burnham | Gas and elec | ... | 39.51 | #1503 | 68.36 | |
| | | | | | #3229 | 17.09 | |
| | C. O. Whedon | Gas and elec | ... | 20.93 | #1505 | 16.75 | |
| | | | | | #3228 | 4.18 | 106.38 |
| | Total for 1908 | | | | | | $1242.01 |

1755

*Rebates and Allowances.*

Gas and Electricity Furnished Free.

| | | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|---|
| 1909. | | | | | | | |
| Jan'y 23. | Voucher #5730: | | | | | | |
| | C. O. Whedon | Gas and elec | ... | 16.02 | #1505 | 12.81 | |
| | | | | | #3228 | 3.21 | |
| | "A. B. J." | do. | ... | 65.85 | | | |
| | J. K. Honeywell | do. | ... | 15.68 | | | |
| | S. H. Burnham | do. | ... | 38.03 | | | |
| | H. Honeywell | do. | ... | 14.67 | #1503 | 107.38 | |
| | | | | | #3229 | 26.85 | 150.25 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Feb'y 27.** | Voucher #5968: | | | | | |
| | H. Honeywell | Gas and elec... | 13.80 | | | |
| | J. K. Honeywell | do. ... | 7.94 | #1503 | 17.39 | |
| | | | | #3229 | 4.35 | |
| | C. O. Whedon | Gas and elec... | 14.84 | #1505 | 11.88 | |
| | | | | #3228 | 2.96 | 36.58 |
| **March 31.** | Voucher 6063: | | | | | |
| | C. O. Whedon | Gas and elec... | 15.96 | #1505 | 8.16 | |
| | | | | #3228 | 7.80 | |
| | J. K. Honeywell | do. ... | 6.10 | | | |
| | H. Honeywell | do. ... | 12.31 | | | |
| | S. H. Burnham | do. ... | 25.57 | #1503 | 19.32 | |
| | | | | #3229 | 24.66 | 59.94 |
| **April 30.** | Voucher 6275: | | | | | |
| | S. H. Burnham | Gas and elec... | 23.49 | | | |
| | J. K. Honeywell | do. ... | 5.93 | | | |
| | E. Bignell | Gas ..... | 35.88 | | | |
| | H. Honeywell | Gas and elec... | 11.68 | #1503 | 58.32 | |
| | | | | #3228 | 18.66 | |
| | C. O. Whedon | Gas and elec... | 18.68 | #1505 | 10.32 | |
| | | | | #3228 | 8.36 | 95.66 |
| **June 30.** | Voucher #6564: | | | | | |
| | H. Honeywell | Gas and elec... | 22.92 | | | |
| | J. K. Honeywell | do. ... | 9.46 | | | |
| | S. H. Burnham | do. ... | 61.35 | | | |
| | E. Bignell | Gas do. ... | 21.96 | #1503 | 73.68 | |
| | | | | #3229 | 42.01 | |
| | C. O. Whedon | Gas and elec... | 22.98 | #1505 | 12.72 | |
| | | | | #3228 | 10.26 | 138.67 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Sept. 30. | Voucher #7046: | | | | | |
| | H. Honeywell | Gas and elec... | 25.59 | | | |
| | J. K. Honeywell | do. ... | 17.40 | | | |
| | S. H. Burnham | do. ... | 47.97 | | | |
| | E. Bignell | Gas | 7.56 | #1503 | 64.68 | |
| | | | | #3229 | 33.94 | |
| | C. O. Whedon | Gas | 9.70 | | | |
| | C. O. Whedon | Elec. | 21.00 | #1505 | 21.00 | |
| | | | | #3228 | 9.70 | 129.32 |

1756 *Rebates and Allowances.*

| 1909. | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|
| Nov. 20. | Voucher 7272: | | | | | |
| | S. H. Burnham | Gas and elec... | 54.29 | | | |
| | H. Honeywell | do. ... | 10.33 | | | |
| | J. K. Honeywell | do. ... | 7.30 | | | |
| | E. Bignell | Gas | 7.08 | #1503 | 50.64 | |
| | | | | #3229 | 28.36 | |
| | C. O. Whedon | Gas and elec... | 22.60 | #1505 | 15.00 | |
| | | | | #3228 | 7.60 | 101.60 |
| | Total for 1909 | | | | | $712.02 |

## Gas and Electricity Furnished Free.

| 1910. | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|
| Jan'y 31. | Voucher #7574: | | | | | |
| | C. O. Whedon | Gas and elec... | 33.97 | #1505 | 27.17 | |
| | | | | #3228 | 6.80 | |
| | E. Bignell | Gas and elec... | 7.44 | | | |
| | J. K. Honeywell | Gas and elec... | 18.51 | | | |
| | H. Honeywell | Gas and elec... | 13.84 | | | |
| | S. H. Burnham | Gas and elec... | 62.37 | #1503 | 72.82 | |
| | | | | #3229 | 29.34 | 136.13 |
| March 31. | Voucher #7820: | | | | | |
| | S. H. Burnham | Gas and elec... | 83.99 | | | |
| | E. Bignell | Gas ..... | 45.48 | #1503 | 103.58 | |
| | | | | #3229 | 25.89 | |
| | C. O. Whedon | Gas and elec... | 41.86 | #1505 | 33.49 | |
| | | | | #3228 | 8.37 | 171.33 |
| July 25. | Voucher #8509: | | | | | |
| | S. H. Burnham | Gas and elec... | 38.45 | | | |
| | E. Bignell | Gas ..... | 18.60 | | | |
| | J. K. Honeywell | Gas and elec... | 28.41 | | | |
| | H. Honeywell | do. ... | 29.03 | #1503 | 91.60 | |
| | | | | #3229 | 22.89 | |
| | C. O. Whedon | Gas and elec... | 10.47 | #1505 | 8.38 | 124.96 |
| | | | | #3228 | 2.09 | |
| Oct. 31. | Voucher 8796: | | | | | |
| | E. Bignell | Gas ..... | 30.96 | | | |
| | J. K. Honeywell | Gas and elec... | 37.72 | #1503 | 54.95 | |
| | | | | #3229 | 13.73 | 68.68 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nov. 30. | Voucher #8948: | | | | | | |
| | J. K. Honeywell | Gas and elec... | 30.66 | | | | |
| | S. H. Burnham | do. ... | 57.43 | #1503 | 70.48 | | |
| | | | | #3229 | 17.61 | | |
| | C. O. Whedon | do. ... | 50.09 | #1505 | 40.08 | | |
| | | | | #3228 | 10.01 | 138.18 | |
| | Total for 1910 | | | | | | $639.28 |

1758

*Rebates and Allowances.*

Gas and Electricity Furnished Free.

1911.

| | | | | Accts. charged. | | | |
|---|---|---|---|---|---|---|---|
| Jan'y 31. | Voucher #9241: | | | | | | |
| | E. Bignell | Gas | 12.48 | | | | |
| | J. K. Honeywell | Gas and elec... | 50.10 | | | | |
| | S. H. Burnham | do. ... | 53.67 | | | | |
| | J. K. Honeywell | do. ... | 40.07 | #1503 | 125.12 | | |
| | | | | #3229 | 31.20 | | |
| | C. O. Whedon | Gas and elec... | 43.48 | #1505 | 34.78 | | |
| | | | | #3228 | 8.70 | 199.80 | |
| Feb'y 28. | Voucher #9462: | | | | | | |
| | E. Bignell | Gas | 67.80 | | | | |
| | S. H. Burnham | Gas and elec... | 64.67 | | | | |
| | H. Honeywell | do. ... | 36.59 | | | | |
| | J. K. Honeywell | do. ... | 23.33 | #1503 | 140.64 | | |
| | | | | #3229 | 51.75 | | |
| | C. O. Whedon | Gas and elec... | 44.40 | #1505 | 20.04 | | |
| | | | | #3228 | 24.36 | 236.79 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| March 31. | Voucher #10069: | | | | | |
| | E. Bignell | Gas | 9.84 | | | |
| | J. K. Honeywell | Gas and elec | 9.02 | | | |
| | H. Honeywell | do. | 11.02 | | | |
| | S. H. Burnham | do. | 34.11 | #1503 | 51.20 | |
| | | | | #3229 | 12.79 | |
| | C. O. Whedon | Gas and elec | 13.42 | #1505 | 10.74 | |
| | | | | #3228 | 2.68 | 77.41 |
| April 29. | Voucher #10220: | | | | | |
| | J. K. Honeywell | Gas and elec | 10.42 | | | |
| | H. Honeywell | do. | 10.38 | | | |
| | E. Bignell | Gas | 12.60 | | | |
| | S. H. Burnham | Gas and elec | 24.77 | #1503 | 46.56 | |
| | | | | #3229 | 11.61 | |
| | C. O. Whedon | do. | 13.95 | #1505 | 11.16 | |
| | | | | #3228 | 2.79 | 72.12 |
| May 31. | Voucher #10346: | | | | | |
| | S. H. Burnham | Gas and elec | 20.82 | | | |
| | E. Bignell | Gas | 7.80 | | | |
| | H. Honeywell | Gas and elec | 11.10 | #1503 | 19.30 | |
| | | | | #3229 | 20.42 | |
| | C. O. Whedon | Gas and elec | 7.74 | #1505 | 6.20 | |
| | | | | #3228 | 1.54 | 47.46 |
| June 30. | Voucher #10558: | | | | | |
| | E. Bignell | Gas | 9.24 | | | |
| | S. H. Burnham | Gas and elec | 16.71 | | | |
| | H. Honeywell | do. | 8.52 | | | |
| | J. K. Honeywell | do. | 13.51 | #1503 | 38.44 | |
| | | | | #3229 | 9.54 | |
| | C. O. Whedon | do. | 8.16 | #1505 | 6.53 | |
| | | | | #3228 | 1.63 | 56.14 |

| 1911. | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|
| July 31. | Voucher #10724: | | | | | |
| | J. K. Honeywell | Gas and elec... | 7.08 | | | |
| | H. Honeywell | do. ... | 9.58 | | | |
| | S. H. Burnham | do. ... | 11.58 | | | |
| | E. Bignell | Gas ..... | 5.88 | #1503 | 27.29 | |
| | | | | #3229 | 6.83 | |
| | C. O. Whedon | Gas and elec... | 6.47 | #1505 | 5.18 | |
| | | | | #3228 | 1.29 | 40.59 |
| Aug. 31. | Voucher #10911: | | | | | |
| | E. Bignell | Gas ..... | 6.48 | | | |
| | H. Honeywell | Gas and elec... | 8.22 | | | |
| | S. H. Burnham | do. ... | 6.40 | #1503 | 16.89 | |
| | | | | #3229 | 4.21 | |
| | C. O. Whedon | Gas and elec... | 9.17 | #1505 | 7.34 | |
| | | | | #3228 | 1.83 | 30.27 |
| Sept. 30. | Voucher #11136: | | | | | |
| | S. H. Burnham | Gas and elec... | 4.29 | | | |
| | J. K. Honeywell | do. ... | 8.57 | | | |
| | H. Honeywell | do. ... | 9.99 | | | |
| | E. Bignell | Gas ..... | 12.36 | #1503 | 28.18 | |
| | | | | #3229 | 7.03 | |
| | C. O. Whedon | Gas and elec... | 11.96 | #1505 | 9.57 | |
| | | | | #3228 | 2.39 | 47.17 |
| Oct. 31. | Voucher #11260: | | | | | |
| | C. O. Whedon | Gas and elec... | 13.83 | #1505 | 11.07 | |
| | | | | #3228 | 2.76 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | S. H. Burnham | do. | ... | 10.25 | | | |
| | J. K. Honeywell | do. | ... | 7.48 | | | |
| | H. Honeywell | do. | ... | 11.28 | #1503 | 23.18 | |
| | | | | | #3229 | 5.83 | 42.84 |
| Nov. 29. | Voucher #11390: | | | | | | |
| | C. O. Whedon | Gas and elec | ... | 16.70 | #1505 | 13.36 | |
| | | | | | #3228 | 3.34 | |
| | J. K. Honeywell | do. | ... | 8.52 | | | |
| | S. H. Burnham | do. | ... | 23.45 | | | |
| | H. Honeywell | do. | ... | 12.44 | | | |
| | E. Bignell | Gas | ... | 28.20 | #1503 | 58.09 | |
| | | | | | #3229 | 14.50 | 89.29 |
| Dec. 30. | Voucher #11390: | | | | | | |
| | S. H. Burnham | Gas and elec | ... | 20.59 | | | |
| | H. Honeywell | do. | ... | 10.95 | | | |
| | J. K. Honeywell | do. | ... | 10.88 | #1503 | 33.94 | |
| | | | | | #3229 | 8.48 | |
| | C. O. Whedon | do. | ... | 16.62 | #1505 | 13.30 | |
| | | | | | #3228 | 3.32 | 59.04 |
| | Total for 1911 | | | | | | $998.92 |



*Rebates and Allowances.*

Gas and Electricity Furnished Free.

| | | | | | Accts. charged. | | |
|---|---|---|---|---|---|---|---|
| 1912. | | | | | | | |
| Jan'y 31. | Voucher #11712: | | | | | | |
| | S. H. Burnham | Gas and elec | ... | 24.04 | | | |
| | E. Bignell | Gas | ... | 15.48 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | H. Honeywell | Gas and elec... | 13.39 | | | |
| | J. K. Honeywell | do. ... | 11.34 | #1503 | 51.40 | |
| | | | | #3229 | 12.85 | |
| | C. O. Whedon | do. ... | 17.19 | #1505 | 13.75 | |
| | | | | #3228 | 3.44 | 81.44 |
| Feb'y 29. | Voucher #11889: | | | | | |
| | E. Bignell | Gas ..... | 9.24 | | | |
| | S. H. Burnham | Gas and elec... | 22.68 | | | |
| | J. K. Honeywell | do. ... | 11.40 | #1503 | 34.64 | |
| | | | | #3229 | 8.68 | |
| | C. O. Whedon | do. ... | 16.53 | #1505 | 13.23 | |
| | | | | #3228 | 3.30 | 59.85 |
| Mc'h 30. | Voucher #12096: | | | | | |
| | C. O. Whedon | Gas and elec... | 14.24 | #1505 | 11.39 | |
| | | | | #3228 | 2.85 | |
| | E. Bignell | Gas ..... | 6.72 | | | |
| | S. H. Burnham | Gas and elec... | 17.67 | | | |
| | J. K. Honeywell | do. ... | 11.16 | #1503 | 28.45 | |
| | | | | #3229 | 7.10 | 49.79 |
| April 30. | Voucher #12274: | | | | | |
| | J. K. Honeywell | Gas and elec... | 9.60 | | | |
| | H. Honeywell | do. ... | 10.30 | | | |
| | E. Bignell | Gas ..... | 7.20 | | | |
| | S. H. Burnham | Gas and elec... | 14.42 | #1503 | 33.02 | |
| | | | | #3229 | 8.50 | |
| | C. O. Whedon | do. ... | 12.31 | #1505 | 10.25 | |
| | | | | #3228 | 2.06 | 55.83 |
| May 31. | Voucher #12396: | | | | | |
| | E. Bignell | Gas ..... | 7.68 | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | S. H. Burnham | Gas and elec... | 10.96 | | | |
| | H. Honeywell | do. ... | 8.04 | | | |
| | J. K. Honeywell | do. ... | 10.75 | #1503 | 29.94 | |
| | | | | #3229 | 7.49 | |
| | C. O. Whedon | do. ... | 8.71 | #1505 | | |
| | | | 2.18 | #3228 | | 48.32 |
| June 29. | Voucher #12599: | | | | | |
| | C. O. Whedon | Gas and elec... | 9.26 | #1505 | 7.41 | |
| | | | | #3228 | 1.85 | |
| | S. H. Burnham | do. ... | 8.97 | | | |
| | E. Bignell | Gas ..... | 4.68 | | | |
| | H. Honeywell | Gas and elec... | 9.75 | | | |
| | J. K. Honeywell | do. ... | 10.00 | #1503 | 26.73 | |
| | | | | #3229 | 6.67 | 42.66 |
| | Carried for'd | | | | | $337.89 |

1761 *Rebates and Allowances.*

| | | | | | | |
|---|---|---|---|---|---|---|
| | Brg't for'd | | | | | $337.89 |
| 1912. | | | | Accts. charged. | | |
| July 31. | Voucher #12785: | | | | | |
| | C. O. Whedon | Gas and elec... | 9.41 | #1505 | 7.53 | |
| | | | | #3228 | 1.88 | |
| | S. H. Burnham | Gas and elec... | 10.05 | | | |
| | E. Bignell | Gas ..... | 4.20 | | | |
| | H. Honeywell | Gas and elec... | 10.02 | | | |
| | J. K. Honeywell | do. ... | 8.88 | #1503 | 26.52 | |
| | | | | #3229 | 6.63 | 42.56 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Aug. 31. Voucher #13037: | | | | | | |
| H. Honeywell | Gas and elec... | 11.14 | | | | |
| J. K. Honeywell | do. ... | 10.42 | | | | |
| E. Bignell | Gas ..... | 4.44 | | | | |
| S. H. Burnham | Gas and elec... | 13.02 | #1503 | 31.23 | | |
| | | | #3229 | 7.79 | | |
| C. O. Whedon | do. ... | 13.37 | #1505 | 10.70 | | |
| | | | #3228 | 2.67 | 52.39 | |
| Sept. 30. Voucher #13205: | | | | | | |
| S. H. Burnham | Gas and elec... | 12.89 | | | | |
| H. Honeywell | do. ... | 10.09 | | | | |
| J. K. Honeywell | do. ... | 10.06 | #1503 | 26.43 | | |
| | | | #3229 | 6.61 | | |
| C. O. Whedon | do. | 17.40 | #1505 | 13.92 | | |
| | | | #3228 | 3.48 | 50.44 | |
| Oct. 31. Voucher #13310: | | | | | | |
| E. Bignell | Gas ..... | 14.46 | | | | |
| H. Honeywell | Gas and elec... | 12.65 | | | | |
| S. H. Burnham | do. ... | 20.64 | | | | |
| J. K. Honeywell | do. ... | 14.68 | #1503 | 49.95 | | |
| | | | #3229 | 12.48 | | |
| C. O. Whedon | do. ... | 10.40 | #1505 | 8.32 | | |
| | | | #3228 | 2.08 | 72.83 | |
| Nov. 30. Voucher #13498: | | | | | | |
| E. Bignell | Gas ..... | 4.20 | | | | |
| S. H. Burnham | Gas and elec... | 17.57 | | | | |
| H. Honeywell | do. ... | 9.42 | | | | |
| J. K. Honeywell | do. ... | 10.15 | #1503 | 33.10 | | |
| | | | #3229 | 8.24 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | C. O. Whedon | do. | ... | 10.02 | #1505 | 8.02 | |
| | | | | | #3228 | 2.00 | 51.36 |
| Dec. 31. | Voucher #13617: | | | | | | |
| | E. Bignell | Gas | ... | 7.80 | | | |
| | S. H. Burnham | Gas and elec | ... | 25.03 | | | |
| | H. Honeywell | do. | ... | 7.23 | | | |
| | J. K. Honeywell | do. | ... | 4.46 | #1503 | 35.63 | |
| | | | | | #3229 | 8.89 | |
| | C. O. Whedon | do. | ... | 11.88 | #1505 | 9.50 | |
| | | | | | #3228 | 2.38 | 56.40 |
| | Total for 1912 | | | | | | $663.87 |

1762 O. N. Guldlin, President; S. M. Foster, Vice President; J Ross McCulloch, Treasurer; Chas. McCulloch, Secretary.

The Western Gas Construction Company,
Gas Engineers,

Builders of Water, Coal and Oil Gas Apparatus,
Gas Holders.

Works and Main Office, Fort Wayne, Indiana.

Eastern Office, New York City.

Western Office, San Francisco.

Sales Department, William W. Hackney, Sales Engineer.

MAY 29, 1912.

Lincoln Gas & Electric Company, Lincoln, Nebraska, Att. Mr. B. C. Adams, Gen. Mgr.

GENTLEMEN: The writer wishes to apologize for not writing you sooner regarding the old engine, etc., but only returned to the office this morning, having gone direct from Lincoln to Burlington, Chicago & St. Louis. We have taken this matter up with our estimating department and find that we can make you an allowance of $400.00 for the engine, countershafting with pulleys and the belt tightener. This will eliminate from the original proposition the #7 blower and the two leather belts. The latter, you will appreciate, we would hardly be able to utilize, and in all probability they have been used up around your works by this time.

I would appreciate it if you would forward the executed contract by return mail, as we require same to file amongst our records. We have, however, ordered all the firebrick linings for this set, and work on the castings and shell is now in progress in the shops. We would also appreciate the sketch which Mr. Montgomery promised the writer he would send us in which he would locate the centers between the present and the new apparatus.

Regarding the placing in position of the material now on the ground for the down run, or hot valve connection to the carburetter, we would advise that we will place this material in the position as agreed upon, without any charge to you, but before this is done, at the time the old set is put out of commission, we wish to take
1763 up with you the feasibility of putting in an entirely new valve of the type we are furnishing with the new apparatus. We believe that you will be so well pleased with this new valve that you will be glad to substitute one like it for the present valve. At that time we will take up with you the cost of such a change, and feel sure that you will agree with us that this is the proper thing to do.

With kindest regards and thanking you for your courtesies to the writer while in Lincoln, we remain,

Very truly yours,

THE WESTERN GAS CONSTRUCTION COMPANY,
Per EDW. W. STEINMUELLER, *Sales Agent.*

I. R.

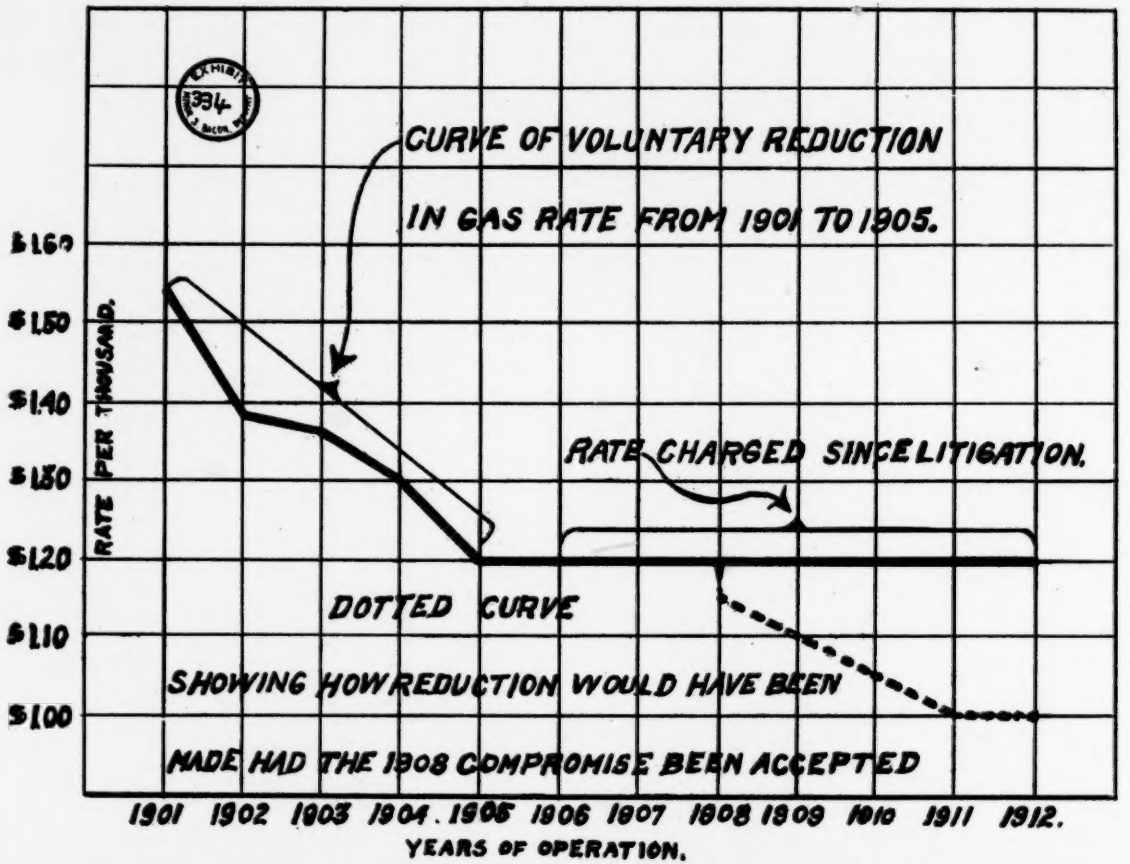
(Here follow photo-lithographs, marked pages 1764-1772.)

# Get a Gas Range

**Visit our modern office and salesroom.**

## Lincoln Gas & Electric Light Co.

**Bell 75** **Auto B2575**




The above chart shows the rate which has been charged for gas since 1901 and proves that during the years up to the time of litigation the company voluntarily reduced its rate so that in the course of five years a 23 per cent reduction was made. (And by the way, the rates charged each year were less than that prescribed by Ordinance.)

It also shows that if the company's compromise had been accepted in 1908 the rate would have been reduced five cents each year so that the dollar rate would have been reached in 1911.

In spite of all that has been said to the contrary, the company has consistently tried to bring about gradual rate reductions for the benefit of the consumer.

**Lincoln Gas & Electric Light Company**

By B. C. ADAMS.

RUDOLPH WOLFF, Vice-President
OFFICE AND YARDS—12th and W Streets
LINCOLN, NEBR.
P. O. Box 163 Both Phones

Ed 364 Fuller

C. J. BILLS, Chairman

A. H. KAUFMAN, Secretary and Treasurer

Lincoln, Neb., 10/20 1910

Delivery No.

O. P. Hahn City

Terms Cash.
7% interest after 30 days.

1766

# TO THE REIMERS, KAUFMAN CO., DR.

SUCCESSOR TO THE REIMERS & FRIED CO.

**Wholesale and Retail Dealers in Building Supplies, Cement Contractors**

| DATE 1910 | DESCRIPTIONS | PRICE | AMOUNT | TOTAL |
|---|---|---|---|---|
| August 19 | Car 63165 Sand 42 tons | | 20 99 | |
| " 26 | Car 4 bl stone 49.00 pds | 10½ | 4 90 | |
| Sept 13 | Car 62350 Sand 57⅛ tons | | 25 71 | |
| " 17 | Car 67488 Sand 38⅝ tons | | 19 31 | 71 01 |
| Oct 20 | To Geo Holder Contract | | | 7190 11 |
| | | | | 7261 12 |
| | By Credits: | | | |
| Sept 16 | " Cash | | 520 00 | |
| Oct 20 | " " | | 1700 00 | |
| | | | | 7220 00 |
| | To Balance due us | | | 61 12 |

Material x Labor in Main house
No of brick mason hours 150, or at-
13 per hr. 1950= Roof 1100= Frames x labor 700=

Total $3650=

Kilns count - 110,000.
at - 7.50 Per M $825-00 ——— $825-00
Sand 90 yds at - 1.25 per yd $109.50
Cement 440 sacks at - 40 cts per sack 1767 $176.00
Scaffolding 100,00
15% for Profit- 547.50
Roof x frames 180 ———
Labor 1,091.50

$3650=

£365

Purifying house

No of brick mason mras 24420 at-
$13.00 per M — 3,172.00
or Kiln count - 1866 at - 7.50 per M — 1386.50

Sand 180 yds at- 65 cts yd — 117.00
Cement - 1302 sacks at - 40 cts sack — 432.20
Scaffolding — 80.00
Profit — 475.80
Labor — 678.50

3172.00

E366
M Eu

1768

# WESTERN UNION

Form 2

| RECEIVERS NO. | TIME FILED | CHECK |
|---|---|---|
| | | |

3KS DA C 13 paid

# TELEGRAM

THEO. N. VAIL, PRESIDENT

1134 "O" street, Lincoln, Neb.
Phones Bell 18 & 190
Auto 2253

SEND the following Telegram, subject to the terms on back hereof, which are hereby agreed to

NX New York Jan 4- 1910

To B. C. Adams, Care Gas Co Lincoln, Neb.

74 122

1771

Elect Doherty Chairman Board of Directors Armstrong

President Frurauff Vice President reelect Burnham

10.59 A.M. Henry L. Doherty & Co.

COPY

((If any complaint advise C.B.Norton,Mgr)

# NIGHT LETTER

Form 2260 J.

## THE WESTERN UNION TELEGRAPH COMPANY

25,000 OFFICES IN AMERICA — INCORPORATED — CABLE SERVICE TO ALL THE WORLD

THEO. N. VAIL, PRESIDENT — BELVIDERE BROOKS, GENERAL MANAGER

| RECEIVED'S NO. | TIME FILED | CHECK |
|---|---|---|
| | | Paid |

SEND the following NIGHT LETTER subject to the terms on back hereof, which are hereby agreed to

Lincoln, Neb. 6/23/10 191

To Doherty Operating Co.
60 Wall Street,
New York, N.Y.,

74 CONFIRMATION

Low bid on brick tank for holder sixty-three seventy-five. Excavation at nonety cents per yard approximately thirty-five hundred. Total ninety-eight seventy-five. This is about seven thousand more than a steel tank would cost. Do you advise us to close contract on above basis? Answer quick.

Lincoln Gas & Elect. Lt. Co.

Chg. Gas Co.

Per B. C. Adams

1772

Copy

1773

74.

Copy.

5/18/10.

Doherty Operating Co., New York, N. Y.

GENTLEMEN: Inclosed please find clipping concerning the gas holder permit. This permit has been granted with the understanding that the height of the holder erected shall not exceed 25′, that it shall contain not less than a maximum of 100,000 cu. ft. of gas, that it shall be surrounded by trees and shrubbery.

The city attorney will draw stip*lu*ation in reference to the district which shall be supplied in Lincoln from this holder, will probably specify certain sizes of mains in certain streets, and further, will provide that the city of Lincoln does not recognize any franchise right in the granting of this permission.

We have agreed with Mr. Hill, owning a house and six lots in the block with our property, to take his property off his hands at the end of a year after the erection of the holder, at $3,500, providing he wishes to sell at that time. I do not believe that we can lose more than $500 on this basis.

We may have still further trouble from the property holders, in the neighborhood of the holder.

We wish to emphasize the necessity of ordering a holder at once and getting quick delivery. The Western Gas Construction Company has made us a price of $7,231 on a holder 22′ 8″ in height and something like 75′ in diameter, with a stone or concrete tank, we to build the tank, and, of course, this is not included in the above price. No doubt, you can get a better price than has been submitted to us, and also bring pressure to bear in the way of prompt delivery.

Yours very truly,

LINCOLN GAS & ELEC. LT. CO.,
Per —— ——, *Gen. Mgr.*

1774

Copy.

Doherty Operating Company,
60 Wall Street, New York.

Henry L. Doherty, President.
Frank W. Frueauff, First Vice President.
H. H. Scott, Vice President & General Manager.
Paul R. Jones, Auditor.
Milan R. Bump, Secretary.
Louis F. Musil, Ass't Secretary. 74
George S. Pearson, Treasurer.
Charles A. Frueauff, General Counsel.

Attention of
—— ——.

MARCH 11th, 1910.

Lincoln Gas & Electric Light Co., Lincoln, Nebr.

GENTLEMEN: Mr. Frueauff stated some time age that he made arrangement for you to send us $200. a month salary for him as

Vice-President. Up to this date we have had no notice or check for this amount.

Will you please write us concerning it.

Very truly yours,

DOHERTY OPERATING COMPANY,
By LOUIS F. MUSIL.

L. F. M./W.

1775 Copy.

74.

MAY 4, 1909.

Mr. Henry L. Doherty, 60 Wall St., New York City.

DEAR SIR: With the death of Mr. I. M. Raymond we have but seven members on our board of directors where we should have nine. You recollect that Mr. McMillin did not accept his election as a member of the board.

Charlie Frueauff has written asking that we call a meeting of the board of directors in order for them to aut-orize making the Ohio Trust Co. our transfer agent and the State Savings Bank and Trust Co. registrar of our stock in Columbus.

When this meeting is called we believe that you would want two new members elected on the board.

I have talked this matter over with Mr. Strode and we agree that the names of A. H. Armstrong of the Armstrong Clothing Co. and Dr. P. L. Hall, Pres. of the Central National Bank would be good ones to suggest.

Kindly advise us as to your wishes in this matter.

Yours very truly,

____ ____,
*General Manager.*

B. C. A.—W.

1776 Copy.

72.

7/2/10.

Mr. Frank W. Frueauff, New York, N. Y.

DEAR MR. FRUEAUFF: We have closed all contracts relative to the erection of the holder in East Lincoln, and excavation was started Thursday. We hope to be able to start the erection of the holder itself about August 10th. We contemplate that it will take something over a month to complete the erection. I addressed a letter to the Doherty Operating Company on Thursday in which was contained the figures covering construction costs.

The sale of gas ranges in Lincoln is coming along very nicely. We actually sold and connected 75 new ranges in June and you know we are not taking in any second hand ranges, whatever.

The sewer which the city compelled us to build at the plant is

about completed and Mr. Bradford thinks that the total cost is going to be about $750.

Our revenue in Uni. Place for the first full month we have had was $102. Things are going rather slowly out there at present, due to the dry condition of the surrounding country, so I am told. I feel, however, that since our first month's bills have been distributed, we will have pressure brought to bear on prospective consumers by those already using gas. We have discontinued the Acetylene plant at Havelock and are now furnishing gas from our Uni. Place mains. The Havelock consumers are using the gas for illuminating purposes only and the revenue from them is very small. We do not feel that it would be wise to attempt the installation of gas stoves until our holder in East Lincoln is erected.

The coal situation in this part of the country is still in bad shape and the Traction Company here is complaining in the newspapers of a hold up on the part of the operators. Humpe had an article in the paper Thursday to the effect that after carefully checking over the additional price they have to pay for coal, they have spent over $20,000 over and above normal costs.

Our fuel costs last month were about $1,000 above normal and we hope that this amount will not be exceeded this month.

We have used $970.45 of gas oil at 2.7¢.
270.72 of fuel oil at 2.4¢.
606.00 of tar at 2¢.
631.24 of Kansas wash slack at $3.05.
276.85 of mine run at $3.75.
578.40 of Colorado slack at $4.70.
499.00 of gas coal at $5.50.

$3,832.66 Total.

We are mailing you today the Incorporation papers for the new Fremont Company. We need money bad at Fremont and would say that we have put over $4,000 into construction since the first of April up to the first of May. You have advanced us, during this time, $2,000. It is impossible for us to pay many of our obligations until we can secure money from some source or other. Upon receipt of the Articles of Incorporation together with other papers which we are sending you, I imagine that it rests entirely with your office to get out the new stock certificates and bonds.

Yours very truly,

____ ____,
*General Manager.*

1777 *Ordinance to be Voted upon at a Special Election, in Lincoln, Nebraska, Friday, December 27, 1912. Polls open eight a. m. and close at seven p. m.*

Roscoe C. Ozman, City Clerk.

An Ordinance Regulating the price of Manufactured Gas and Prescribing penalties for the enforcement thereof: Providing for a compromise settlement of the suit pending in the Federal Court involving the validity of the dollar gas ordinance passed November 12, 1906, and providing for a compromise settlement of the occupation tax assessed against the Lincoln Gas & Electric Light Company and prescribing an occupation tax: Providing for a compromise settlement of the franchise controversy and recognizing and reaffirming the franchise of the Lincoln Gas Company, its successors and assigns, for the life of the original grantee, and repealing all ordinances and parts of ordinances in conflict herewith.

Be it ordained by the Mayor and Council of the City of Lincoln, Nebraska.

Section 1. That the price to be charged for gas manufactured and sold in the City of Lincoln for illuminating or heating purposes after this ordinance shall take effect and up to December 1, 1914, shall be One Dollar net per one thousand cubic feet; and the price to be charged subsequent to December 1, 1914, shall be ninety-five cents net per one thousand cubic feet, and subject thereafter to further regulation; provided that a penalty of not more than twenty cents per one thousand cubic feet may be added to the prices hereinabove specified, when payment is not made within six days from date of bill rendered covering gas consumed; and provided that a minimum monthly charge of twenty-five cents per month for a single service may be charged and collected by any gas company.

1778 Section 2. Any gas company, or any executive officer, president or manager of any gas company, who shall violate any provision of this ordinance shall be deemed guilty of a misdemeanor and on conviction thereof shall be fined in any sum not less than Ten Dollars, nor more than One Hundred Dollars and a violation hereof for each calendar day or part thereof, shall constitute a separate offense.

Section 3. That in the matter of the enforcement of the ordinance passed November 12, 1906, taking effect December 1, 1906, fixing the price of Gas at One Dollar net per one thousand cubic feet, and the suit pending in the Federal Court for the District of Nebraska, involving the validity of said ordinance and in the way of compromise of the matters in controversy in said suit, the City Attorney of the City of Lincoln is hereby authorized, instructed and directed to stipulate for, agree to and aid in securing the decree of said Court, enjoining the enforcement of said ordinance on the ground that the rate prescribed would be confiscatory from December 1, 1906, to

December 1, 1910, and that the enforcement thereof be enjoined on the ground of the invalidity of said ordinance on the condition that the Lincoln Gas & Electric Light Company shall stipulate for, agree to and aid in securing the decree of the Court in said case, to the effect that said company shall refund to the consumers of gas of the City of Lincoln, for gas sold by said company in said City, subsequent to December 1, 1910, twenty cents per one thousand cubic feet of gas sold at One Dollar and twenty cents per one thousand cubic feet, and by decree provide for the determination thereof in case of dispute and providing, if agreeable to the Court, that in the adjustment thereof, a representative of the City of Lincoln shall have access to the books and records of said company showing the charges for gas subsequent to December 1, 1910, and shall be permitted to participate with the company in determining and verifying the amounts to be refunded to the various consumers of gas, as applications shall be made therefore, and providing for the release and discharge of the bonds furnished by the company for the protection of the gas consumers, in said case, under such terms and conditions as may be prescribed by the Court. This settlement is to be without prejudice as against either party in any subsequent proceeding to show the value of the property involved.

Section 4. That in the matter of the occupation tax assessed against the Lincoln Gas & Electric Light Company and involved in suits pending and as a compromise settlement of the controversies therein involved, and as a part of the settlement between the City of Lincoln and the Lincoln Gas & Electric Light Company, with respect to the price to be charged for gas as herein provided, the Lincoln Gas & Electric Light Company is to pay the City of Lincoln on final decree in the case, in the Federal Court involving the gas rate hereinbefore referred to, the sum of Twenty Thousand Dollars ($20,000) in full settlement of the occupation taxes assessed against said company to the date of the taking effect of this ordinance, and is to pay the City of Lincoln thereafter an occupation tax in the amount of one per cent annually on its gross receipts from gas and electric sales; provided an equal rate for occupation tax shall be imposed on any other company furnishing gas or electric service, and is to pay in addition, all unpaid Court costs in the case in the Federal Court, involving the gas rate hereinbefore referred to.

1779

Section 5. That in the matter of the action pending in the District Court of Lancaster County, Nebraska, under the title of State ex rel. Frank M. Tyrrell, County Attorney vs. Lincoln Gas & Electric Light Company, involving the franchise rights of the Lincoln Gas & Electric Light Company, the City Attorney of the City of Lincoln is authorized and directed to stipulate for, agree to and aid in securing the decree of said Court in said case to the effect that the franchises granted the Lincoln Gas Company in 1872 were for the corporate life of the Lincoln Gas Company and expire at the expiration of said period; and authorizing and directing the City Attorney to join the Lincoln Gas & Electric Light Company in the aforesaid construction of the franchise rights granted, and to bind the City thereby in all future extensions of its property and investments made in relation

thereto. The Company waives to the city in any condemnation or rate proceedings any franchise value on account of franchise rights herein or heretofore granted, or reaffirmed to it by said city, or on account of this settlement, but does not waive business value or value as a going concern attaching to its property by reason of the extent of its business or objection to the right of the city to condemnation, the right to the same being left open for determination at the time of such proceeding.

Section 6. The Lincoln Gas & Electric Light Company as part of this settlement, is to pay all expenses incurred by the city in
1780 submitting this ordinance to a vote of the people for their approval, payment whereof is to be made by the Gas Company in advance of such election; and is to pay all unpaid court costs in the Dollar gas ordinance case, the occupation tax cases and the franchise case.

Section 7. In addition to the provisions of Section 6, hereof the Lincoln Gas & Electric Light Company is to pay, in case the provisions of this ordinance shall be approved and adopted by a vote of the people of the City of Lincoln, such additional expense as the City of Lincoln shall have incurred in the employment of an expert to value the property of the Gas Company, and in the employment of Special Counsel to assist the City Attorney in the matters referred to in this ordinance.

Section 8. That the original ordinance passed November 12, 1906, approved November 19, 1906, entitled "An Ordinance regulating the price of manufactured gas, establishing penalties for the violation of the provisions of this ordinance and repealing all ordinances in conflict herewith," is hereby repealed.

Section 9. This ordinance shall be submitted to a vote of the people of the City of Lincoln, at a special election to be held under the provisions of the Statutes of the State providing for an initiative and referendum vote on ordinances of the City, and if a majority of the electors voting at such special election shall vote for the adoption of this ordinance, then the same shall thereupon be in full force and effect.

Introduced by Thos. H. Pratt, by request.

1781 (COPY PLAINTIFF'S EXHIBIT #402.)

Pipe Laid from Jan. 1, 1910, to Dec. 1, 1910.

| | | | |
|---|---|---|---|
| 4″ pipe | 10906 ft. | | |
| 6″ pipe | 5686 ft. | | |
| | | Labor & drayage..... | 3,264.66 |
| 20″ pipe | 466.8 ft. | " " ..... | 406.72 |
| 12″ pipe | 1175 ft. | " " ..... | 896.12 |
| | 18233.8 ft. | | $4,567.50 |

1782 (COPY PLAINTIFF'S EXHIBIT #403.)

From Jan. 1, 1911, to Dec. 31, 1911.

Pipe and Material and Labor for the Year of 1911.

| | | | | |
|---|---|---|---|---|
| 12,452 | ft. of | 4" | pipe | new |
| 408 | " " | 4" | " | old |
| 10,529 | " " | 6" | " | new |
| 1,824 | " " | 6" | " | old |
| 384 | " " | 12" | " | new |
| 132 | " " | 12" | " | old |
| 12 | " " | 12" | " | wrought iron |
| 2,028 | " " | 16" | " | new |
| Total 27,637 | " " | | pipe laid—5.23+miles. | |

(Labor Cost.)

| | | | |
|---|---|---|---|
| | 23,705 hours@1.75 per day | | $5,185.58 |
| Calking | 227 " " 2.25 " " | | 510.75 |
| Teaming | 771 " " 3.50 " " | | 337.32 |
| | 1,616 sections 6½ ft.@1.00 pr. section | | 616.54 |
| Carters Drayage | 234 hours@60¢ an hour | | 140.40 |
| Total cost of labor for year | | | $7,790.59 |

1783 (COPY PLAINTIFF'S EXHIBIT #404.)

Material Used Year 1912.

| | | | | |
|---|---|---|---|---|
| 620 | lengths & 7 ft. | of 4" | pipe | new |
| 78 | " | " 4" | " | old |
| 78 | lengths & 2 ft. | " 6" | " | new |
| 95 | " | " 6" | " | old |
| 209 | " | " 12" | " | new |
| 521 | " | " 16" | " | " |
| 7 | ft. | " 20" | " | " |

(Labor Cost.)

| | | | |
|---|---|---|---|
| Labor | 899½ hours@1.60 per day | | $179.90 |
| Labor | 12,289½ " @1.75 " " | | $2,688.33 |
| Labor | 18,564½ " @2.00 " " | | $4,641.12 |
| Calking | 2,510½ " @2.25 " " | | $706.08 |
| Foreman | 1,411¾ " @2.50 " " | | $443.18 |
| Foreman | 54½ " @2.80 " " | | $19.07 |
| Teaming | 1,081½ " @3.50 " " | | $472.94 |
| Labor | 806 sections @1.00 section | | $806.00 |
| Labor | 75 " @1.25 " | | $93.75 |
| Carters | 228 hours @ 60¢ an hour | | $136.80 |
| Total | | | $10,187.17 |

1784 (COPY PLAINTIFF'S EXHIBIT #405.)

Material Used in Year 1913.

1,335 lengths of 4" pipe
251 " " 6" "
112 " " 6" " 2nd hand

Labor Cost of Constructing Mains for Year 1913.

| | | | |
|---|---|---|---|
| | 13,795 | hours@$2.00 per day..... | $3,448.75 |
| | 1,384½ | " @ 2.25 " " ..... | 389.39 |
| | 820½ | " @ 2.50 " " ..... | 258.90 |
| Bakers' time | 820½ | " @ 2.50 " " ..... | 258.90 |
| Teaming | 523 | " @ 3.50 " " ..... | 228.82 |
| Carters | 72 | " @ 60¢ an hour..... | 43.20 |
| | 717 sections | @ 1.00 per section..... | 717.00 |
| Total cost of labor..... | | | $5,244.96 |

1785 (COPY PLAINTIFF'S EXHIBIT #406.)

Nov. 17, 1910.

Beatrice Creamery 4" Service.
69 ft. 4" pipe
1 4" "L"
1 Smith sleeve, valve & box
75 lbs. lead
5 lbs. oakum
50 lbs. coal,
1 gal. oil
1½ sack cement

| | | | |
|---|---|---|---|
| Teaming | 4 hr. | @3.50 per day..... | 1.75 |
| | 108 hr. | @1.75 per day..... | 23.63 |
| | 16 hr. | @2.25 " " ..... | 4.50 |
| Baker | 8 hr. | @ 30¢ ..... | 2.40 |
| F. Johnson. | | | 32.28 |

1786 (COPY PLAINTIFF'S EXHIBIT #407.)

Fire Services & 4" Lines.

3 lengths of 4" pipe
29 " "6" "

1— 6x4 valve & sleeve & box complete Smith
1— 8x4 " " " " "
1— 8x6 " " " " "
1—10x6 " " " " "
2—12x6 " " " " "
1— 4x2½ reducer
2— 6" offsets
1— 6" Ell
1— 4" Sleeve
4— 6" "
1— 4x4 Tee
1— 6x6 Tee

Labor on Fire Services.

| | | | |
|---|---|---|---|
| Labor | 568 hours@1.75 per day | ..... | $124.25 |
| Labor | 815 " "2.00 " " | ..... | 203.75 |
| Calking | 220 " "2.25 " " | ..... | 61.87 |
| Foreman | 214½ " "2.50 " " | ..... | 67.04 |
| Teaming | 90 " "3.50 " " | ..... | 39.38 |
| Total | | ..... | $496.29 |

1787 (COPY PLAINTIFF'S EXHIBIT #408.)

No. 23 St. from Holdrege to Potter, Dec. 8, 1913.

| | | | |
|---|---|---|---|
| | 368 hours@2.00 per day | ..... | 92.00 |
| | 73 " "2.25 " " | ..... | 20.56 |
| | 20 " "2.50 " " | ..... | 5.25 |
| Bakers' Time | 20 " "2.50 " " | ..... | 5.25 |
| | 48½sections@1.00 per section | ..... | 48.50 |
| Carters | 12 hours@60¢ " hours | ..... | 7.20 |
| | | | $178.76 |

56 lengths of 4" pipe
1—6x4 sleeve, valve & box Smith
1—4x4x4x4 cross
1—4" plug
1—4" sleeve
40# of oakum
200# " coal
3 bars of lead
4 gals. of oil

2035

1788 (COPY PLAINTIFF'S EXHIBIT #409.)

*Material Used in the Construction of Fire Service and 4" Private Mains for Year of* 1913.

35 lengths of 4" pipe
1 6"x4 reducer
1 6"x4" sleeve, valve & box—Smith
1 6"x6" " " " "
1 12"x4" " " " "
1 4" plug
1 10"x4" sleeve, valve & box, Smith
1—4"x4"x4" Tee
1—4" hydrant 2 way, new
1—sack of cement
½ yard of sand
450 pounds of lead
400 " " coal
24 " " oakum
2½ gallons " oil

Labor on Constructing 4" Services for 1913.

| | | | | |
|---|---|---|---|---|
| | 509 | hours@2.00 per day | ..... | 127.25 |
| | 76 | " "2.25 " " | ..... | 21.38 |
| | 69 | " "2.50 " " | ..... | 21.57 |
| Teaming | 31 | " "3.50 " " | ..... | 13.56 |
| Bakers' time | 55 | " "2.75 " " | ..... | 18.90 |
| Total cost of labor | | | ..... | $202.66 |

(Here follows photo-lithograph, marked page 1789.)

# REPORT OF EXPERT ON GAS PROFITS

LINCOLN, Neb., Dec. 25.—To the Editor of The State Journal: Will you please publish the following report from Mr. Adams, the expert employed by the city in the dollar gas case:

"LINCOLN, Neb., Dec. 25, 1912.—Fred C. Foster, city attorney, Lincoln, Neb. Dear Sir: The following complies with your request for a statement as to the profits of the gas company:

"If the gas sold in Lincoln during the year of 1907 had been at the net rate of $1 per thousand feet the gas company would have earned more than 9 per cent on the value of its plant above necessary operating expenses, including depreciation.

"Since 1907 the gas output has increased constantly, being twenty-six per cent greater in 1911 than in 1907 and this implies still larger profits.

"Yours respectfully,

"ALTON D. ADAMS."

EXHIBIT 414

I wish to add to this that in my opinion the city will be successful in the final outcome of this case.

FRED C. FOSTER.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

| | | | | | | |
|---|---|---|---|---|---|---|
| Dec. 31, 1873. | Fire Brick sold | Lgr., "A." | P. 32 | 32.80 | | |
| | | | | | | 32.80 |
| 1874. | No Credits | " | | | | |
| 1875. | All Chgs. to Const'n closed to expense | " | P. 32 | 80.82 | | |
| | | | | | | 80.82 |
| Apr. 25, 1876. | Gulick, Tile & Clay | " | P. 33 | 2.50 | | |
| June 24, 1876. | Amt. of sale of Chattel Property on judgment | " | P. 33 | 391.00 | | |
| | | | | | | 393.50 |
| 1877. | No Ledger A/C, No Credit | | | | | |
| 1878. | " " | | | | | |
| 1879. | " " | | | | | |
| 1880. | " " | | | | | |
| 1881. | " " | | | | | |
| 1882. | " " | Lgr. "A," | P. 104 | | | |
| 1883. | " " | " | " | | | |
| 1884. | " " | " | 105 | | | |
| Oct. 6, 1885. | Brick sold Stephens Bros | " | 106 | 4.25 | | |
| " 19, " | Ker, Murray Mfg. Co. Unloading car | " | " | 9.15 | | |
| | | | | | | 13.40 |
| 1886. | J. R. Smedberg, Labor setting up condenser | " | 316-318 | 6.00 | | |
| | | | | | | 6.00 |
| 1887. | No Credits | " | 318-319-350 | | | |
| Sept. 1, 1888. | Overcharge on freight | " | 350-352 | 1.13 | | |
| " " | Nat'l G. L. & F. Co. Frt. on new plant | " | " " | 274.25 | | |
| Nov. 1, " | Returned by George & G. | " | " " | 3.50 | | |
| " 3, " | Nat'l Gas L. & F. Co. Digging hole & filling around oil tank | | | 56.80 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 9 Bbl. Lime @95¢ | | | 8.55 | |
| | | 11 Loads sand@1.88 | | | 20.68 | |
| | | 500 Fire Brick | | | 30.00 | |
| | | 1,000 Fire Brick Batts | | | 10.00 | |
| | | 1½ Bbl. Ground Brick | | | 4.00 | |
| Nov. | 15, 1888. | Nat'l Gas L. & F. Co. Southwell bill for brick | | | 86.70 | |
| " | 24, " | " Frt. on Omaha Pipe | | | .45 | |
| | | | | | | 496.06 |
| 1791 | | Lincoln Gas & Electric Light Company. | | | | |
| | | *Statement of Credits to Gas Construction Accounts* 1873 *to* 1912. | | | | |
| Nov. | 25, 1889. | Cash returned by City | Lgr. | "A," P.352-353 | 10.83 | |
| | | | | | | 10.83 |
| | 1890. | No Credits | " | 353-373 | | |
| Oct. | 31, 1890. | Stacy Mfg. Co., Unloading car iron | " | "B," 64-67 | 3.00 | |
| " | | Stephens Bros. Man 1 day | " | 16-17 | 1.75 | |
| | | | | | | 4.75 |
| Jan. | 30, 1891. | Dennis Long & Co. Broken Pipe | " | 67-73-93-94 | 28.21 | |
| Mch. | 11, 1891. | " " " Rebate | | | 19.70 | |
| May | 11, " | Pipe sold City, 51710 lbs. 6" water pipe | | | 700.67 | |
| May | 14, " | " " " 29265 lbs. 6" water pipe | | | 396.54 | |
| | | | | | | 1,145.12 |
| Aug. | 9, 1892. | Western Gas Const. Co., Frt | Lgr. | B, 94-99 | 24.25 | |
| " | 29, " | Jno. Graham, Car 661 Stockwell Brick | Lgr. | B, P. 152-156 | 80.00 | |
| Oct. | 8, " | Western Gas Const. Co., Rivets | | " | .98 | |
| Nov. | 23, " | John Lanham, Cement & mason work | | | 292.11 | |
| Dec. | 1, " | Western Gas Const. Co., pig lead, Hemp & pipe | | " | 115.69 | |
| | | | | | | 513.03 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| July | 1, 1893. | Western Gas Const. Co., R. L. Smith | Lgr. B, | 156-163 | 42.00 | | |
| Nov. | 21, " | Elec. Light Ex., Labor putting in boiler | | | 135.58 | | |
| " | 30, " | Miss Thompson | | | 78.87 | | |
| | | | | | | 256.45 | |
| Jan. | 9, 1894. | B. & M. Ry. Co., Brick Bldgs. Sold | " | 164-168 | 500.00 | | |
| May | 5, " | Lawlor, Paint | | | 1.20 | | |
| | | | | | | 501.20 | |
| Apr. | 29, 1895. | Returned by Dennis Long & Co. | " | 169-173 | 13.00 | | |
| May | 13, " | " " Cooper & Cole Bros. | " | | 5.00 | | |
| Jan. | 8, " | Pd. on Cooper bill by F. & M. Ins. Co. | | | 20.95 | | |
| Oct. | 23, " | J. K. Honeywell | | | 48.00 | | |
| Nov. | 2, " | D. E. Thompson, Agt. | | | 24.60 | | |
| " | " | F. & M. Ins. Co. | | | 9.75 | | |
| " | " | City, 6" pipe | | | 64.60 | | |
| | | | | | | 185.90 | |
| June | 3, 1896. | D. H. Painter Rerr | Lgr. B, | 174-178 | 1.50 | | |
| " | 6, " | F. & M. & D. E. T. Agt | | | 40.76 | | |
| " | 25, " | City, 6" Pipe | | | 70.00 | | |
| Nov. | 2, " | D. E. Thompson, Agt. | | | 11.45 | | |
| | | | | | | 123.71 | |
| June | 10, 1897. | City, 6" C. I. Pipe | Lgr. B, | 178-179 | 22.40 | | |
| Dec. | 6, " | D. E. Thompson, Small boiler sold | " | 384-386 | 40.00 | | |
| | | | | | | 62.40 | |

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Apr. | 23, | 1898. | D. E. Thompson, Labor | Lgr. C, | 116-120 | 22.10 | |
| June | 1, | " | B. W. Richards, Pipe | | | 3.16 | |
| July | 11, | " | Mrs. Putnam, Fixtures | | | 218.83 | |
| Oct. | 31, | " | Returned by Lawlor | | | 200.00 | |
| May | 15, | 1899. | Mrs. Putnam, Fixtures | | | 26.60 | |
| May | 11, | " | J. K. Honeywell, Camp Wagon | | | 60.00 | |
| | | | | | | | 530.69 |
| May | 15, | 1899. | Lead sold City | Lgr. C, | 120-123 | 27.50 | |
| " | 20, | " | Florence Putnam | | | 44.00 | |
| Sept. | 11, | " | F. & M. Ins. Co., pipe | | | 12.75 | |
| | | | | | | | 84.25 |
| Jan. | 8, | 1900. | Florence Putnam, Gas Fix | Lgr. C, | 123-127 | 19.30 | |
| " | 27, | " | D. E. Thompson | | | 44.78 | |
| Apr. | 9, | " | Mrs. Putnam, Fixtures | | | 41.03 | |
| " | 9, | " | Cooper & Cole Bros., overpaid | | | 12.76 | |
| July | 5, | " | Returned by Lawlor | | | 30.00 | |
| Sept. | 15, | " | Draft from New York | | | 3,336.65 | |
| | | | | | | | 3,484.52 |
| Oct. | 8, | 1900. | Wood & Havemeyer, Draft (to correct error) | Lgr. No. *No.* P. 702 | | 1,500.00 | |
| Oct. | 31, | " | Mo. Fire Brick Co. | | | 13.05 | |
| | | | | | | | 1,513.05 |
| Jan. | 1, | 1901. | No Exp. | Lgr., | P. 81 | 3.00 | |
| " | 31, | " | Service | | | 5.00 | |
| July | 31, | " | New Services | | | 12.00 | |
| Nov. | 30, | " | New Services | | | 42.35 | |
| | | | | | | | 62.35 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dec. | 31, 1901. | Sales, St. Mains a/c | Lgr. 2, | P. 51 | 7.90 | | |
| | | | | | | 7.90 | |
| May | 31, 1902. | A/c Cash St. Mains a/c | " 2, | 51 | 1.50 | | |
| Sept. | 30, 1902. | Cash " | " | 107 | 1.25 | | |
| Sept. | " " | Misc. Sales " | " | " | 50.00 | | |
| Dec. | 31, " | Cash " | " | " | 2.70 | | |
| Sept. | 30, " | Cash Service Pipes | " | 108 | 1.25 | | |
| | | | | | | 56.70 | |
| July | —, 1903. | Meters & Connections | " | 53 | 7.90 | | |
| Feb. | 28, 1903. | Voucher Rec. Office F. & F. | " | 61 | 15.00 | | |
| Apr. | 30, " | Cash St. Mains | " | 107 | 20.00 | | |
| " | " " | Sales " | " | " | 5.00 | | |
| June | " " | " " | " | " | 46.50 | | |
| Aug. | —, " | N. C. Stull, Running Main | " | " | 50.00 | | |
| Apr. | 30, " | Sales, Service pipes | " | 108 | 43.95 | | |
| July | 31, " | Misc. Sales Service pipes | " | " | 31.18 | | |
| Sept. | 30, " | Vou. Record, New Boiler a/c | " | 125 | 8.95 | | |
| Oct. | 1, " | A. Hagenow, Changing Service | " | 108 | 1.10 | | |
| Dec. | 12, " | J. Youngblut, Service | " | " | 5.00 | | |
| Oct. | 12, " | A. M. Barton, Main extension | " | 107 | 10.00 | | |
| Nov. | 16, " | J. H. Mohr, 148 ft. Main | " | " | 15.54 | | |
| | | | | | | 260.12 | |



1793 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Feb. | 29, 1904. | Cash, Meters & Conn | Lgr. 2, | P. 53 | 220.40 | | |
| Dec. | 31, 1904. | " " " | " | 53 | 237.50 | | |
| Jan. | 31, 1904. | Acct. Pay, St. Mains a/c | " | 337 | 20.20 | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | " | " | " | Service Pipes | | | | " | 338 | 6.02 | |
| Feb. | 29, | " | " | " | " | " | | " | " | 21.00 | |
| Nov. | 30, | " | " | " | " | " | | " | " | 11.40 | |
| Dec. | 31, | " | " | " | " | " | | " | " | 12.21 | |
| Mar. | " | " | " | " | New Tar Well | | | " | 123 | 8.10 | |
| July | 3, | " | Petty Journal 195 St. Mains | | | | | A/C. | No. 301 | 10.00 | |
| Sept. | 30, | " | " | " | 273 | " | " | " | " | 42.65 | |
| " | 30, | " | " | " | 273 | " | " | " | " | 9.25 | |
| Dec. | 31, | " | " | " | 427 | " | " | " | " | 70.72 | |
| " | 31, | " | " | " | 428 | " | " | " | " | 30.55 | |
| Apr. | —, | 1904. | Order No. 95, New Service Pipes | | | | | " | 302 | 1.40 | |
| July | 31, | " | Petty Journal, 195, New Service Pipes | | | | | " | " | 7.50 | |
| Oct. | 31, | " | " | " | 311, | " | " | " | " | 31.28 | |
| Nov. | 30, | " | " | " | 37, | " | " | " | " | 11.40 | |
| Dec. | 31, | " | " | " | 428, | " | " | " | " | 5.49 | |
| " | 31, | " | " | " | 428*b*, | " | " | " | " | 6.72 | |
| | | | | | | | | | | | 763.79 |

No Details were found for the above items.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dec. | 30, | 1905. | Cash, Office Furn. & Fix | | Lgr. 2, | P. 61 | 8.00 |
| Jan. | 31, | 1905. | " St. Mains | | " | 337 | 20.00 |
| July | 31, | " | Tfr. Vo. 111*a* 1074′ 2″ pipe replaced by 4″ | | A/C. | No. 301 | 223.08 |
| Oct. | 30, | 1905. | Tfr. Vo. 139 to Correct error | | " | " " | 23.00 |
| Dec. | " | " | " " 154 U. of N. Main Extension | | " | " " | 1,500.00 |
| " | " | " | " " 157 to correct error | | " | " " | 30.72 |
| Jan. | 31, | " | Petty Journal 471 Chgd. Consumers, Service Pipes | | " | " 302 | 17.88 |
| " | " | " | Petty Journal 472 Chgd. Consumers, Service | " " | " | " " | 12.20 |
| Feb. | 28, | " | Petty Journal 525, (No explanation found.) | " " | " | " " | 20.80 |
| Feb. | 28, | 1905. | Petty Journal 526, Service | " " | " | " " | 10.08 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | (No explanation found.) | | | | | |
| Mch. | 31, | " | Petty Journal 579, Chgd., Consumers, Service | " | " | " | 10.44 | |
| July | 31, | " | Petty Journal Line & Main Extension, Service | " | " | " | 41.66 | |
| Aug. | 31, | " | Tfr. Vo. 117, Line & Main Extension, Service | " | " | " | 41.11 | |
| " | 31, | " | Tfr. Vo. 117, Misc. Sales | " | " | " | 19.45 | |
| " | " | " | Petty Journal 905, | " | " | " | 39.05 | |
| | | | (No explanation found.) | | | | | |
| " | " | " | Petty Journal 906, Service | " | " | " | 8.10 | |
| | | | (No explanation found.) | | | | | |

1794 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Aug. | 31, 1905. | | Petty Journal 906 Service Pipes..... | A/c. | 302 | 6.30 | | |
| | | | (No explanation found.) | | | | | |
| Aug. | 31, 1905. | | Petty Journal 906 Service " ..... | " | " | 11.95 | | |
| | | | (No explanation found.) | | | | | |
| Aug. | 31, 1905. | | Petty Journal 908 Service " ..... | " | " | 4.50 | | |
| | | | (No explanation found.) | | | | | |
| Aug. | 31, | " | Petty Journal 908 Service " ..... | " | " | 6.30 | | |
| | | | (No explanation found.) | | | | | |
| " | " | | Petty Journal 908a Service " ..... | " | " | 25.20 | | |
| | | | (No explanation found.) | | | | | |
| Sept. | 30, 1905. | | Tfr. Vo. 130, Sales Services pd. by consumer, service Pipes ..... | " | " | 108.75 | | |
| Oct. | 30, | " | Tfr. Vo. 135, Sales Services Pipes..... | " | " | 55.80 | | |
| Nov. | 30, | " | " " 145, " " " ..... | " | " | 79.35 | | |
| Dec. | 30, | " | " " 154, " " " ..... | " | " | 5.00 | | |
| | | | | | | | 2,328.72 | |
| June | 30, 1906. | | Tfr. Vo. 218 To correct error St. Mains..... | A/c. | 301 | 11.51 | | |
| July | 31, | " | " " 240 2" main replaced by 4" St. Mains... | " | " | 78.40 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sept. | 30, | " | " | " | 261 916' 2" main replaced | " | " | 229.08 | |
| Jan. | 31, | " | " | " | 168A Services chgd. Consumers, Service pipes | " | 302 | 18.02 | |
| Feb. | 28, | " | " | " | 180A Services chgd. consumers, Service pipes | " | " | 106.60 | |
| Mar. | 31, | " | " | " | 190 Services chgd. consumers, Service pipe | " | " | 19.82 | |
| Apr. | 30, | " | " | " | 200 Services chgd. consumers, Service pipes | " | " | 393.15 | |
| May | 31, | " | " | " | 208 Services chgd. Consumers, Service pipes | " | " | 158.40 | |
| May | 31, | " | " | " | 208 Services chgd. consumers, Service pipes | " | " | 236.05 | |
| June | 30, | " | " | " | 222 Services chgd. consumers, Service pipes | " | " | 513.70 | |
| July | 31, | " | " | " | 233 Services chgd. consumers, Service pipes | " | " | 281.60 | |
| Aug. | 31, | " | " | " | 247 Services chgd. consumers, Service pipes | " | " | 205.40 | |
| Sept. | 30, | " | " | " | 262 Services chgd. consumers, Service pipes | " | " | 118.35 | |
| Oct. | 31, | " | " | " | 271 Services chgd. consumers, Service pipes | " | " | 184.20 | |
| Nov. | 30, | " | " | " | 289 Services chgd. consumers, Service pipes | " | " | 298.60 | |
| Dec. | 31, | " | " | " | 303 Services chgd. consumers, Service pipes | " | " | 257.50 | |
| Sept. | 30, | " | " | " | No explanation found, Furniture & Fix.. | " | 307 | 8.00 | |
| Nov. | 30, | " | " | " | 289, 30 Gas meters, Gas Works | " | 300 | 60.00 | |
| Oct. | 31, | " | Cash 45, No explanation found, Furn. & Fix | | | Lgr. 3, | P. 288 | 1.00 | |
| | | | | | | | | | 3,179.38 |

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

| | | | | | |
|---|---|---|---|---|---|
| Jan. 31, 1907. | Tfr. Vo. 308 Services chgd. Consumers Services... | A/c. | 302 | 58.70 |
| Oct. 31, " | " " 449 To correct error, New Benches..... | " | G4 | 361.05 |
| " —, " | Missouri Fire Brick Co. Lime 6.50, Cash 350.00 ..... | " | " | 356.50 |
| May 31, " | Tfr. Vo. 388, Gen'l Supt. Back Salary, Gas Works Add. ..... | " | #300 | 15.00 |
| Aug. 31, " | R. S. Young Bldg. Sup. Co. Empty cement sacks, St. Mains Ext. ..... | " | 301 | 5.90 |
| Feb. 28, " | Petty Journal P. 97, Services Chgd. Consumers, New service pipes ..... | " | 302 | 56.59 |
| Mch. 30, " | Petty Journal P. 124, Services Chgd. Consumers, New service pipes ..... | " | 302 | 179.30 |
| Apr. 30, " | Petty Journal P. 153, Services Chgd. Consumers, New service pipes ..... | " | " | 240.40 |
| May 31, " | Petty Journal P. 182, Services Chgd. Consumers, New service pipes ..... | " | " | 326.42 |
| May 31, " | Tfr. Vo. 388, Gen'l Supt. Back Salary, New service pipes ..... | " | " | 15.00 |
| June 30, " | Petty Journal P. 13, Services Chgd. Consumers, New Service Pipes..... | " | " | 358.45 |
| July 31, " | Petty Journal P. 42, Services Crgd. Consumers, New Service Pipes ..... | " | " | 394.90 |
| Aug. 31, " | Petty Journal P. 72, Services Chgd. Consumers, New Service Pipes..... | " | " | 525.70 |
| Sept. 30, " | Petty Journal P. 111, Services Chgd. Consumers, New Service Pipes ..... | " | " | 163.85 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Oct. 31, " | Petty Journal P. 149, Services Chgd. Consumers, New Service Pipes | " | " | 315.30 | |
| Nov. 30, " | Petty Journal P. 193, Services Chgd. Consumers, New Service Pipes | " | " | 299.55 | |
| Dec. 31, " | Petty Journal P. 26, Services Chgd. Consumers, New Service Pipes | " | " | 127.05 | |
| Mch. 30, " | Petty Journal P. 103, 50 3 lt. meters, Meters & Connections | " | 303 | 150.00 | |
| Oct. 31, " | Order No. 99, Furn. & Fix. | " | 307 | 26.60 | |
| | | | | | 3,976.26 |

1796 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|
| June 30, 1908. | Tfr. Vo. 567 To correct error, New Water Gas House | A/c. | G6 | 182.83 | |
| Oct. 16, 1908. | Otis Elevator Co., Frt. Credit, New Water Gas House | " | " | 38.68 | |
| Oct. 31, " | F. W. Brown Co. Credit Memo. New Water Gas House | " | " | 3.46 | |
| " " | Western Gas Const. Co., Frt. Cr., Governor & Conn. | " | G8 | 169.38 | |
| Jan. 31, " | Petty Journal P. 63, Purifying boxes sold, Plant | " | | 500.00 | |
| July 30, " | Order No. 75, Material returned to stock, St. Mains Ext. | " | 301 | 57.38 | |
| Sept. 30, " | Order No. 95, Material Returned to Stock, St. Mains Ext. | " | | 29.36 | |
| Nov. 30, " | Order No. 14, Material Returned to Stock, St. Mains Ext. | " | " | 1.29 | |
| Dec. 31, " | Order No. 126, Material Returned to Stock St. Mains Ext. | " | " | 3.08 | |

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|---|---|---|---|---|---|---|
| Jan. | 31, | " | Petty Journal 64, Services chgd. consumers, New Service Pipes | " | 302 | 222.95 |
| Feb. | 29, | " | Petty Journal 94, Services chgd. consumers, New Service Pipes | " | " | 22.65 |
| Mar. | 31, | " | Petty Journal 129, Services chgd. consumers, New service Pipes | " | " | 156.15 |
| Apr. | 30, | " | Petty Journal 165, Services chgd. consumers, New service Pipes | " | " | 250.95 |
| May | 30, | " | Petty Journal 199, Services chgd. consumers, New service pipes | " | " | 314.85 |
| June | 30, | " | Petty Journal 33, Services chgd. consumers, New service pipes | " | " | 240.15 |
| July | 31, | " | Petty Journal 60, Services chgd. consumers, New service pipes | " | " | 215.55 |
| July | 30, | " | Order No. 75, Material returned to stock, New service pipes | " | " | 43.27 |
| Aug. | 31, | " | Petty Journal P. 89 Services chgd. consumers New Service pipes | " | " | 204.95 |
| Sept. | 30, | " | Order No. 95, Material returned to stock, New service pipe | " | " | .67 |
| Sept. | 30, | " | Petty Journal P. 128, Services chgd. consumers, New service pipe | " | " | 175.55 |

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Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|---|
| Oct. | 31, 1908. | | Order No. 102, Material returned to stock, New service pipes | A/c. | 302 | 1.82 |

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|---|---|---|---|---|---|---|---|
| " | " | Petty Journal P. 174, Services chgd. consumers, New service pipes | " | " | 391.60 | | |
| Nov. 30, | " | Petty Journal, P. 42, Services chgd. consumers, New Service pipes | " | " | 363.00 | | |
| Dec. 31, | " | Petty Journal P. 82, Services chgd. consumers, New service pipes | " | " | 514.05 | | |
| Sept. 30, | " | Maryland Meter Co., Meters and connections | " | 303 | 1.14 | | |
| Jan. 31, | " | F. W. Brown Co., Lbr. returned, Office Furn. & Fix. | " | 307 | 1.65 | | |
| July 30, | " | Order No. 75, Material returned to stock, Office Furn. & Fix. | " | " | 55.50 | | |
| Jan. 24, | " | Tfr. Vo. 491*a* To correct errors in pay roll, Gas Works | Lgr. 3, | P. 281 | 209.50 | | |
| " | " | Tfr. Vo. 491*d*, To correct error, Gas Works | " " | " | 6.30 | | |
| Feb. 29, | " | By Cash sale of horse Gas Works | " " | " | 75.00 | | |
| May 30, | " | " " refund D. Mooney Gas Works | " " | 593 | 1.75 | | |
| Aug. 31, | " | " " Voucher recalled Gas Works | " " | " | 5.00 | | |
| Jan. 24, | " | Tfr. Vo. 491*a* To correct error, St. Mains | " " | 283 | 40.00 | | |
| " | " | Tfr. Vo. 491*d* To correct error St. Mains | " " | " | 19.00 | | |
| " | " | Tfr. Vo. 491*d* To correct error St. Mains | " " | " | 223.08 | | |
| " | " | " " 491*b* To correct error in pay roll, Services | " " | 285 | 393.00 | | |
| Dec. 31, | " | By Cash, Junk sold, Plant | " " | 278 | 203.50 | | |
| | | | | | | | 5,338.04 |
| Apr. 30, 1909. | | Western Gas Const. Co., Credit Memo., New Water Gas Machine | A/c. | G5 | 8.40 | | |
| " | " | Otis Elevator Co. (Credit Memo. New W. G. House.) | " | G6 | 10.00 | | |
| Jan. 31, | " | Order No. 11, Mat'l ret'd to stock, New Gas Holder | " | G7 | 14.16 | | |
| Apr. 30, | " | Western Gas Const. Co., Credit Memo., New Gas Holder | " | " | 91.70 | | |

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|---|---|---|---|---|---|---|
| Mch. | 31, | " | R. S. Young Co., Sacks ret'd Governor & Connections | " | G8 | 21.80 |
| Sept. | 28, | " | Crane Co., Credit Memo., Governor & Connections. | " | G8 | 59.65 |
| Sept. | 30, | " | Western Supply Co., Credit memo., Governors & Connections | " | " | 1.05 |

1798 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|---|
| Jan. | 31, | 1909. | Western Supply Co., Credit Memo., New W. G. Exhauster | A/c. | G10 | 2.76 |
| Dec. | 31, | " | Tfr. Vo. 846, Error, Chgd. Maintenance, Havelock Main Ext. | " | H1 | 105.00 |
| July | 31, | " | Petty Journal P. 359, Junk sold, Gas Works Additions | " | 300 | 17.74 |
| Aug. | 31, | " | Tfr. Vo. 764, Motor ret'd to stock, Gas Works Additions | " | 300 | 150.00 |
| Jan. | 31, | " | Order No. 11, Mat'l ret'd to stock, St. Main Ext.... | " | 301 | 1.73 |
| Apr. | 30, | " | Order No. 41, Mat'l ret'd to stock, St. Main Ext... | " | " | 1.85 |
| July | 31, | " | Order No. 73, Mat'l ret'd to stock, St. Main Ext.... | " | " | .30 |
| Jan. | 31, | " | Petty Journal, P. 124, Services chgd. consumers, New Service pipes | " | 302 | 268.20 |
| Feb. | 27, | " | Petty Journal P. 160, Services chgd. consumers, New service pipes | " | " | 141.86 |
| Feb. | 27, | " | Order No. 22, Mat'l ret'd to stock, New service pipes | " | " | .96 |
| Mar. | 31, | " | Petty Journal P. 203, Services chgd. consumers, New Service pipe | " | " | 536.95 |
| Apr. | 30, | " | Petty Journal P. 246, Services chgd. consumers, New Service pipe | " | " | 693.50 |

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|---|---|---|---|---|---|---|
| May | 31, | " | Petty Journal P. 285, Services chgd. consumers, New Service Pipes | " | " | 722.55 |
| " | | " | Order No. 54, Mat'l ret'd to stock, New Service Pipes | " | " | 2.10 |
| June | 30, | " | Petty Journal P. 324, Service chgd. consumers, New Service pipe | " | " | 1,029.60 |
| July | 31, | " | Petty Journal P. 362, Services chgd. consumers, New Service Pipes | " | " | 737.13 |
| " | | " | Order No. 73, Mat'l ret'd to stock, New Service Pipes | " | " | 5.85 |
| Aug. | 31 | " | Petty Journal P. 397, Services Chgd. Consumers, New Service pipes | " | " | 918.40 |
| Sept. | 30, | " | Petty Journal P. 441, Services Chgd. consumers, New service pipe | " | " | 530.45 |
| Oct. | 30, | " | Petty Journal P. 498, Services Chgd. consumers, New Service pipe | " | " | 854.81 |
| Nov. | 30, | " | Petty Journal P. 552, Services Chgd. consumers, New service pipe | " | " | 699.90 |
| " | | " | Order No. 103, Mat'l ret'd to stock, New service pipes | " | " | 2.73 |

1799 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|---|
| Dec. | 31, | 1909. | Petty Journal P. 604, Services chgd. consumers, New service pipes | A/c. | 302 | 396.55 |
| June | 9, | " | Tfr. Vo. 729, To corect error, Meters and connections | " | 303 | 4.80 |
| July | 31, | " | Petty Journal P. 334—25 3 lt. meters sold, Meters & Conn. | " | " | 75.00 |

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| Nov. | 30. | " | Petty Journal P. 545 5 3 lt. meters sold, Meters & Conn. | " | " | 15.00 | | |
| Dec. | 31, | " | Petty Journal P. 587 1 Sprague meter sold, Meters & Conn. | " | " | 8.00 | | |
| Jan. | 30, | " | Order No. 11, Mat'l ret'd to stock, Office Furn. & Fix. | " | 307 | .90 | | |
| " | | " | Order No. 12, Mat'l ret'd to stock, Office Furn. & Fix. | " | " | 92.00 | | |
| Feb. | 27, | " | Order No. 22, Mat'l ret'd to stock, Office Furn. & Fix. | " | " | 7.00 | | |
| Jan. | 1, | " | Tfr. Vo. 649, Adjustment entry as per auditor's report charged special incidental expense. Plant | Lgr. 4, | P. 1 | 1,608.13 | | |
| Jan. | 1, | " | Tfr. Vo. 650, Washer Cooler item taken out of investment and chgd. into a/c No. 1836 per auditor's report ..... Plant | " | " | 331.89 | | |
| Apr. | 30, | " | Cash, Meters sold Fremont, Meters & Conn..... | " | P. 15 | 71.90 | | |
| | | | | | | | 10,242.30 | |
| Nov. | 30, | 1910. | Order No. 200, Mat'l ret'd to stock, New District Holder ..... | A/c. | G17 | 2.30 | | |
| Dec. | 19, | " | Vo. 9504, Western Gas Const. Co. Labor and Holder, New Dist. Holder..... | " | " | 660.34 | | |
| Aug. | 31, | " | Order No. 173, Mat'l ret'd to stock, St. Mains Ext.. | " | 301 | 5.00 | | |
| Sept. | 30, | " | Order No. 186, 2" pipe replaced by 4", St. Mains Ext. ..... | " | " | 851.80 | | |
| Oct. | 31, | " | Order 191, Mat'l ret'd to stock, St. Mains Ext..... | " | " | 11.35 | | |
| " | | " | Order No. 195, 2" pipe replaced by 4"..... | " | " | 230.00 | | |
| Nov. | 30, | " | Order 200, Mat'l ret'd to stock, St. Mains Ext.... | " | " | 1.26 | | |
| Jan. | 31, | " | Petty Journal P. 140, Services chgd. consumers, New service pipes ..... | " | 302 | 289.20 | | |

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|---|---|---|---|---|---|---|
| Feb. | 28, | " | Petty Journal P. 179, Services chgd. consumers, New Service pipes | " | " | 292.05 |
| Mar. | 31, | " | Petty Journal P. 218, Services chgd. consumers, New service Pipes | " | " | 343.95 |
| Mar. | 31, | " | Order No. 138, Mat'l ret'd to stock, New service pipes | " | " | .61 |

1800 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|---|
| Apr. | 30, | 1910. | Petty Journal P. 258 Services chgd. Consumer, New service pipe | A/c. | 302 | 1,072.00 |
| May | 31, | " | Petty Journal P. 295 Services chgd. consumer, New service pipe | " | " | 983.39 |
| June | 30, | " | Petty Journal P. 334 Services chgd. consumer, New service pipe | " | " | 1,171.25 |
| June | 30, | " | Order No. 162, Mat'l ret'd to stock, New service pipes | " | " | .72 |
| July | 30, | " | Petty Journal P. 365, Services chgd. consumers, New service pipes | " | " | 976.80 |
| Aug. | 31, | " | Petty Journal P. 402, Services chgd. consumers, New service pipes | " | " | 589.25 |
| Aug. | 31, | " | Order No. 173, Mat'l ret'd to stock, New service pipes | " | " | 10.53 |
| Sept. | 30, | " | Order No. 179, Mat'l ret'd to stock, New service pipes | " | " | 152.23 |
| Sept. | 30, | " | Petty Journal P. 452, Services chgd. consumers, New service pipe | " | " | 545.25 |

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|---|---|---|---|---|---|---|
| Oct. | 31, | " | Petty Journal P. 501, Services chgd. consumers, New service pipes | " | " | 336.95 |
| Oct. | 31, | " | Korsmeyer Co., Credit Memo., New service pipes | " | " | .40 |
| " | | " | Order No. 191, Mat'l ret'd to stock, New service pipes | " | " | 2.45 |
| Nov. | 30, | " | Order No. 200, Mat'l ret'd to stock, New service pipes | " | " | 10.95 |
| Nov. | 30, | " | Petty Journal P. 546, Services chgd. consumers, New service pipe | " | " | 237.65 |
| Dec. | 31, | " | Petty Journal P. 588, Services chgd. consumers, New service pipe | " | " | 157.50 |
| Apr. | 30, | " | Doherty Operating Co. Rebate on Meters, Meters & connections | " | 303 | 178.05 |
| Apr. | 30, | " | Petty Journal P. 256; 15 3 lt. meters $45.00, 1 #A Sprague meter 5.75, Meters and connections | | | 50.75 |
| May | 31, | " | Petty Journal P. 269, 7 3 lt. meters, Meters & Connections | | | 21.00 |
| May | 31, | " | Doherty Operating Co. Meters & Connections | | | 3.60 |
| Dec. | 31, | " | Doherty Operating Co. Rebate on meters, Meters & connections | | | 34.25 |
| Feb. | 28, | " | Order 131, Mat'l ret'd to stock, Office Furn. & Equip. | A/c. | 307 | 22.42 |

1801 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|---|
| June | 30, 1910. | | Order 161, Mat'l ret'd to stock Office Furn. & Equip. | A/c. | 307 | 25.84 |

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| Oct. 31, | " | Order 191, Mat'l ret'd to stock Office Furn. & Equip. | " | " | 2.92 | |
| Nov. 30, | " | Order 201, Mat'l ret'd to stock Office Furn. & Equip. | " | " | 38.12 | |
| | | | | | | 9,312.13 |
| Nov. 29, | 1911. | Order No. 279 Mat'l ret'd to stock, Service Governor | A/c. | G11 | 9.58 | |
| Dec. 30, | " | Order No. 282, Mat'l ret'd to stock, Service Governor | " | " | 11.51 | |
| Feb. 28, | " | Petty Journal, Repairing 5 3 lt. meters, New Dist. Holder | " | G17 | 5.00 | |
| Apr. 29, | " | Petty Journal, P. 143, cement sacks ret'd $12.95, P. 145, Cinders sold, 6.25, New Dist. Holder | " | " | 19.20 | |
| Feb. 28, | " | Order No. 224, 2" pipe replaced St. Main Extension | " | 301 | 20.36 | |
| Mar. 31, | " | Order 230, Mat'l ret'd to stock St. Main Extension | " | " | 11.69 | |
| Apr. 29, | " | Order 237, Mat'l ret'd to stock, St. Main extension | " | " | 6.21 | |
| June 20, | " | Tfr. Vo. 1191, to correct error, St. Main Extension | " | " | 4.00 | |
| June 30, | " | Order No. 248, Mat'l ret'd to stock, St. Main Extension | " | " | 3.75 | |
| Dec. 30, | " | Order 281, Mat'l Ret'd to stock St. Main Extension | " | " | 1.65 | |
| Jan. 31, | " | Petty Journal P. 42, Services chgd. consumer, New Service pipes | " | 302 | 103.50 | |
| Feb. 28, | " | Petty Journal P. 79, Services chgd. consumer, New service Pipes | " | " | 152.25 | |
| Feb. 28, | " | Order No. 224, Mat'l ret'd to stock, New service pipes | " | " | 3.57 | |
| Mar. 31, | " | Order No. 230, Mat'l ret'd to stock, New service pipes | " | " | 19.33 | |
| Apr. 29, | " | Order No. 237, Mat'l ret'd to stock, New Service Pipes | " | " | 20.33 | |

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| May | 31, " | Order No. 242, Mat'l ret'd to stock, New service pipes | " | " | .71 |
| June | 30, " | Tfr. Vo. 1191, to correct error New service pipes | " | " | 1.00 |
| Sept. | 30, " | Order No. 265, Mat'l ret'd to stock, New service pipes | " | " | 2.75 |
| Oct. | 31, " | Order No. 271, Mat'l ret'd to stock, New service pipes | " | " | 2.91 |
| Nov. | 29, " | Order No. 279, Mat'l ret'd to stock, New service pipes | " | " | .12 |

1802

Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

| | | | | | |
|---|---|---|---|---|---|
| Mar. | 31, 1911. | Petty Journal P. 120, Services chgd. consumers, New service pipe | A/c. | 302 | 489.45 |
| Apr. | 29, " | Petty Journal P. 160, Services chgd. consumer, New Service pipe | " | " | 667.35 |
| May | 31, " | Petty Journal P. 201, Services chgd. consumer, New Service pipes | " | " | 711.66 |
| June | 30, " | Petty Journal P. 236, Services chgd. consumers, New service pipes | " | " | 645.70 |
| July | 31, " | Petty Journal 269, Services chgd. consumers, New service pipes | " | " | 543.70 |
| Aug. | 31, " | Petty Journal P. 307, Services chgd. consumers, New service pipes | " | " | 501.20 |
| Sept. | 30, " | Petty Journal P. 354, Services chgd. consumers, New service pipes | " | " | 294.50 |
| Oct. | 31, " | Petty Journal P. 400, Services chgd. consumers, New service pipes | " | " | 473.09 |

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|---|---|---|---|---|---|---|
| Oct. | 31, | " | Petty Journal P. 354, Services chgd. consumers, New service pipes | " | " | 4.00 |
| Nov. | 29, | " | Petty Journal P. 446, Services chgd. consumers, New service pipes | " | " | 290.50 |
| Dec. | 30, | " | Petty Journal P. 492, Services chgd. consumers New service pipes | " | " | 333.55 |
| Jan. | 31, | " | Doherty Operating Co., Rebate on meters, Meters & connections | " | " | 94.49 |
| Jan. | 31, | " | Tfr. Vo. 1072, Gas meters junked in 1910, Meters & Connections | " | " | 183.30 |
| Mar. | 31, | " | Doherty Operating Co. Rebate on meters, Meters & connections | " | " | 17.51 |
| May | 31, | " | Tfr. Vo. 1184, 1 3 lt. gas meter junked, Meters & Conn. | " | " | 3.50 |
| June | 30, | " | Tfr. Vo. 1191, To correct error, Meters & Connections | " | " | 14.63 |
| Aug. | 31, | " | Tfr. Vo. 1274, 1 3 lt. gas meter junked, Meters & Conn. | " | " | 3.50 |
| Oct. | 31, | " | H. L. Doherty & Co., Rebate on meters, Meters & Conn. | " | " | 46.28 |
| Oct. | 31, | " | Tfr. Vo. 1332, 2 gas meters junked, Meters & Conn. | " | " | 7.00 |
| Jan. | 31, | " | Order No. 219, Mat'l ret'd to stock, Office Furn. & Equip. | " | 307 | 10.22 |
| May | 31, | " | Order No. 243, Mat'l ret'd to stock, Office Furn. & Equip. | " | " | 13.50 |

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|---|---|
| June | 30, 1911. | Order No. 248, Mat'l Ret'd to stock, Office Furn. & Equip. | A/c. | 307 | 8.03 | | |
| June | 30, " | Tfr. Vo. 1191, To correct error, Office Furn. & Equip. | " | " | 63.05 | | |
| July | 31, " | Order No. 253, Mat'l ret'd to stock, Office Furn. & Equip. | " | " | 13.50 | | |
| Aug. | 31, " | Order No. 258, Mat'l ret'd to stock, Office Furn. & Equip. | " | " | 9.94 | | |
| Oct. | 31, " | Order 272, Mat'l ret'd to stock Office Furn. & Equip. | " | " | 13.50 | | |
| Nov. | 29, " | Order 280, Mat'l ret'd to stock Office Furn. & Equip. | " | " | 30.84 | | |
| Dec. | 30, " | Order 281, Mat'l ret'd to stock Office Furn. & Equip. | " | " | 25.00 | | |
| " | " | Order 282, Mat'l ret'd to stock, Office Furn. & Equip. | " | " | 1.45 | | |
| " | " | Petty Journal P. 488, 83 Chairs sold, Office Furn. & Equip. | " | " | 16.60 | | |
| Apr. | 29, " | Horse sold (½ cr. Gas Works ½ Elec.) Works A/c. | Lgr. 4, | P. 21 | 57.50 | | |
| | | | | | | 5,987.46 | |
| Jan. | 31, 1912. | Order No. 291, Mat'l ret'd to stock Service Governors | A/c. | G11 | 7.13 | | |
| Feb. | 29, " | Order 298, Mat'l ret'd to stock Service Governors.. | " | " | 5.19 | | |
| Mar. | 30, " | Order 307, Mat'l Ret'd to stock Service Governors.. | " | " | 4.89 | | |
| Apr. | 30, " | Order 313, Mat'l Ret'd to stock Service Governors.. | " | " | 6.34 | | |
| May | 31, " | Order 320, Mat'l ret'd to stock Service Governors.. | " | " | 5.78 | | |

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| June | 29, | " | Order 327, Mat'l ret'd to stock Service Governors.. | " | " | 9.26 |
| July | 31, | " | Order 333, Mat'l ret'd to stock Service Governors.. | " | " | 5.77 |
| Aug. | 31, | " | Order 340, Mat'l ret'd to stock Service Governors.. | " | " | 5.76 |
| Sept. | 30, | " | Order 348, Mat'l ret'd to stock Service Governors.. | " | " | 7.75 |
| Oct. | 31, | " | Order 355, Mat'l ret'd to stock Service Governors.. | " | " | 5.46 |
| Nov. | 30, | " | Order 360, Mat'l ret'd to stock Service Governors.. | " | " | 3.47 |
| Dec. | 31, | " | Order 366, Mat'l ret'd to stock Service Governors.. | " | " | 6.69 |
| Aug. | 31, | " | Tfr. Vo. 1537 (Grass seed chgd. to New Holder, corrected by Trav. Auditor), New Dist. Holder.. | " | " | 6.97 |
| Aug. | 31, | " | Tfr. Vo. 1537 (Flowers chgd. New Holder, Corrected by Trav. Auditor), New Dist. Holder.... | " | " | 78.18 |
| June | 29, | " | Reg. 13424, Nebr. Mat'l Co., New Gas Meter Shop. | " | 20 | 3.00 |

1804 Lincoln Gas & Electric Light Company.

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

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|---|---|---|---|---|---|---|
| July | 31, | 1912. | Order 334, Mat'l ret'd to stock New Gas Meter Shop | A/c. | 320 | .72 |
| May | 31, | " | Order 320, Mat'l ret'd to stock St. Mains Extension | " | 301 | .33 |
| July | 31, | " | Order 333, Mat'l ret'd to stock St. Mains Extension | " | " | .21 |
| Aug. | 31, | " | Order 340, Mat'l ret'd to stock St. Mains Extension | " | " | .16 |
| Oct. | 31, | " | " 350, to adjust inventory St. Mains Extension | " | " | 23.70 |
| " | 31, | " | " 355, Mat'l ret'd to stock St. Mains Extension | " | " | .21 |
| Jan. | 31, | " | Petty Journal P. 36, Services chgd. consumers, New service pipes | " | 302 | 94.00 |
| Feb. | 29, | " | Petty Journal P. 72, Services chgd. consumers, New service pipes | " | " | 49.25 |

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|---|---|---|---|---|---|
| Mar. | 30, | " | Petty Journal P. 111, Services chgd. consumers, New service pipes | " | " 75.25 |
| Apr. | 30, | " | Petty Journal P. 156, Services chgd. consumers, New service pipes | " | " 683.10 |
| May | 31, | " | Petty Journal P. 196, Services chgd. consumers, New service pipes | " | " 608.05 |
| June | 29, | " | Petty Journal P. 234, Services chgd. consumers, New service pipes | " | " 880.24 |
| July | 31, | " | Petty Journal P. 269, Services chgd. consumers, New service pipes | " | " 607.00 |
| Aug. | 31, | " | Petty Journal P. 309, Services chgd. consumers, New service pipes | " | " 770.30 |
| Sept. | 30, | " | Petty Journal P. 365, Services chgd. consumers, New service pipes | " | " 644.30 |
| Oct. | 31, | " | Petty Journal P. 420, Services chgd. consumers, New service pipes | " | " 591.55 |
| Nov. | 30, | " | Petty Journal P. 472, Services chgd. consumers, New service pipes | " | " 606.55 |
| Dec. | 31, | " | Petty Journal P. 527, Services chgd. consumers, New service pipes | " | " 244.50 |
| Feb. | 29, | " | Order No. 298, Mat'l ret'd to stock New service pipes | " | " 1.94 |
| Mar. | 30, | " | Order 307, Mat'l ret'd to stock, New service pipes.. | " | " 2.38 |
| Apr. | 30, | " | Order 313, Mat'l ret'd to stock, New service pipes.. | " | " 1.54 |
| May | 31, | " | Order 320, Mat'l ret'd to stock, New service pipes.. | " | " 1.51 |

*Statement of Credits to Gas Construction Accounts* 1873 *to* 1912.

| | | | | | |
|---|---|---|---|---|---|
| June | 29, 1912. | Order 327, Mat'l ret'd to stock, New service pipes.. | A/c. | 302 | 1.53 |
| July | 31, " | Order 333, Mat'l ret'd to stock, New service pipes.. | " | " | 1.62 |
| Oct. | 31, " | Order 355, Mat'l ret'd to stock, New service pipes.. | " | " | 1.74 |
| Nov. | 30, " | Order 360, Mat'l ret'd to stock, New service pipes.. | " | " | 3.61 |
| July | 31, " | Tfr. Vo. 1514B, H. L. Doherty & Co. Rebate on meters, Meters & Connections..... | " | 303 | 29.25 |
| Sept. | 30, " | Tfr. Vo. 1580, Meters Condemned Meters & Connections ..... | " | " | 7.50 |
| Nov. | 30, " | Tfr. Vo. 1618, H. L. Doherty & Co. Rebate on meters, Meters & Connections..... | " | " | 27.00 |
| Dec. | 31, " | Tfr. Vo. 1643, H. L. Doherty & Co. Rebate on meters, Meters & Connections..... | " | " | 14.25 |
| Dec. | 31, " | Order No. 366, Mat'l ret'd to stock, Meters & Connections ..... | " | " | .21 |
| Feb. | 29, " | Order 297, Mat'l ret'd to stock, Office, Furn. & Equip. ..... | " | 307 | 15.42 |
| " | " | Order 298, Mat'l ret'd to stock, Office Furn. & Equip. ..... | " | " | 28.00 |
| Apr. | 30, " | Order 314, Mat'l ret'd to stock, Office, Furn. & Equip. ..... | " | " | .65 |
| May | 31, " | Order 320, Mat'l ret'd to stock, Office Furn. & Equip. ..... | " | " | 2.75 |
| May | 31, " | Order 321, Mat'l ret'd to stock, Office Furn. & Equip. ..... | " | " | 84.02 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| June | 29, | " | Order 328, Mat'l ret'd to stock, Office Furn. & Equip. | " | " | 1.89 | .. |
| July | 31, | " | Order 333, Mat'l ret'd to stock Office Furn. & Equip. | " | " | 4.34 | |
| Aug. | 31, | " | Tfr. Vo. 1536, Correction ordered by Jones, Auditor, Office Furn. & Equip. | " | " | 27.75 | |
| Nov. | 30, | " | Order No. 361, Mat'l ret'd to stock, Office Furn. & Equip. | " | " | .56 | |
| Nov. | 16, | " | Cash 59, Sale of Lot 3 Block 83, Plant account | Lgr. 5, | P. 2 | 2,500.00 | |
| | | | | | | | 8,800.52 |
| | | | Total Credits 1873 to 1912 | | | | 59,754.15 |

(Here follow photo-lithographs, marked pages 1806-1826.)

G 1

# GAS REPORT
TO
# DOHERTY OPERATING COMPANY
BY

LINCOLN GAS & ELECTRIC LIGHT CO.
DEC 1913

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U.S. PUBLIC UTILITIES 424 Class A Water Gas

APPROVALS AND RECORD

Date

Audited and Vouched for by _____ Secretary _____

Approved by _____ Superintendent _____

Approved by _____ General Manager _____

Date Report was Mailed _____

Date Received at New York Office _____

Checked By _____

Date of Reviewing Letter _____

This Report Has Been Seen By

| Office Department | Corporation Dept. | Executive Dept. | General Manager | Engineering Dept. | Auditing Dept. | Statistical Dept. | New Business Dept. |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

1806

Form 525—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 3

DETAILS OF EARNINGS AND SALES FOR DEC 1913

## DETAILED STATEMENT OF GROSS EARNINGS THIS MONTH

| | | % A | This Year B | | % C | Last Year D | | Increase E | | Decrease F | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | Municipal Sales 401 | | | | | | | | | | |
| 28 | Allowances | | | | | | | | | | |
| 29 | Net Municipal Sales | | | | | | | | | | |
| 30 | Domestic & Illuminatg Sales 402 | | 24026 | 94 | | 25271 | 84 | | | 1244 | 90 |
| 31 | Allowances | | 75 | 90 | | 31 | 76 | 44 | 14 | | |
| 32 | Net Domestic and Illum.Sales | | 23951 | 04 | | 25240 | 08 | | | 1289 | 04 |
| 33 | Industrial Fuel Sales 403 | | | | | | | | | | |
| 34 | Allowances | | | | | | | | | | |
| 35 | Net Industrial Fuel Sales | | | | | | | | | | |
| 36 | | | | | | | | | | | |
| 37 | Gross Sales 404 | 100 | 24026 | 94 | 100 | 25271 | 84 | | | 1244 | 90 |
| 38 | Total Allowances 405 | | 75 | 90 | | 31 | 76 | 44 | 14 | | |
| 39 | Net Sales 406 | | 23951 | 04 | | 25240 | 08 | | | 1289 | 04 |
| 40 | Minimum Bills 408 | | 73 | 00 | | 69 | 25 | 3 | 75 | | |
| 41 | Forfeited Discount 409 | | 289 | 63 | | 287 | 66 | 1 | 97 | | |
| 42 | | | | | | | | | | | |
| 43 | | | | | | | | | | | |
| 44 | Total Revenue 410 | 100 | 24313 | 67 | 100 | 25596 | 99 | | | 1283 | 32 |
| 45 | Bad Debts 411 | | 250 | 00 | | 250 | 00 | | | | |
| 46 | | | | | | | | | | | |
| 47 | Gross Earnings from Oper. 412 | | 24063 | 67 | | 25346 | 99 | | | 1283 | 32 |

## 12 MONTHS ENDING THIS MONTH

GAS REPORT

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | Municipal Sales | | | | | | | | | | |
| 49 | Allowances | | | | | | | | | | |
| 50 | Net Municipal Sales | | | | | | | | | | |
| 51 | Domestic & Illuminatg Sales | | 273716 | 74 | | | | | | | |
| 52 | Allowances | | 1240 | 23 | | | | | | | |
| 53 | Net Domestic and Illum.Sales | | 272476 | 51 | | | | | | | |
| 54 | Industrial Fuel Sales | | | | | | | | | | |
| 55 | Allowances | | | | | | | | | | |
| 56 | Net Industrial Fuel Sales | | | | | | | | | | |
| 57 | | | | | | | | | | | |
| 58 | Gross Sales | 100 | 273716 | 74 | 100 | | | | | | |
| 59 | Total Allowances | | 1240 | 23 | | | | | | | |
| 60 | Net Sales | | 272476 | 51 | | | | | | | |
| 61 | Minimum Bills | | 990 | 00 | | | | | | | |
| 62 | Forfeited Discounts | | 3129 | 01 | | | | | | | |
| 63 | | | | | | | | | | | |
| 64 | | | | | | | | | | | |
| 65 | Total Revenue | 100 | 276595 | 52 | 100 | | | | | | |
| 66 | Bad Debts | | 3000 | 00 | | | | | | | |
| 67 | | | | | | | | | | | |
| 68 | Gross Earnings from Oper. | | 273595 | 52 | | 282162 | 11 | | | 8566 | 59 |

## DETAILED STATEMENT OF SALES THIS MONTH

| | | % A | Sales in M Cu. Ft. This Year B | % C | Last Year D | Gr. Earnings Per M Sold This Year E | Last Year F | Sales Per Capita This Year G | Last Year H |
|---|---|---|---|---|---|---|---|---|---|
| 69 | Municipal Sales | | | | | | | | |
| 70 | Domestic and Illuminating Sales | | 20214.9 | | 21099.6 | 1.195 | 1.201 | | |
| 71 | Industrial Sales | | | | | | | | |
| 72 | | | | | | | | | |
| 73 | Total Sales | 100 | 20214.9 | 100 | 21099.6 | 1.195 | 1.201 | | |

## 12 MONTHS ENDING THIS MONTH

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 74 | Municipal Sales | | | | | | | | |
| 75 | Domestic and Illuminating Sales | | 226978.7 | | 234386.0 | 1.206 | 1.204 | | |
| 76 | Industrial Sales | | | | | | | | |
| 77 | | | | | | | | | |
| 78 | Total Sales | 100 | 226978.7 | 100 | 234386.0 | 1.206 | 1.204 | | |

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LINCOLN GAS & ELECTRIC LIGHT CO.

DEC 1913

# G 4

GENERAL SUMMARY OF OPERATION AND MAINTENANCE FOR

GAS REPORT

THIS MONTH

| | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| | | Operation | Maintenance | Total | Operation | Maintenance | Total |
| | | A | B | C | D | E | F |
| 79 | Production Department | | | | | | |
| 80 | Coal Gas Generation | * | * | * | | | * |
| 81 | Water Gas Generation | 6569 09 | 167 23 | 6736 32 | | | 7743 28 |
| 82 | Purchased Gas | * | * | * | | | * |
| 83 | Purification and Storage | 1202 21 | 118 83 | 1321 04 | | | * |
| 84 | | | | | | | |
| 85 | Gross Production | 7771 30 | 286 06 | 8057 36 | | | 7743 28 |
| 86 | Credits from Other Operations | 23 96 | 1 43 | 25 39 | | | * |
| 87 | Net Production | 7747 34 | 284 63 | 8031 97 | | | 7743 28 |
| 88 | Distribution Department | 508 36 | 151 81 | 660 17 | | | 1924 21 |
| 89 | | | | | | | |
| 90 | Customers Department | | | | | | |
| 91 | Office | 1334 68 | 116 09 | 1450 77 | | | * |
| 92 | Shop | 532 28 | 294 58 | 826 86 | | | * |
| 93 | Municipal | * | * | * | | | * |
| 94 | Total Customers Department | 1866 96 | 410 67 | 2277 63 | | | 1093 17 |
| 95 | | | | | | | |
| 96 | General Department | 4348 06 | | 4348 06 | | | 5635 91 |
| 97 | | | | | | | |
| 98 | Utility Equipment | | 117 84 | 117 84 | | | * |
| 99 | | | | | | | |
| 100 | Total | 14470 72 | 964 95 | 15435 67 | | | 16396 57 |
| 101 | | | | | | | |
| 102 | Total Unclassified Expense | 82 25 | * | 82 25 | | | * |
| 103 | | | | | | | |
| 104 | Total Expenses | 14552 97 | 964 95 | 15517 92 | | | 16396 57 |
| | Per M. cu.ft.sold | .7200 | .0477 | .7677 | | | .7772 |

12 MONTHS ENDING THIS MONTH

| | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| | | Operation | Maintenance | Total | Operation | Maintenance | Total |
| | | A | B | C | D | E | F |
| 105 | Production Department | | | | | | |
| 106 | Coal Gas Generation | * | * | * | | | |
| 107 | Water Gas Generation | 70082 19 | 3521 11 | 73603 30 | | | |
| 108 | Purchased Gas | * | * | * | | | |
| 109 | Purification and Storage | 15525 50 | 2614 15 | 18139 65 | | | |
| 110 | | | | | | | |
| 111 | Gross Production | 85607 69 | 6135 26 | 91742 95 | | | |
| 112 | Credits from Other Operations | 99 54 | 4 66 | 104 20 | | | |
| 113 | Net Production | 85508 15 | 6130 60 | 91638 75 | | | |
| 114 | Distribution Department | 5036 22 | 1947 26 | 6983 48 | | | |
| 115 | | | | | | | |
| 116 | Customers Department | | | | | | |
| 117 | Office | 15797 66 | 677 76 | 16475 42 | | | |
| 118 | Shop | 6314 33 | 3538 57 | 9852 90 | | | |
| 119 | Municipal | | | | | | |
| 120 | Total Customers Department | 22111 99 | 4216 33 | 26328 32 | | | |
| 121 | | | | | | | |
| 122 | General Department | 56406 36 | | 56406 36 | | | |
| 123 | | | | | | | |
| 124 | Utility Equipment | | 1249 43 | 1249 43 | | | |
| 125 | | | | | | | |
| 126 | Total | 169062 72 | 13543 62 | 182606 34 | | | |
| 127 | | | | | | | |
| 128 | Total Unclassified Expense | 806 63 | 23 80 | 830 43 | | | |
| 129 | | | | | | | |
| 130 | Total Expenses | 169869 35 | 13567 42 | 183436 77 | | | 175573 49 |
| | Per M.cu.ft.sold | .7484 | .0600 | .8082 | | | .7401 |

Form 528—12-10-12-5000

1808

LINCOLN GAS & ELECTRIC LIGHT CO.

DEC 1913

# G 5

SUMMARY OF DEMAND, CUSTOMER, OUTPUT & GENERAL EXPENSE FOR

AMOUNTS

| | | This Month | | 12 Months Ending This Month | |
|---|---|---|---|---|---|
| | | This Year | Last Year | This Year | Last Year |
| | | A | B | C | D |
| 131 | Demand Expense | 1399 42 | * | 18478 97 | |
| 132 | | | | | |
| 133 | Customer Expense | 2277 63 | * | 26328 32 | |
| 134 | | | | | |
| 135 | Output Expense | 7410 56 | * | 81392 69 | |
| 136 | | | | | |
| 137 | General Expense | 4348 06 | 5635 91 | 56406 36 | |
| 138 | | | | | |
| 139 | Total | 15435 67 | 16396 37 | 182606 34 | |

PER UNIT THIS MONTH

| | | This Year | Last Year | Increase | Decrease |
|---|---|---|---|---|---|
| | | A | B | C | D |
| 140 | Demand Expense Per M of | | | | |
| 141 | Maximum Hourly Send Out | 11.364 | | | |
| 142 | | | | | |
| 143 | Customer Expense Per Customer | .2696 | | | |
| 144 | | | | | |
| 145 | Output Exp. Per M of Output Sales | .3687 | | | |
| 146 | | | | | |
| 147 | General Exp. Per $100 Gross Revenue | 18.002 | 22.270 | * | 4.268 |
| 148 | | | | | |

PER UNIT 12 MONTHS ENDING THIS MONTH

| | | This Year | Last Year | Increase | Decrease |
|---|---|---|---|---|---|
| | | A | B | C | D |
| 149 | Demand Expense Per M of | | | | |
| 150 | Maximum Hourly Send Out | 150.02 | | | |
| 151 | | | | | |
| 152 | Customer Expense Per Customer | 3.116 | | | |
| 153 | | | | | |
| 154 | Output Exp. Per M of Output Sales | .3585 | | | |
| 155 | | | | | |
| 156 | General Exp. Per $100 Gross Revenue | 21.392 | | | |
| 157 | | | | | |

GAS REPORT

COST OF ADDITIONAL BUSINESS FOR 12 MONTHS ENDING THIS MONTH

| | | Demand | Customers | Output | General |
|---|---|---|---|---|---|
| | | A | B | C | D |
| 158 | Units Beginning of Period | | | | |
| 159 | Units End of Period | | | | |
| 160 | Increase of Units During Period. | | | | |
| 161 | Operation Exp. Beginning of Period | | | | |
| 162 | Operation Expense End of Period | | | | |
| 163 | Increase in Operation Expense | | | | |
| 164 | Incr. in Oper. Exp. Per Unit of Incr'se | | | | |
| 165 | Operation Exp. on Increment Basis | | | | |
| 166 | | | | | |
| 167 | Joint Expense | | | | |
| 168 | Maintenance | | | | |
| 169 | Joint and Maintenance Expense | | | | |
| 170 | Joint and Maintenance Exp. Per Unit | | | | |
| 171 | | | | | |
| 172 | | | | | |
| 173 | | | | | |
| 174 | | | | | |
| 175 | | | | | |
| 176 | | | | | |

Form 529—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 8

DEC 1913

WATER GAS GENERATION
PURCHASED GAS
} (OPERATION) FOR

## WATER GAS GENERATION (OPERATION) THIS MONTH

| | | Maximum Hourly Make W. G. | This Year: Demand A | This Year: Output B | This Year: Total C | Last Year: Demand D | Last Year: Output E | Last Year: Total F |
|---|---|---|---|---|---|---|---|---|
| 289 | Th. Yr. | 43500 | | | | | | |
| 290 | L't. Yr. | 51900 | | | | | | |
| 291 | Generator Fuel (Initial Cost) 435 | | | | 1574 37 | | | |
| 292 | Generator Fuel (Freight) 436 | | | | 926 10 | | | 2529 26 |
| 293 | Generator Fuel (Unloading) 437 | | | | 66 10 | | | |
| 294 | Generator Fuel (Handling) 438 | | | | 60 88 | | | |
| 295 | | | | | | | | |
| 296 | **Generator Fuel (Total Cost)** 439 | | | 2627 45 | 2627 45 | * | 2529 26 | 2529 26 |
| 297 | Enricher 440 | | | 3333 50 | 3333 50 | | 2731 33 | 2731 33 |
| 298 | Steam for Gas Making 441 | | | 468 20 | 468 20 | | 365 00 | 365 00 |
| 299 | | | | | | | | |
| 300 | **Gross Cost Gas Mak'g Sup.** 442 | | | 6429 15 | 6429 15 | * | 5625 59 | 5625 59 |
| 301 | Tar Residual 443 | | | 181 26 | 181 26 | | 46 50 | 46 50 |
| 302 | | | | | | | | |
| 303 | **Net Cost Gas Making Sup.** 444 | | | 6247 89 | 6247 89 | * | 5579 09 | 5579 09 |
| 304 | | | | | | | | |
| 305 | Generator House Supplies 445 | | 14 43 | | 14 43 | 17 31 | 17 31 | |
| 306 | Generator House Labor 446 | | | 306 77 | 306 77 | * | 316 18 | 316 18 |
| 307 | | 447 | | | | | | |
| 308 | **Gross Generation Oper. W.G.** 448 | | 14 43 | 6735 92 | 6750 35 | 17 31 | 5941 77 | 5959 08 |
| 309 | | | | | | | | |
| 310 | **Net Generation Oper. W.G.** 449 | | 14 43 | 6554 66 | 6569 09 | 17 31 | 5895 27 | 5912 58 |
| 311 | | | | | | | | |

GAS REPORT

## WATER GAS GENERATION (OPERATION) PER UNIT THIS MONTH

| | | M Cu. Ft. Water Gas Made | Demand Expense Per M of Maximum Hourly Make W. G.: This Year A | Last Year B | Increase C | Decrease D | Output Expense Per M Made: This Year E | Last Year F | Increase G | Decrease H |
|---|---|---|---|---|---|---|---|---|---|---|
| 312 | Th. Yr. | 22017.2 | | | | | | | | |
| 313 | L't. Yr. | 23055.3 | | | | | | | | |
| 314 | Generator Fuel (Initial Cost) | | | | | | | | | |
| 315 | Generator Fuel (Freight) | | | | | | | | | |
| 316 | Generator Fuel (Unloading) | | | | | | | | | |
| 317 | Generator Fuel (Handling) | | | | | | | | | |
| 318 | | | | | | | | | | |
| 319 | **Generator Fuel (Total Cost)** | | | | | | .1193 | .1097 | .0096 | * |
| 320 | Enricher | | | | | | | | | |
| 321 | Steam for Gas Making | | | | | | | | | |
| 322 | | | | | | | | | | |
| 323 | **Gross Cost Gas Mak'g Supplies** | | | | | | | | | |
| 324 | Tar Residual | | | | | | | | | |
| 325 | | | | | | | | | | |
| 326 | **Net Cost Gas Making Supplies** | | | | | | | | | |
| 327 | | | | | | | | | | |
| 328 | Generator House Supplies | | | | | | | | | |
| 329 | Generator House Labor | | | | | | | | | |
| 330 | | | | | | | | | | |
| 331 | **Gross Generation Oper. W.G.** | | .3317 | .3336 | * | .0019 | .3059 | .2577 | .0482 | * |
| 332 | | | | | | | | | | |
| 333 | **Net Generation Oper. W.G.** | | .3317 | .3336 | * | .0019 | .2977 | .2557 | .0420 | |
| 334 | | | | | | | | | | |

## PURCHASED GAS (OPERATION) THIS MONTH

| | | This Year: Demand A | This Year: Output B | This Year: Total C | Last Year: Demand D | Last Year: Output E | Last Year: Total F |
|---|---|---|---|---|---|---|---|
| 335 | Cost of Purchased Gas 450 | | | | | | |
| 336 | | | | | | | |
| 337 | | | | | | | |
| 338 | | | | | | | |
| 339 | | | | | | | |

1810

Form 532—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

DEC 1913

# G 9

WATER GAS GENERATION
PURCHASED GAS } (OPERATION) FOR WATER GAS GENERATION (OPERATION) 12 MONTHS ENDING THIS MONTH

| | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| | Maximum Hourly Make W. G. | Demand | Output | Total | Demand | Output | Total |
| | | A | B | C | D | E | F |
| 340 | Th. Yr. | | | | | | |
| 341 | L't. Yr. 51100 55700 | | | | | | |
| 342 | Generator Fuel (Initial Cost) | [illegible] | [illegible] | 17104 80 | [illegible] | [illegible] | |
| 343 | Generator Fuel (Freight) | [illegible] | [illegible] | 10893 29 | [illegible] | [illegible] | |
| 344 | Generator Fuel (Unloading) | [illegible] | [illegible] | 384 24 | [illegible] | [illegible] | |
| 345 | Generator Fuel (Handling) | [illegible] | [illegible] | 671 16 | [illegible] | [illegible] | |
| 346 | | | | | | | |
| 347 | Generator Fuel (Total Cost) | | 29053 49 | 29053 49 | | | |
| 348 | Enricher | [illegible] | 33869 06 | 33869 06 | [illegible] | | |
| 349 | Steam for Gas Making | [illegible] | 5670 82 | 5670 82 | [illegible] | | |
| 350 | | | | | | | |
| 351 | Gross Cost Gas Mak'g Supplies | | 68593 37 | 68593 37 | | | |
| 352 | Tar Residual | [illegible] | 2325 94 | 2325 94 | [illegible] | | |
| 353 | | | | | | | |
| 354 | Net Cost Gas Making Supplies | | 66267 43 | 66267 43 | | | |
| 355 | | | | | | | |
| 356 | Generator House Supplies | 294 82 | [illegible] | 294 82 | | [illegible] | |
| 357 | Generator House Labor | | 3519 94 | 3519 94 | | | |
| 358 | | | | | | | |
| 359 | Gross Generation Oper. W. G. | 294 82 | 72113 31 | 72408 13 | | | |
| 360 | | | | | | | |
| 361 | Net Generation Oper. W. G. | 294 82 | 69787 37 | 70082 19 | | | |
| 362 | | | | | | | |

GAS REPORT

WATER GAS GENERATION (OPERATION) PER UNIT 12 MONTHS ENDING THIS MONTH

| | | Demand Expense Per M of Maximum Hourly Make W. G. | | | | Output Expense Per M Made | | | |
|---|---|---|---|---|---|---|---|---|---|
| | M Cu. Ft. Water Gas Made | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| | | A | B | C | D | E | F | G | H |
| 363 | Th. Yr. 245211.9 | | | | | | | | |
| 364 | L't. Yr. 258205.6 | | | | | | | | |
| 365 | Generator Fuel (Initial Cost) | [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 366 | Generator Fuel (Freight) | [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 367 | Generator Fuel (Unloading) | [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 368 | Generator Fuel (Handling) | [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 369 | | | | | | | | | |
| 370 | Generator Fuel (Total Cost) | | | | | .1185 | | | |
| 371 | Enricher | [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 372 | Steam for Gas Making | [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 373 | | | | | | | | | |
| 374 | Gross Cost Gas Mak'g Supplies | | | | | | | | |
| 375 | Tar Residual | [illegible] | [illegible] | [illegible] | [illegible] | | | | |
| 376 | | | | | | | | | |
| 377 | Net Cost Gas Making Supplies | | | | | | | | |
| 378 | | | | | | | | | |
| 379 | Generator House Supplies | | | | | [illegible] | [illegible] | [illegible] | [illegible] |
| 380 | Generator House Labor | | | | | | | | |
| 381 | | | | | | | | | |
| 382 | Gross Generation Oper. W. G. | 5.7700 | | | | .2941 | | | |
| 383 | | | | | | | | | |
| 384 | Net Generation Oper. W. G. | 5.7700 | | | | .2845 | | | |
| 385 | | | | | | | | | |

PURCHASED GAS (OPERATION) 12 MONTHS ENDING THIS MONTH

| | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| | | Demand | Output | Total | Demand | Output | Total |
| | | A | B | C | D | E | F |
| 386 | Cost of Purchased Gas | [illegible] | | | [illegible] | | |
| 387 | | | | | | | |
| 388 | | | | | | | |
| 389 | | | | | | | |
| 390 | | | | | | | |

1811

Form 553—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

PURIFICATION & STORAGE OPERATION FOR DEC 1913

G -)

GAS REPORT

## THIS MONTH

| | Maximum Hourly Send Out | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|---|
| | | | Demand | Output | Total | Demand | Output | Total |
| | | | A | B | C | D | E | F |
| 391 | Th. Yr. 123156 | | | | | | | |
| 392 | L't. Yr. 125384 | | | | | | | |
| 393 | Purification Supplies | 451 | | 181 17 | 181 17 | | | |
| 394 | Misc. Production Supplies | 452 | 26 02 | | 26 02 | | | |
| 395 | | | | | | | | |
| 396 | Purification Labor | 453 | | 10 55 | 10 55 | | | |
| 397 | Superintendence, Etc. | 454 | 387 50 | | 387 50 | | | |
| 398 | Miscellaneous Production Labor | 455 | 170 97 | | 170 97 | | | |
| 399 | | | | | | | | |
| 400 | Power Expense | 456 | | 40 16 | 40 16 | | | |
| 401 | Steam Expense | 457 | 350 00 | | 350 00 | | | |
| 402 | Other Sundry Expense | 458 | 35 84 | | 35 84 | | | |
| 403 | Total Operation | 459 | 970 33 | 231 88 | 1202 21 | | | |

## PER UNIT THIS MONTH

| | M Cu. Ft. Output | | Demand Expense Per M of Maximum Hourly Send Out | | | | Output Expense Per M of Output | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| | | | A | B | C | D | E | F | G | H |
| 404 | Th. Yr. 22004.6 | | | | | | | | | |
| 405 | L't. Yr. 23054.8 | | | | | | | | | |
| 406 | Purification Supplies | | | | | | | | | |
| 407 | Misc. Production Supplies | | | | | | | | | |
| 408 | | | | | | | | | | |
| 409 | Purification Labor | | | | | | | | | |
| 410 | Superintendence, Etc. | | | | | | | | | |
| 411 | Miscellaneous Production Labor | | | | | | | | | |
| 412 | | | | | | | | | | |
| 413 | Power Expense | | | | | | | | | |
| 414 | Steam Expense | | | | | | | | | |
| 415 | Other Sundry Expense | | | | | | | | | |
| 416 | Total Operation | | 2.878 | | | | .0105 | | | |

## 12 MONTHS ENDING THIS MONTH

| | Maximum Hourly Send Out | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|---|
| | | | Demand | Output | Total | Demand | Output | Total |
| | | | A | B | C | D | E | F |
| 417 | Th. Yr. 123156 | | | | | | | |
| 418 | L't. Yr. " | | | | | | | |
| 419 | Purification Supplies | | | 2823 20 | 2823 20 | | | |
| 420 | Misc. Production Supplies | | 696 74 | | 696 74 | | | |
| 421 | | | | | | | | |
| 422 | Purification Labor | | | 315 58 | 315 58 | | | |
| 423 | Superintendence, Etc. | | 5556 25 | | 5556 25 | | | |
| 424 | Miscellaneous Production Labor | | 2363 47 | | 2363 47 | | | |
| 425 | | | | | | | | |
| 426 | Power Expense | | | 383 86 | 383 86 | | | |
| 427 | Steam Expense | | 3089 32 | | 3089 32 | | | |
| 428 | Other Sundry Expense | | 297 08 | | 297 08 | | | |
| 429 | Total Operation | | 12002 86 | 3522 64 | 15525 50 | | | |

## PER UNIT 12 MONTHS ENDING THIS MONTH

| | M Cu. Ft. Output | | Demand Expense Per M of Maximum Hourly Send Out | | | | Output Expense Per M of Output | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| | | | A | B | C | D | E | F | G | H |
| 430 | Th. Yr. 245474.3 | | | | | | | | | |
| 431 | L't. Yr. 258204.0 | | | | | | | | | |
| 432 | Purification Supplies | | | | | | | | | |
| 433 | Misc. Production Supplies | | | | | | | | | |
| 434 | | | | | | | | | | |
| 435 | Purification Labor | | | | | | | | | |
| 436 | Superintendence, Etc. | | | | | | | | | |
| 437 | Miscellaneous Production Labor | | | | | | | | | |
| 438 | | | | | | | | | | |
| 439 | Power Expense | | | | | | | | | |
| 440 | Steam Expense | | | | | | | | | |
| 441 | Other Sundry Expense | | | | | | | | | |
| 442 | Total Operation | | 97.46 | | 1812 | | .0143 | | | |

Form 534—12-10-12-(693)

GAS STATISTICS FOR

# LINCOLN GAS & ELECTRIC LIGHT CO.

## DEC 1913

**G 11**

GAS REPORT

### COAL GAS STATISTICS THIS MONTH

| | | | A This Year | | B Last Year | |
|---|---|---|---|---|---|---|
| 443 | Coal Gas Made | | | M Cu. Ft. | | M Cu. Ft. |
| 444 | Kind of Coal Used | | | | | |
| 445 | Coal Carbonized | | | Tons | | Tons |
| 446 | Yield Per Lb. of Coal Carbonized | | | Cu. Ft. | | Cu. Ft. |
| 447 | Cost of Coal Per Ton Used | | $ | | $ | |
| 448 | Average Number of Retorts in Use | | | | | |
| 449 | Average Charge Per Retort | | | Lbs. | | Lbs. |
| 450 | Average Make Per Retort Per 24 Hours | | | Cu. Ft. | | Cu. Ft. |
| 451 | Coke Made Per Ton of Coal Carbonized | | | Lbs. | | Lbs. |
| 452 | Coke Used for Bench Fuel Per Ton of Coal Carbonized | | | Lbs. | | Lbs. |
| 453 | Coal Used for Bench Fuel Per Ton of Coal Carbonized | | | Lbs. | | Lbs. |
| 454 | Selling Price for Coke Per Ton | | $ | | $ | |
| 455 | Net Receipts for Coke Per Ton Sold | | $ | | $ | |
| 456 | Net Receipts for Coke Per Ton of Coal Carbonized | | $ | | $ | |
| 457 | Tar Made Per Ton of Coal Carbonized | | | Gallons | | Gallons |
| 458 | Net Receipts for Tar Per Ton of Coal Carbonized | | $ | | $ | |
| 459 | Selling Price for Tar Per Gallon | | $ | | $ | |
| 460 | Net Receipts for Tar Per Gallon Sold | | $ | | $ | |
| 461 | Ammonia Made Per Ton of Coal Carbonized | | | Lbs. | | Lbs. |
| 462 | Net Receipts for Ammonia Per Ton of Coal Carbonized | | $ | | $ | |
| 463 | Selling Price of Ammonia Per Lb. | | $ | | $ | |
| 464 | Net Receipts for Ammonia Per Lb. Sold | | $ | | $ | |
| 465 | Carbon Sold | | | Tons | | Tons |
| 466 | Selling Price for Carbon Per Ton | | $ | | $ | |
| 467 | Net Receipts for Carbon Per Ton Sold | | $ | | $ | |
| 468 | Gas Purified Per Bushel Per Change | | | Cu. Ft. | | Cu. Ft. |
| 469 | Spent Oxide Sold _____ Tons @ | | $ | | $ | |
| 470 | Illuminating Power | Maximum | | C. P. | | C. P. |
| 471 | | Minimum | | C. P. | | C. P. |
| 472 | | Average | | C. P. | | C. P. |
| 473 | Heating Value | Maximum | | B. T. U. | | B. T. U. |
| 474 | | Minimum | | B. T. U. | | B. T. U. |
| 475 | | Average | | B. T. U. | | B. T. U. |

### WATER GAS STATISTICS THIS MONTH

| | | | | | | |
|---|---|---|---|---|---|---|
| 476 | Water Gas Made | | 22017213 | Cu. Ft. | 23055255 | Cu. Ft. |
| 477 | Enricher Used | | 73,425 | Gallons | 72,499 | Gallons |
| 478 | Enricher Used Per M Manufactured | | 3.34 | Gallons | 3.14 | Gallons |
| 479 | Candles Per Gallon of Enricher | | | | | |
| 480 | Boiler Fuel Per M Manufactured | | 20 | Lbs. | ∴ | Lbs. |
| 481 | Generator Fuel Per M Manufactured | | 31.2 | Lbs. | 31.8 | Lbs. |
| 482 | Number of Runs | | 3592 | | 2909 | |
| 483 | Average Make Per Run | | 6130 | Cu. Ft. | 7910 | Cu. Ft. |
| 484 | Average Make Per Gas Maker Per Hour | | 18405 | Cu. Ft. | 24723 | Cu. Ft. |
| 485 | Gas Purified Per Bushel of Material Per Change | | ∴ | Cu. Ft. | ∴ | Cu. Ft. |
| 486 | Tar Made Per M Manufactured | | .096 | Gallons | .07 | Gallons |
| 487 | Tar Made Per Gallon of Oil Used | | .026 | Gallons | .214 | Gallons |
| 488 | Illuminating Power | Maximum | | C. P. | | C. P. |
| 489 | | Minimum | | C. P. | | C. P. |
| 490 | | Average | | C. P. | | C. P. |
| 491 | Heating Value | Maximum | 665 | B. T. U. | 633 | B. T. U. |
| 492 | | Minimum | 618 | B. T. U. | 610 | B. T. U. |
| 493 | | Average | 633 | B. T. U. | 624 | B. T. U. |

### MIXED GAS STATISTICS THIS MONTH

| | | | | | | |
|---|---|---|---|---|---|---|
| 494 | Illuminating Power | Maximum | | C. P. | | C. P. |
| 495 | | Minimum | | C. P. | | C. P. |
| 496 | | Average | | C. P. | | C. P. |
| 497 | Heating Value | Maximum | | B. T. U. | | B. T. U. |
| 498 | | Minimum | | B. T. U. | | B. T. U. |
| 499 | | Average | | B. T. U. | | B. T. U. |

Form 535—12-16-12-5000

1813

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 12

PRODUCTION DEPARTMENT / DISTRIBUTION DEPARTMENT

DEC 1913

(OPERATION) FOR

## SUMMARY OF PRODUCTION DEPARTMENT (OPERATION) THIS MONTH

| | Maximum Hourly Send Out | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| 500 | Th. Yr. 123156 | Demand | Output | Total | Demand | Output | Total |
| 501 | L't. Yr. 125384 | A | B | C | D | E | F |
| 502 | Gross Production Supplies | 40 45 | 6610 32 | 6650 77 | | | |
| 503 | Net Production Supplies | 40 45 | 6429 06 | 6469 51 | | | |
| 504 | Production Labor | 558 47 | 317 32 | 875 79 | | | |
| 505 | Production Sundry Expense | 385 84 | 40 16 | 426 00 | | | |
| 506 | Cost of Purchased Gas | * | * | * | | | |
| 507 | **Gross Production Operatn** 460 | 984 76 | 6786 54 | 7771 30 | | | |
| 508 | Credits from Other Operations 461 | 3 08 | 20 88 | 23 96 | | | |
| 509 | **Net Production Operation** 462 | 981 68 | 6765 66 | 7747 34 | | | |

## PER UNIT THIS MONTH

| | M Cu. Ft. Output | Demand Expense Per M of Maximum Hourly Send Out | | | | Output Expense Per M of Output | | | |
|---|---|---|---|---|---|---|---|---|---|
| 510 | Th. Yr. 22004.6 | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| 511 | L't. Yr. 23054.8 | A | B | C | D | E | F | G | H |
| 512 | Gross Production Supplies | | | | | | | | |
| 513 | Net Production Supplies | | | | | | | | |
| 514 | Production Labor | | | | | | | | |
| 515 | Production Sundry Expense | | | | | | | | |
| 516 | Cost of Purchased Gas | * | | | | | | | |
| 517 | **Gross Production Operation** | 7.996 | | | | .3088 | | | |
| 518 | Credits from Other Operations | .025 | | | | .0009 | | | |
| 519 | **Net Production Operation** | 7.971 | | | | .3079 | | | |

## SUMMARY 12 MONTHS ENDING THIS MONTH

GAS REPORT

| | Maximum Hourly Send Out | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| 520 | Th. Yr. 123156 | Demand | Output | Total | Demand | Output | Total |
| 521 | L't. Yr. | A | B | C | D | E | F |
| 522 | Gross Production Supplies | 991 56 | 71377 82 | 72369 38 | | | |
| 523 | Net Production Supplies | 991 56 | 69090 63 | 70082 19 | | | |
| 524 | Production Labor | 7919 72 | 3835 52 | 11755 24 | | | |
| 525 | Production Sundry Expense | 3386 40 | 383 86 | 3770 26 | | | |
| 526 | Cost of Purchased Gas | | * | * | | | |
| 527 | **Gross Production Operation** | 12297 68 | 73310 01 | 85607 69 | | | |
| 528 | Credits from Other Operations | 8 68 | 90 86 | 99 54 | | | |
| 529 | **Net Production Operation** | 12289 00 | 73219 15 | 85508 15 | | | |

## PER UNIT 12 MONTHS ENDING THIS MONTH

| | M Cu. Ft. Output | Demand Expense Per M of Maximum Hourly Send Out | | | | Output Expense Per M of Output | | | |
|---|---|---|---|---|---|---|---|---|---|
| 530 | Th. Yr. 245474.3 | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| 531 | L't. Yr. 258204.0 | A | B | C | D | E | F | G | H |
| 532 | Gross Production Supplies | | | | | | | | |
| 533 | Net Production Supplies | | | | | | | | |
| 534 | Production Labor | | | | | | | | |
| 535 | Production Sundry Expense | | | | | | | | |
| 536 | Cost of Purchased Gas | | | | | | | | |
| 537 | **Gross Production Operation** | 99.84 | | | | .2987 | | | |
| 538 | Credits from Other Operations | .06 | | | | .0004 | | | |
| 539 | **Net Production Operation** | 99.78 | | | | .2983 | | | |

## DISTRIBUTION DEPARTMENT (OPERATION) THIS MONTH

| | | Total Charged Entirely to Output | | Output Expense Per M of Output | | | |
|---|---|---|---|---|---|---|---|
| | | This Year | Last Year | This Year | Last Year | Increase | Decrease |
| | | A | B | C | D | E | F |
| 540 | Operation Supplies 463 | * | | | | | |
| 541 | Operation Labor 464 | 186 45 | | | | | |
| 542 | Operation Sundry Expense 465 | 321 91 | | | | | |
| 543 | **Total Distribution Dep't. Oper** | 508 36 | | .0231 | | | |

## 12 MONTHS ENDING THIS MONTH

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 544 | Operation Supplies | 219 99 | | | | | |
| 545 | Operation Labor | 2047 76 | | | | | |
| 546 | Operation Sundry Expense | 2768 47 | | | | | |
| 547 | **Total Distribution Dep't. Oper.** | 5036 22 | | .2051 | | | |

Form 636 – 12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

CUSTOMERS DEPARTMENT (OPERATION) FOR DEC 1913

# G 13

GAS REPORT

THIS MONTH

| | | | Number of Customers | Total Charged Entirely to Customer | | Customer Expense Per Customer | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | This Year | Last Year | This Year | Last Year | Increase | Decrease |
| | | | | A | B | C | D | E | F |
| 548 | | Th. Yr | 8449 | | | | | | |
| 549 | | L't. Yr. | 7816 | | | | | | |
| 550 | Office | Stationery and Printing 466 | | 80 00 | * | | | | |
| 551 | Office | Misc. Office Supplies 467 | | 33 65 | 116 99 | | | | |
| 552 | Office | Reading Meters Labor 468 | | 125 78 | 136 58 | | | | |
| 553 | Office | Customers Bookkeepig Labor 469 | | 360 26 | 584 80 | | | | |
| 554 | Office | Collecting Bills Labor 470 | | 176 90 | 149 85 | | | | |
| 555 | Office | Application Dept. Labor 471 | | 85 80 | * | | | | |
| 556 | Office | Delivering Bills Labor 472 | | 16 78 | 26 86 | | | | |
| 557 | Office | Miscellaneous Office Labor 473 | | 230 10 | * | | | | |
| 558 | Office | Telephone Expense 474 | | 141 17 | * | | | | |
| 559 | Office | Other Office Sundry Exp. 475 | | 81 24 | 78 09 | | | | |
| 560 | Office | **Total Office Operation** 476 | | 1334 68 | 1093 17 | | | | |
| 561 | Shop | Gratuitous Work Supplies 477 | | * | * | | | | |
| 562 | Shop | Miscellaneous Shop Supplies 478 | | 40 | * | | | | |
| 563 | Shop | Gratuitous Work Labor 479 | | 18 34 | * | | | | |
| 564 | Shop | Resett'g & Remov'g Meters L.480 | | 151 80 | * | | | | |
| 565 | Shop | Res. & Rem. Governors L.. 481 | | 171 27 | * | | | | |
| 566 | Shop | Miscellaneous Shop Labor 482 | | * | * | | | | |
| 567 | Shop | Gratuitous Work Sund. Exp. 483 | | 116 17 | * | | | | |
| 568 | Shop | Res. & Rem. Meters S. Exp. 484 | | 29 31 | * | | | | |
| 569 | Shop | Res. & Rem. Governors S. E. 485 | | 31 53 | * | | | | |
| 570 | Shop | Other Shop Sundry Expense 486 | | * | * | | | | |
| 571 | Shop | **Total Shop Operation** 487 | | 13 46 | * | | | | |
| 572 | | **Total Office and Shop Oper.** 488 | | 532 28 | * | | | | |
| 573 | Municipal | Municipal Lamp Supplies 489 | | 1866 96 | 1093 17 | | | | |
| 574 | Municipal | Municipal Lamps Labor 490 | | * | * | | | | |
| 575 | Municipal | Municipal Sundry Expense 491 | | * | * | | | | |
| 576 | Municipal | **Total Municipal Oper.** 492 | | * | * | | | | |
| 577 | | **Total Customers Dept. Oper.** 493 | | 1866 96 | 1093 17 | .2210 | .1399 | .0811 | * |

12 MONTHS ENDING THIS MONTH

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 578 | Office | Stationery and Printing | | 960 00 | | | | | |
| 579 | Office | Miscellaneous Office Supplies | | 429 74 | | | | | |
| 580 | Office | Reading Meters Labor | | 1401 22 | | | | | |
| 581 | Office | Customers Bookkeeping Labor | | 4122 94 | | | | | |
| 582 | Office | Collecting Bills Labor | | 2060 23 | | | | | |
| 583 | Office | Application Department Labor | | 1048 94 | | | | | |
| 584 | Office | Delivering Bills Labor | | 267 17 | | | | | |
| 585 | Office | Miscellaneous Office Labor | | 3036 02 | | | | | |
| 586 | Office | Telephone Expense | | 1694 34 | | | | | |
| 587 | Office | Other Office Sundry Expense | | 777 16 | | | | | |
| 588 | Office | **Total Office Operation** | | 15797 66 | | | | | |
| 589 | Shop | Gratuitous Work Supplies | | 15 65 | | | | | |
| 590 | Shop | Miscellaneous Shop Supplies | | 573 67 | | | | | |
| 591 | Shop | Gratuitous Work Labor | | 1658 78 | | | | | |
| 592 | Shop | Resett'g & Remov'g Meters L. | | 2088 43 | | | | | |
| 593 | Shop | Res. & Rem. Governors L.. | | * | | | | | |
| 594 | Shop | Miscellaneous Shop Labor | | 1497 59 | | | | | |
| 595 | Shop | Gratuitous Work Sundry Exp. | | 247 94 | | | | | |
| 596 | Shop | Res. & Rem. Meters Sundry Exp. | | 65 20 | | | | | |
| 597 | Shop | Res. & Rem. Governors S. Exp. | | * | | | | | |
| 598 | Shop | Other Shop Sundry Expense | | 167 07 | | | | | |
| 599 | Shop | **Total Shop Operation** | | 6314 33 | | | | | |
| 600 | | **Total Office and Shop Operat'n** | | 22112 99 | | | | | |
| 601 | Municipal | Municipal Lamp Supplies | | * | | | | | |
| 602 | Municipal | Municipal Lamps Labor | | * | | | | | |
| 603 | Municipal | Municipal Sundry Expense | | * | | | | | |
| 604 | Municipal | **Total Municipal Operat'n.** | | * | | | | | |
| 605 | | **Total Customers Dept. Operat'n.** | | 22112 99 | | 2.617 | | | |

Form 537—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 14

DEC 1913

GENERAL DEPARTMENT (OPERATION) FOR

GAS REPORT

## THIS MONTH

| | $100 of Gross Revenue | | Amount | | Per $100 of Gross Revenue | | | |
|---|---|---|---|---|---|---|---|---|
| 606 | Th. Yr. 241.50 | | This Year | Last Year | This Year | Last Year | Increase | Decrease |
| 607 | L't. Yr. 253.46 | | A | B | C | D | E | F |
| 608 | Executive Salaries | 494 | 660 00 | 776 60 | | | | |
| 609 | | | | | | | | |
| 610 | Clerical Salaries | 495 | 143 03 | 138 05 | | | | |
| 611 | Legal Expense | 496 | 715 00 | 815 81 | | | | |
| 612 | | | | | | | | |
| 613 | Traveling Expenses | 497 | 28 00 | * | | | | |
| 614 | General Incidental Expenses | 498 | 206 43 | 541 89 | | | | |
| 615 | Other Corporate Expenses | 499 | 20 49 | * | | | | |
| 616 | | | | | | | | |
| 617 | | | | | | | | |
| 618 | **Total Above Items** | | 1772 95 | 2272 35 | | | | |
| 619 | | | | | | | | |
| 620 | | | | | | | | |
| 621 | Taxes | 500 | 1200 00 | 1200 00 | | | | |
| 622 | Insurance | 501 | 45 99 | * | | | | |
| 623 | Rents | 502 | 365 20 | 136 45 | | | | |
| 624 | Injuries and Damages | 503 | * | * | | | | |
| 625 | | | | | | | | |
| 626 | New Business Expense | 504 | 729 16 | 2027 11 | | | | |
| 627 | | | | | | | | |
| 628 | Stores Department Supplies | 505 | * | * | | | | |
| 629 | Stores Department Labor | 506 | 213 16 | * | | | | |
| 630 | Stores Dep't Sundry Exp. | 507 | 21 60 | * | | | | |
| 631 | | | | | | | | |
| 632 | | | | | | | | |
| 633 | **Total General Dep't Oper.** | 508 | 4348 06 | 5635 91 | 18.002 | 22.235 | * | 4.223 |

## 12 MONTHS ENDING THIS MONTH

| | $100 of Gross Revenue | | Amount | | Per $100 of Gross Revenue | | | |
|---|---|---|---|---|---|---|---|---|
| 634 | Th. Yr. 2736.82 | | This Year | Last Year | This Year | Last Year | Increase | Decrease |
| 635 | L't. Yr. 2821.62 | | A | B | C | D | E | F |
| 636 | Executive Salaries | | 8480 00 | | | | | |
| 637 | | | | | | | | |
| 638 | Clerical Salaries | | 1600 77 | | | | | |
| 639 | Legal Expense | | 7285 67 | | | | | |
| 640 | | | | | | | | |
| 641 | Traveling Expenses | | 745 77 | | | | | |
| 642 | General Incidental Expenses | | 2875 85 | | | | | |
| 643 | Other Corporate Expenses | | 545 65 | | | | | |
| 644 | | | | | | | | |
| 645 | | | | | | | | |
| 646 | **Total Above Items** | | 21533 71 | | | | | |
| 647 | | | | | | | | |
| 648 | | | | | | | | |
| 649 | Taxes | | 14400 00 | | | | | |
| 650 | Insurance | | 538 71 | | | | | |
| 651 | Rents | | 4475 41 | | | | | |
| 652 | Injuries and Damages | | 2321 50 | | | | | |
| 653 | | | | | | | | |
| 654 | New Business Expense | | 10399 90 | | | | | |
| 655 | | | | | | | | |
| 656 | Stores Department Supplies | | 29 30 | | | | | |
| 657 | Stores Department Labor | | 2418 90 | | | | | |
| 658 | Stores Dep't Sundry Exp. | | 288 93 | | | | | |
| 659 | | | | | | | | |
| 660 | | | | | | | | |
| 661 | **Total General Dep't Oper.** | | 56406 36 | | 20.61 | | | |

Form 525—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

DETAILS OF NEW BUSINESS DEPARTMENT (OPERATION) FOR DEC 1913

# G 15

GAS REPORT

DETAILS OF EXPENSE ACCOUNT NO. 509

| | | | This Month | | 12 Months Ending This Month | |
|---|---|---|---|---|---|---|
| | | | This Year | Last Year | This Year | Last Year |
| | | | A | B | C | D |
| 662 | Office and Representatives | | | | | |
| 663 | Clerical Salaries, Etc. | a | 291 20 | 588 30 | 3941 73 | |
| 664 | Solic. for New Customers on Present Mains | b | 325 60 | * | 4893 70 | |
| 665 | Solic. for New Cust. on Proposed Extensions | c | * | * | * | |
| 666 | Solic. for Incr. Business of Present Customers | d | * | * | 180 00 | |
| 667 | Sundry Expense | e | 52 23 | 117 93 | 605 64 | |
| 668 | Advertising | | | | | |
| 669 | Details — Newspaper Advertising | | 76 20 | 584 81 | 1589 50 | |
| 670 | Details — Mail Advertising | | * | * | * | |
| 671 | Details — Billboard Advertising | | * | * | * | |
| 672 | Details — Miscellaneous Advertising | | 19 96 | * | 463 05 | |
| 673 | Summary — Supplies | f | * | * | 18 85 | |
| 674 | Summary — Labor | g | * | * | 100 64 | |
| 675 | Summary — Sundry Expense | h | 96 16 | * | 1865 81 | |
| 676 | Total Above Items | | 765 19 | 1291 04 | 11773 62 | |
| 677 | Appliances | | | | | |
| 678 | Received for Appliances | k | 1040 03 | 1005 99 | 16623 55 | |
| 679 | Cost of Appliances | l | 786 09 | 915 88 | 11386 77 | |
| 680 | Profit on Appliances | | 253 94 | 90 11 | 5236 78 | |
| 681 | Loss on Appliances | | | | | |
| 682 | Appliance Supplies | m | * | 522 73 | 2 25 | |
| 683 | Appliance Labor | n | * | * | 4 20 | |
| 684 | Appliance Sundry Expense | o | * | * | 6 40 | |
| 685 | Total Appliance Expense | | * | 522 73 | 12 85 | |
| 686 | Net Profit on Appliances | | 253 94 | * | 5223 93 | |
| 687 | Net Loss on Appliances | | * | 432 62 | * | |
| 688 | Installations — Supplies | p | 140 78 | 176 92 | 2008 22 | |
| 689 | Installations — Labor | q | 281 48 | 138 41 | 3671 80 | |
| 690 | Installations — Sundry Expense | r | 63 05 | 140 84 | 785 07 | |
| 691 | Installations — Total | | 485 31 | 456 17 | 6465 09 | |
| 692 | Installations — Charged Customers | s | 267 40 | 152 72 | 2614 88 | |
| 693 | Installations — Profit on Installation Work | | * | * | * | |
| 694 | Installations — Loss on Installation Work | | 217 91 | 303 45 | 3850 21 | |
| 695 | Total New Business Exp. (Amt Spent) 509 | | 729 16 | 2027 11 | 10399 90 | |
| 696 | Amount Prorated | | * | * | * | |
| 697 | Total New Bus. Exp. (Chgd to Operation) | | 729 16 | 2027 11 | 10399 90 | |

STATISTICAL DATA

| | | 12 Months Ending This Month | |
|---|---|---|---|
| | | This Year | Last Year |
| | | A | B |
| 698 | Increase in Gross Earnings | R 8566.59 | * |
| 699 | Increase in Gross Earnings Per Cent. | R 3.036 | * |
| 700 | Increase in Net Earnings | R 16429.87 | * |
| 701 | Increase in Net Earnings Per Cent. | R 15.43 | * |
| 702 | New Business Expense Per $1 of Increased Gross Earnings | * | * |
| 703 | New Business Expense Per $1 of Increased Net Earnings | * | * |
| 704 | Number of Customers Added Net | 633. | * |
| 705 | Total Number of Contracts Taken by the Application Department | * | * |
| 706 | Total Number of Contracts Taken by the New Business Department | * | * |
| 707 | New Business Expense Per Contract Taken by the New Business Department | * | * |
| 708 | Number of New Buildings in the Franchise Area | * | * |
| 709 | Number of Contracts Taken for Business at New Buildings | * | * |
| 710 | Population of the Franchise Area | 53400 | 52200 |
| 711 | Number of Customers | 8449 | 7816 |
| 712 | Number of Customers with Bills Less than $1 | * | * |
| 713 | Number of Customers with Bills Less Than $1 [in Per Cent.] | * | * |
| 714 | | | |

Form 839—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 16

PRODUCTION DEPARTMENT (MAINTENANCE) FOR DEC 1913

GAS REPORT

## PRODUCTION MAINTENANCE THIS MONTH

| | Maximum Hourly Send Out | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| 715 | Th. Yr. 123156 | Demand | Output | Total | Demand | Output | Total |
| 716 | L't. Yr. 125384 | A | B | C | D | E | F |
| 717 | Bench Repairs Material 510 | | | | | | |
| 718 | Bench Repairs Labor 511 | | | | | | |
| 719 | | | | | | | |
| 720 | Total C.G. Generat'n Maint. 512 | | | | | | |
| 721 | Generator & Equip. Repairs M. 513 | | 137 23 | 137 23 | | | |
| 722 | Generator & Equip. Repairs L. 514 | | " | " | | | |
| 723 | | | | | | | |
| 724 | Boiler Maintenance 515 | 30 00 | | 30 00 | | | |
| 725 | Total W.G. Generat'n Maint. 516 | 30 00 | 137 23 | 167 23 | | | |
| 726 | General Apparatus Repairs M. 518 | 49 18 | | 49 18 | | | |
| 727 | Misc. Works Repairs Material 519 | 20 80 | | 20 80 | | | |
| 728 | General Apparatus Repairs L. 520 | 18 85 | | 18 85 | | | |
| 729 | Misc. Works Repairs Labor 521 | " | | " | | | |
| 730 | | | | | | | |
| 731 | Boiler Maintenance 522 | 30 00 | | 30 00 | | | |
| 732 | Tot. Purif. & Storage Maint. 523 | 118 83 | " | 118 83 | | | |
| 733 | Gross Product. Dep't Maint. 524 | 148 83 | 137 23 | 286 06 | | | |
| 734 | Total Production Material | 69 98 | 137 23 | 207 21 | | | |
| 735 | Total Production Labor | 18 85 | " | 18 85 | | | |
| 736 | | | | | | | |
| 737 | Boiler Maintenance | 60 00 | " | 60 00 | | | |
| 738 | Gross Production Dept Maint. | 148 83 | 137 23 | 286 06 | | | |
| 739 | Credits from Other Departments 524 a | 74 | 69 | 1 43 | | | |
| 740 | Net Production Dept Maint. | 148 09 | 136 54 | 284 63 | | | |

## SUMMARY PRODUCTION MAINTENANCE PER UNIT THIS MONTH

| | M Cu. Ft. Output | Demand Expense Per M of Maximum Hourly Send Out | | | | Output Expense Per M of Output | | | |
|---|---|---|---|---|---|---|---|---|---|
| 741 | Th. Yr. 22004.6 | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| 742 | L't. Yr. 23054.8 | A | B | C | D | E | F | G | H |
| 743 | Total Production Material | | | | | | | | |
| 744 | Total Production Labor | | | | | | | | |
| 745 | | | | | | | | | |
| 746 | Boiler Maintenance | | | | | | | | |
| 747 | Gross Production Dept Maint. | 1.208 | | | | .00623 | | | |
| 748 | Credits from Other Departments | .006 | | | | .00003 | | | |
| 749 | Net Production Dep't Maint. | 1.202 | | | | .00620 | | | |

## SUMMARY PRODUCTION MAINTENANCE 12 MONTHS ENDING THIS MONTH

| | Maximum Hourly Send Out | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| 750 | Th. Yr. 123156 | Demand | Output | Total | Demand | Output | Total |
| 751 | L't. Yr. " | A | B | C | D | E | F |
| 752 | Total Production Material | 1241 10 | 2684 11 | 3925 21 | | | |
| 753 | Total Production Labor | 953 59 | 455 53 | 1409 12 | | | |
| 754 | | | | | | | |
| 755 | Boiler Maintenance | 800 93 | " | 800 93 | | | |
| 756 | Gross Production Dept Maint. | 2995 62 | 3139 64 | 6135 26 | | | |
| 757 | Credits from Other Departments | 2 34 | 2 32 | 4 66 | | | |
| 758 | Net Production Dep't Maint. | 2993 28 | 3137 32 | 6130 60 | | | |

## SUMMARY PRODUCTION MAINTENANCE PER UNIT 12 MONTHS ENDING THIS MONTH

| | M Cu. Ft. Output | Demand Expense Per M of Maximum Hourly Send Out | | | | Output Expense Per M of Output | | | |
|---|---|---|---|---|---|---|---|---|---|
| 759 | Th. Yr. 245474.3 | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| 760 | L't. Yr. 258204.0 | A | B | C | D | E | F | G | H |
| 761 | Total Production Material | | | | | | | | |
| 762 | Total Production Labor | | | | | | | | |
| 763 | | | | | | | | | |
| 764 | Boiler Maintenance | | | | | | | | |
| 765 | Gross Production Dept Maint. | 24.32 | | | | .1279 | | | |
| 766 | Credits from Other Departments | .02 | | | | .0001 | | | |
| 767 | Net Production Department | 24 30 | | | | .1278 | | | |

Form 549

1818

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 17

DISTRIBUTION DEPARTMENT | (MAINTENANCE) FOR DEC 1913
CUSTOMERS DEPARTMENT |

## DISTRIBUTION DEPARTMENT MAINTENANCE

| | | Amount This Month (Charged Entirely to Demand) | | 12 Months Ending This Month | |
|---|---|---|---|---|---|
| | | This Year | Last Year | This Year | Last Year |
| | | A | B | C | D |
| 767 | Maintenance of Mains Material 525 | 3 00 | | 192 71 | |
| 768 | Maintenance of Services Mat'l 526 | | | 49 50 | |
| 769 | Misc. Distr. Maintenance Mat'l 527 | | | 154 51 | |
| 770 | Maintenance of Mains Labor 528 | 96 54 | | 1047 02 | |
| 771 | Maintenance of Services Labor 529 | 6 24 | | 277 27 | |
| 772 | Misc. Distr. Maintenance Labor 530 | 46 03 | | 226 25 | |
| 773 | Tot. Distribution Dept Maint. 531 | 151 81 | | 1947 86 | |

## SUMMARY DISTRIBUTION DEPARTMENT MAINTENANCE

| | | | | | |
|---|---|---|---|---|---|
| 774 | Maintenance Material | 3 00 | | 398 72 | |
| 775 | Maintenance Labor | 148 81 | | 1550 54 | |
| 776 | | | | | |
| 777 | Total Distribution Dept Maint. | 151 81 | | 1947 86 | |

## SUMMARY DISTRIBUTION DEPARTMENT MAINTENANCE PER UNIT

| | Maximum Hourly Send Out | This Month Per M of Maximum Hourly Send Out | | | | 12 Months Ending This Month | | | |
|---|---|---|---|---|---|---|---|---|---|
| 778 | Th. Yr. 123156 | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| 779 | L't. Yr. 125384 | A | B | C | D | E | F | G | H |
| 780 | Maintenance Material | | | | | | | | |
| 781 | Maintenance Labor | | | | | | | | |
| 782 | | | | | | | | | |
| 783 | Total Distribution Dept Maint. | 1.233 | | | | 15.810 | | | |

## CUSTOMERS DEPARTMENT MAINTENANCE

| | Number of Customers | Amount This Month (Charged Entirely to Customers) | | 12 Months Ending This Month | |
|---|---|---|---|---|---|
| 784 | Th. Yr 8449 | This Year | Last Year | This Year | Last Year |
| 785 | L't. Yr. 7816 | A | B | C | D |
| 786 | Office | | | | |
| 787 | Repairs to Office Equip. Material 532 | 113 79 | | 646 76 | |
| 788 | Repairs to Office Equip. Labor 533 | 2 30 | | 31 00 | |
| 789 | Total Office Maintenance 534 | 116 09 | | 677 76 | |
| 790 | Shop | | | | |
| 791 | Meter Reprs and Testg Mat'l 535 | 63 73 | | 811 17 | |
| 792 | Service Governors Maint. Mat'l 536 | | | 24 85 | |
| 793 | Misc. Shop Repairs Material 537 | | | 12 90 | |
| 794 | Meter Repairs and Testing L. 538 | 230 85 | | 2683 32 | |
| 795 | Service Governors Maint. Labor 539 | | | 6 33 | |
| 796 | Misc. Shop Repairs Labor 540 | | | | |
| 797 | Total Shop Maintenance 541 | 294 58 | | 3558 57 | |
| 798 | Total Office & Shop Maint. 542 | 410 67 | | 4216 33 | |
| 799 | Municipal | | | | |
| 800 | Repairs to Municipal Equip. M. 543 | | | | |
| 801 | Repairs to Municipal Equip. L. 544 | | | | |
| 802 | Total Municipal Maint. 545 | | | | |
| 803 | Tot. Customers Dept Maint. 546 | 410 67 | | 4816 33 | |

## SUMMARY CUSTOMERS DEPARTMENT MAINTENANCE

| | | | | | |
|---|---|---|---|---|---|
| 804 | Total Office and Shop Material | | | | |
| 805 | Total Municipal Material | | | | |
| 806 | Total Office and Shop Labor | | | | |
| 807 | Total Municipal Labor | | | | |
| 808 | Total Customers Dept Maint. | | | | |

## SUMMARY CUSTOMERS DEPARTMENT MAINTENANCE PER UNIT

| | Number of Customers | Per Customer This Month | | | | 12 Months Ending This Month | | | |
|---|---|---|---|---|---|---|---|---|---|
| 809 | Th. Yr. 8449 | This Year | Last Year | Increase | Decrease | This Year | Last Year | Increase | Decrease |
| 810 | L't. Yr. 7816 | A | B | C | D | E | F | G | H |
| 811 | Total Office and Shop Material | | | | | | | | |
| 812 | Total Municipal Material | | | | | | | | |
| 813 | Total Office and Shop Labor | | | | | | | | |
| 814 | Total Municipal Labor | | | | | | | | |
| 815 | Total Customers Dept Maint. | .0486 | | | | .4990 | | | |

GAS REPORT

Form 541—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 18

DEC 1913

UTILITY EQUIPMENT (MAINTENANCE) UNCLASSIFIED EXPENSES } FOR UTILITY EQUIPMENT (MAINTENANCE) THIS MONTH

GAS REPORT

| | | This Year A | Last Year B |
|---|---|---|---|
| 816 | Barn and Equipment 547 | | |
| 817 | Wagon and Harness Repairs M. a | 36 13 | |
| 818 | Miscellaneous Repairs Material b | 70 | |
| 819 | | | |
| 820 | Maintenance Labor c | 29 28 | |
| 821 | | | |
| 822 | | | |
| 823 | | | |
| 824 | Garage and Equipment 548 | | |
| 825 | Electric Cars Material a | 38 52 | |
| 826 | Gasoline Cars Material b | * | |
| 827 | Motor Cycles Material c | 13 21 | |
| 828 | | | |
| 829 | | | |
| 830 | Maintenance Labor d | * | |
| 831 | | | |
| 832 | | | |
| 833 | | | |
| 834 | | | |
| 835 | | | |
| 836 | | | |
| 837 | Total Maintenance 549 | 117 84 | |

SUMMARY OF UTILITY EQUIPMENT (MAINTENANCE) 12 MONTHS ENDING THIS MONTH

| | | | |
|---|---|---|---|
| 838 | Maintenance Material | 760 64 | |
| 839 | | | |
| 840 | Maintenance Labor | 488 79 | |
| 841 | | | |
| 842 | | | |
| 843 | Total Maintenance | 1249 43 | |

UNCLASSIFIED EXPENSES

| | | This Month | | 12 Months Ending This Month | |
|---|---|---|---|---|---|
| | | This Year A | Last Year B | This Year C | Last Year D |
| 844 | Operation | | | | |
| 845 | Auditor's Adjustments 550A | 82 25 | | 806 63 | |
| 846 | | | | | |
| 847 | | | | | |
| 848 | | | | | |
| 849 | | | | | |
| 850 | | | | | |
| 851 | Maintenance | | | | |
| 852 | Condemned Meters | | | | |
| 853 | Condemned Mains and Services | | | | |
| 854 | Special Contingencies | | | | |
| 855 | House Repairs | | | 23 80 | |
| 856 | | | | | |
| 857 | | | | | |
| 858 | | | | | |
| 859 | | | | | |
| 860 | | | | | |
| 861 | | | | | |
| 862 | | | | | |
| 863 | | | | | |
| 864 | | | | | |
| 865 | | | | | |
| 866 | Total Unclassified Expense 550 | 82 25 | | 830 43 | |

1820

Form 542—12-10-12-5000

CLEARING ACCOUNTS FOR

# LINCOLN GAS & ELECTRIC LIGHT CO.

## DEC 1913

**G 19**

GAS REPORT

CLEARING ACCOUNTS

| | | | Total Expense | | Division of Expenses | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Account No. | Amount | Account No. | Amount |
| | | | A | | B | C | D | E |
| 867 | Barn Expense Operation | 551 | 157 | 62 | 465 | 15 76 | 603 | 15 76 |
| 868 | Supplies | a | 112 | 63 | 484A | 23 64 | 705D | 7 88 |
| 869 | Labor | b | 44 | 21 | 484B | 7 89 | | |
| 870 | Sundry Expense | c | | 78 | 507 | 15 76 | | |
| 871 | | | | | 509R2 | 63 05 | | |
| 872 | | | | | 602 | 7 88 | | |
| 873 | Garage Expense Operation | 552 | 24 | 30 | 483A | 17 01 | | |
| 874 | Supplies | a | 9 | 32 | 509E | 7 29 | | |
| 875 | Labor | b | 1 | 20 | | | | |
| 876 | Sundry Expense | c | 13 | 78 | | | | |
| 877 | | | | | | | | |
| 878 | | | | | | | | |
| 879 | Gas Used by the Company | 553 | 25 | 39 | 88 | 7 36 | | |
| 880 | 70900 cu.ft. | | | | 465 | 11 35 | | |
| 881 | | | | | 486 | 2 45 | | |
| 882 | | | | | 509E | 11 | | |
| 883 | | | | | 535 | 4 12 | | |
| 884 | | | | | | | | |
| 885 | | | | | | | | |
| 886 | | | | | | | | |
| 887 | | | | | | | | |
| 888 | | | | | | | | |
| 889 | Boiler Operation | 554 | 890 | 00 | 441 | 360 00 | | |
| 890 | | | | | 457 | 350 00 | | |
| 891 | | | | | 465 | 180 00 | | |
| 892 | | | | | | | | |
| 893 | | | | | | | | |
| 894 | | | | | | | | |
| 895 | Boiler Maintenance | 555 | 60 | 00 | 515 | 30 00 | | |
| 896 | | | | | 522 | 30 00 | | |
| 897 | | | | | | | | |
| 898 | | | | | | | | |
| 899 | | | | | | | | |
| 900 | | | | | | | | |

DETAILS OF CLEARING ACCOUNTS NO. 554 & 555

| | | | This Month | | 12 Months Ending This Month | |
|---|---|---|---|---|---|---|
| | | | This Year | Last Year | This Year | Last Year |
| | | | A | B | C | D |
| 901 | Boiler Operation | | | | | |
| 902 | Fuel — Tons @ | | | | | |
| 903 | Fuel — Tons @ | | | | | |
| 904 | Fuel — @ | | | | | |
| 905 | Fuel — @ | | | | | |
| 906 | Total Fuels Used | a | | | | |
| 907 | Boiler Water | b | | | | |
| 908 | Miscellaneous Supplies | c | | | | |
| 909 | Boiler Room Labor | d | | | | |
| 910 | | | | | | |
| 911 | Proportion of Boiler Operation | e | 890 00 | | 8346 94 | |
| 912 | Total Operation | | 890 00 | | 8346 94 | |
| 913 | Boiler Maintenance | | | | | |
| 914 | Boiler Repairs Material | a | | | | |
| 915 | Boiler Repairs Labor | b | | | | |
| 916 | | | | | | |
| 917 | Proportion of Boiler Maintenance | c | 60 00 | | 801 73 | |
| 918 | Total Maintenance | | 60 00 | | 801 73 | |

Form 543—12-10-12-5000

1821

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 20

METER AND STOCK STATEMENTS FOR DEC 1913

GAS REPORT

## METER STATEMENT

| | Owned First of Month | Bought During Month | Total | Condemned During Month | Owned End of Month | In Use | In Stock | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Serviceable | Unserviceable | Total |
| | A | B | C | D | E | F | G | H | K |
| 910 | 9125 | 1 | 9126 | | 9126 | 8759 | 367 | | 367 |
| 920 | | | | | | | | | |
| 921 | | | | | | | | | |

## COAL STOCK

| | | Bituminous Gas Coal | | | | Steam Coal | | |
|---|---|---|---|---|---|---|---|---|
| | | Tons | Initial Cost | Freight | Total Cost | Per Ton | Tons | Cost | Per Ton |
| | | A | B | C | D | E | F | G | H |
| 922 | On Hand First of Month | 1.06 | | | 8 20 | 7.64 | | | |
| 923 | Bought During Month | | | | | | | | |
| 924 | Total | 1.06 | | | 8 20 | 7.64 | | | |
| 925 | Used During the Month | 1.06 | | | 8 20 | 7.64 | | | |
| 926 | | | | | | | | | |
| 927 | | | | | | | | | |
| 928 | Stock Close of Month | 0.00 | | | | | | | |

## OIL STOCK

| | | Enricher | | | Pintsch | | |
|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gallon | Gallons | Cost | Per Gallon |
| | | A | B | C | D | E | F |
| 929 | On Hand First of Month | 30101 | 1273 10 | .0423 | | | |
| 930 | Bought During Month | 81244 | 3753 74 | .0467 | | | |
| 931 | Total | 111345 | 5026 84 | .0451 | | | |
| 932 | Used During the Month | 73425 | 3333 50 | .0454 | | | |
| 933 | | | | | | | |
| 934 | | | | | | | |
| 935 | Stock Close of Month | 37920 | 1693 34 | .0448 | | | |

## RESIDUAL STOCK

| | | Coke Made | | | Coke Purchased | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Tons | Cost | Per Ton | Tons | Initial Cost | Freight | Total Cost | Per Ton |
| | | A | B | C | D | E | F | G | H |
| 936 | On Hand First of Month | | | | 325.5 | 1490 29 | 880 66 | 2370 95 | 7.07 |
| 937 | Recd & Made Dur'g Mo. | | | | 443.7 | 2042 02 | 1198 02 | 3240 04 | 7.31 |
| 938 | Coke Supplies | | | | | | | | |
| 939 | Coke Labor | | | | | | | | |
| 940 | Coke Sundry Expense | | | | | | | | |
| 941 | Total | | | | 769.2 | 3532 31 | 2078 68 | 5610 99 | 7.31 |
| 942 | Used for Bench Fuel | | | | | | | | |
| 943 | Used for W Gas Making | | | | 343.0 | 1574 37 | 926 10 | 2500 47 | 7.30 |
| 944 | Used Elsewhere | | | | | | | | |
| 945 | | | | | | | | | |
| 946 | Sold | | | | 10.0 | 29 50 | 18 00 | 47 50 | 4.75 |
| 947 | | | | | | | | | |
| 948 | Stock Close of Month | | | | 416.2 | 1928 44 | 1134 58 | 3063 02 | 7.37 |

| | | Coal Gas Tar | | | Water Gas Tar | | | Ammonia | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Gallons | Cost | Per Gal. | Gallons | Cost | Per Gal. | Pounds | Cost | Per L. |
| | | A | B | C | D | E | F | G | H | K |
| 949 | On Hand First of Month | | | | 11500 | 916 70 | .0797 | | | |
| 950 | Made During Month | | | | 1900 | 181 26 | .0955 | | | |
| 951 | Supplies | | | | | 4 50 | | | | |
| 952 | Labor | | | | | 4 29 | | | | |
| 953 | Sundry Expense | | | | | 13 40 | | | | |
| 954 | Total | | | | 13400 | 1120 15 | .0836 | | | |
| 955 | Used During the Month | | | | | | | | | |
| 956 | | | | | | | | | | |
| 957 | Sold | | | | 785 | 95 00 | .1210 | | | |
| 958 | | | | | | | | | | |
| 959 | Stock Close of Month | | | | 12615 | 1025 15 | .0815 | | | |

Form 544—12-10-12-5000

RAY ROLL DATA FOR

# LINCOLN GAS & ELECTRIC LIGHT CO.

## DEC 1913

DETAILS THIS MONTH

**G 21**

GAS REPORT

| | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| | | No. of Employes | Ave. Monthly Wage | Total Wages | No. of Employes | Ave. Monthly Wage | Total Wages |
| | | A | B | C | D | E | F |
| 960 | **Production Department** | | | | | | |
| 961 | Stokers | | | | | | |
| 962 | Helpers | | | | | | |
| 963 | Water Gas Makers | 2 | 77 50 | 155 00 | | | |
| 964 | Water Gas Makers' Helpers | 2 | 69 75 | 81 38 | | | |
| 965 | Furnace Men | | | | | | |
| 966 | Coke Men | 1 | 54 25 | 119 98 | | | |
| 967 | Purifying Men | | | 10 55 | | | |
| 968 | Laborers | 4 | 59 34 | 170 97 | | | |
| 969 | Chemists | | | | | | |
| 970 | Clerks | 5 | 69 00 | 287 50 | | | |
| 971 | Foremen | 1 | 100 00 | 100 00 | | | |
| 972 | | | | | | | |
| 973 | All Others | 1 | 54 25 | 89 24 | | | |
| 974 | **Total Production Department** | 16 | 67 83 | 1014 62 | | | |
| 975 | **Distribution Department** | | | | | | |
| 976 | Laborers | 3 | 51 44 | 85 54 | | | |
| 977 | Clerks | | | | | | |
| 978 | Foremen | | | 17 24 | | | |
| 979 | | | | | | | |
| 980 | All Others | 4 | 59 56 | 232 48 | | | |
| 981 | **Total Distribution Dep't.** | 7 | 56 08 | 335 26 | | | |
| 982 | **Customers Office Department** | | | | | | |
| 983 | Bookkeepers | 6 | 67 50 | 360 26 | | | |
| 984 | Cashiers | 1 | 70 00 | 65 60 | | | |
| 985 | Collectors | 3 | 60 00 | 151 90 | | | |
| 986 | Application Clerks | 1 | 80 00 | 88 80 | | | |
| 987 | Meter Readers | 3 | 59 38 | 125 78 | | | |
| 988 | Department Heads | | | | | | |
| 989 | | | | | | | |
| 990 | All Others | 5 | 55 00 | 250 88 | | | |
| 991 | **Total Office Department** | 19 | 62 53 | 1043 22 | | | |
| 992 | **Customers Shop Department** | | | | | | |
| 993 | Fitters | | | | | | |
| 994 | Helpers | | | | | | |
| 995 | Meter Repairmen | 4 | 58 06 | 232 85 | | | |
| 996 | Trouble Men | 1 | 65 00 | 151 05 | | | |
| 997 | Clerks | | | 26 00 | | | |
| 998 | Foremen | 1 | 75 00 | 75 00 | | | |
| 999 | | | | | | | |
| 1000 | All Others | 6 | 54 75 | 186 44 | | | |
| 1001 | **Total Shop Department** | 12 | 58 40 | 671 34 | | | |
| 1002 | **Total Customers Department** | 31 | 58 68 | 1714 56 | | | |
| 1003 | **General Department** | | | | | | |
| 1004 | Executive Officers | | | | | | |
| 1005 | General Manager | 1 | 200 00 | 160 00 | | | |
| 1006 | Treasurer | 1 | 150 00 | 120 00 | | | |
| 1007 | Auditor | | | | | | |
| 1008 | Representatives | 6 | 60 00 | 325 60 | | | |
| 1009 | Other New Business Employes | 8 | 74 63 | 568 58 | | | |
| 1010 | Miscellaneous Clerical Employes | 5 | 78 00 | 309 16 | | | |
| 1011 | All Others | | | | | | |
| 1012 | **Total General Department** | 21 | 80 81 | 1483 34 | | | |
| 1013 | General Superintendents | | | | | | |
| 1014 | | | | | | | |
| 1015 | All Others | 2 | 66 50 | 75 79 | | | |
| 1016 | **Total Operation and Maint.** | 77 | 67 49 | 4623 57 | | | |

Form 545—12-10-12-5000

MISCELLANEOUS DATA FOR

# LINCOLN GAS & ELECTRIC LIGHT CO.

## DEC 1913

**G 22**

GAS REPORT

### PAY ROLL DATA

| | | This Year | | | Last Year | | |
|---|---|---|---|---|---|---|---|
| | | No. of Employes | Ave. Monthly Wage | Total Wages | No. of Employes | Ave. Monthly Wage | Total Wages |
| | | A | B | C | D | E | F |
| 1017 | Coke Stock Men | | | 4 29 | | | |
| 1018 | Other Residual Stock Men | | | | | | |
| 1019 | Construction | | | | | | |
| 1020 | Street Mains | | | 67 51 | | | |
| 1021 | " Services | 5 | 60 10 | 167 85 | | | |
| 1022 | Distri.Holder | 2 | 69 75 | 118 33 | | | |
| 1023 | | | | | | | |
| 1024 | | | | | | | |
| 1025 | Total Construction & Stock | 7 | 62 71 | 357 98 | | | |
| 1026 | Total Oper. & Maint. (Line 1016) | 77 | 67 49 | 4623 57 | | | |
| 1027 | Total Monthly Pay Roll | 84 | 67 09 | 4981 55 | | | |

### PLANT AND OPERATING DATA

| | | Maximum Capacity | | Maximum Make | % Make to | Maximum Make | % Make to | Least |
|---|---|---|---|---|---|---|---|---|
| | | 24 Hours | 1 Hour | 24 Hours This Month | 24 Hr. Cap. | 24 Hours to Date | 24 Hr. Cap. | Reserve Capacity |
| | | A | B | C | D | E | F | G |
| 1028 | Coal Gas Benches | | | | | | | |
| 1029 | Water Gas Machines | 2400000 | 100000 | 823244 | 34.3 | 866269 | 36.1 | 1533731 |
| 1030 | Total | 2400000 | 100000 | 823244 | 34.3 | 866269 | 36.1 | 1533731 |

| | | In Use | In Reserve | Being Built or Overhauled | Total Number |
|---|---|---|---|---|---|
| | | A | B | C | D |
| 1031 | Benches of 6 | | | | |
| 1032 | Benches of 9 | | | | |
| 1033 | Benches of 12 | | | | |
| 1034 | Total Number of Retorts | | | | |

| | | | Prior to this Date | | This Month | |
|---|---|---|---|---|---|---|
| | | | This Year | Last Year | This Year | Last Year |
| | | | A | B | C | D |
| 1035 | Max. Makes | Coal Gas | | | | |
| 1036 | | Water Gas | 51100 | 55700 | 43500 | 51900 |
| 1037 | | Purchased Gas | | | | |
| 1038 | | Mixed Gas | | | | |
| 1039 | Maximum Send-Out in 1 Hour | | 123156 | 139358 | 123156 | 125384 |
| 1040 | Maximum Send-Out in 24 Hours | | 827268 | 890038 | 816578 | 834096 |

| | | | | | |
|---|---|---|---|---|---|
| 1041 | Storage Capacity | 850000 Cu. Ft. | % of Storage to 24 Hour Capacity | 35.4 | |
| 1042 | % of Storage to Maximum Send-Out in 1 Hour | 690.2 | % of Storage to Maximum Send-Out in 24 Hours | 104.1 | |
| 1043 | Purifying Capacity in Cu. Ft. of Material | 5760 | Cross Section in Sq. Ft. Basis Single Flow Boxes | 480 | |

### GAS MADE M CUBIC FEET

| | | This Month | | 12 Months Ending This Month | |
|---|---|---|---|---|---|
| | | This Year | Last Year | This Year | Last Year |
| | | A | B | C | D |
| 1044 | Coal Gas | | | | |
| 1045 | Water Gas | 22017.2 | 23055.3 | 245211.9 | 258205.6 |
| 1046 | Purchased Gas | | | | |
| 1047 | Mixed Gas | | | | |

### DISTRIBUTION LOSS DATA THIS MONTH

| | | This Year | | | | Last Year | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | M Cu. Ft. | Per Cent. | Rate | Cost | M Cu. Ft. | Per Cent. | Rate | Cost |
| | | A | B | C | D | E | F | G | H |
| 1048 | Send Out | 22004.6 | 100 | 3663 | 8057 36 | 23054.8 | 100 | 3359 | 7743 28 |
| 1049 | Sales | 20214.9 | 91.9 | 3663 | 7401 85 | 21099.6 | 91.5 | 3359 | 7086 63 |
| 1050 | Used by the Company | 70.9 | 0.3 | 3663 | 25 97 | 69.2 | 0.3 | 3359 | 23 24 |
| 1051 | Lost and Unaccounted For | 1718.8 | 7.8 | 3663 | 629 54 | 1886.0 | 8.2 | 3359 | 633 41 |

### DISTRIBUTION LOSS DATA 12 MONTHS ENDING THIS MONTH

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1052 | Send-Out | 245474.3 | 100 | 3738 | 91742 95 | 258204.0 | 100 | | |
| 1053 | Sales | 226978.7 | 92.4 | 3738 | 84830 04 | 234386.0 | 90.8 | | |
| 1054 | Used by the Company | 370.7 | 0.2 | 3738 | 138 55 | 569.1 | 0.2 | | |
| 1055 | Lost and Unaccounted For | 18124.9 | 7.4 | 3738 | 6774 36 | 23248.9 | 9.0 | | |

Form 546—12-10-12-2000

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 23

CONSTRUCTION COSTS OF MAINS FOR DEC 1913

GAS REPORT

## STREET MAINS (FEET)

| | Size | In Use First of Year A | Laid This Month B | Prev. Reported This Year C | Total This Year D | Total To Date E | Abandoned During Month F | Taken up During Month G | Total Previous Deductions H | Tot. Deduct'ns To Date K | In Use This Date L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1056 | 2 | 357087 | 424 | 22069 | 22493 | 379560 | | | 1131 | | 378429 |
| 1057 | 4 | 117377 | | 4791 | 4791 | 122168 | | | | | 122168 |
| 1058 | 6 | 16522 | | | | 16522 | | | | | 16522 |
| 1059 | 8 | 4822 | | | | 4822 | | | | | 4822 |
| 1060 | 10 | 9100 | | | | 9100 | | | | | 9100 |
| 1061 | 12 | 3950 | | | | 3950 | | | | | 3950 |
| 1062 | 16 | 1400 | | | | 1400 | | | | | 1400 |
| 1063 | 20 | 1300 | | | | 1300 | | | | | 1300 |
| 1064 | | | | | | | | | | | |
| 1065 | | | | | | | | | | | |
| 1066 | | | | | | | | | | | |
| 1067 | | | | | | | | | | | |
| 1068 | | | | | | | | | | | |
| 1069 | | | | | | | | | | | |
| 1070 | Total Ft. | 511538 | 424 | 26860 | 27284 | 538822 | | | 1131 | | 537691 |
| 1071 | Total Mi. | 96.88 | .08 | 5.09 | 5.17 | 102.05 | | | 0.21 | | 101.84 |
| 1072 | 3" Basis | 95.24 | .05 | 4.00 | 4.05 | 99.89 | | | 0.14 | | 99.15 |

## BOOSTER MAINS

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1073 | | | | | | | | | | | |
| 1074 | | | | | | | | | | | |
| 1075 | | | | | | | | | | | |
| 1076 | | | | | | | | | | | |
| 1077 | | | | | | | | | | | |

## PUMPING MAINS

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1078 | | | | | | | | | | | |
| 1079 | | | | | | | | | | | |
| 1080 | | | | | | | | | | | |
| 1081 | | | | | | | | | | | |
| 1082 | | | | | | | | | | | |

## COST OF LOW PRESSURE STREET MAINS

| | | Laid This Month | | | | | | | | | Laid This Year | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount | | | | | | Amount Per Ft. | | | Amount | | | | | | Amount Per Ft. | | |
| | | Material | | Labor | | Total | | Material | Labor | Total | Material | | Labor | | Total | | Material | Labor | Total |
| | | A | | B | | C | | D | E | F | G | | H | | K | | L | M | N |
| 1083 | 2" | 44 | 76 | 53 | 00 | 97 | 76 | .105 | .125 | .230 | 231323 | | 235800 | | 4671 | 23 | .103 | .105 | .208 |
| 1084 | | | | | | | | | | | | | | | | | | | |
| 1085 | 4" | | | | | | | | | | 153543 | | 87980 | | 2415 | 23 | .320 | .180 | .504 |
| 1086 | | | | | | | | | | | | | | | | | | | |
| 1087 | | | | | | | | | | | | | | | | | | | |
| 1088 | | | | | | | | | | | | | | | | | | | |
| 1089 | | | | | | | | | | | | | | | | | | | |

## COST OF HIGH PRESSURE STREET MAINS

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1090 | | | | | | | | | | | | | | | | | | | |
| 1091 | | | | | | | | | | | | | | | | | | | |
| 1092 | | | | | | | | | | | | | | | | | | | |
| 1093 | | | | | | | | | | | | | | | | | | | |

## COST AND MILEAGE OF MAINS LAID

| | | Cost of Mains Laid | | | | Total Mileage In Use This Date |
|---|---|---|---|---|---|---|
| | | This Month A | | This Year to Date B | | C |
| 1094 | Low Pressure Mains | 97 | 76 | 7086 | 46 | 101.84 |
| 1095 | High Pressure Mains | | | | | |
| 1096 | Booster Mains | | | | | |
| 1097 | Pumping Mains | | | | | |
| 1098 | Total | 97 | 76 | 7086 | 46 | 101.84 |
| 1099 | Deduct Value of Mains Taken Up | | | | | 3" Basis 99.15 |
| 1100 | Net Cost of Mains | 97 | 76 | 7086 | 46 | |

Form 847—12-10-12-5000

LINCOLN GAS & ELECTRIC LIGHT CO.

# G 24

SERVICE, METER & APPLIANCE DATA FOR DEC 1913

## SERVICE PIPES

| | | Laid This Month (A) | Previously Reported This Year (B) | Total This Year (C) | In Use First of Year (D) | Total (E) | Discontinued This Year (F) | In Use This Date (G) |
|---|---|---|---|---|---|---|---|---|
| 1101 | Low Pressure: Main to Meter (Old Main) | 12 | 302 | 314 | 6322 | 6636 | 3 | 6633 |
| 1102 | Main to Meter (New Main) | 1 | 148 | 149 | 1789 | 1938 | 0 | 1938 |
| 1103 | Curb to Meter (Extension) | 4 | 45 | 49 | 428 | 477 | 0 | 477 |
| 1104 | Total Complete Services | 17 | 495 | 512 | 8539 | 9051 | 3 | 9048 |
| 1105 | Main to Curb (Account Paving) | 0 | 273 | 273 | 447 | 720 | 49 | 671 |
| 1106 | Total Number of Services | 17 | 768 | 785 | 8986 | 9771 | 52 | 9719 |
| 1107 | High Pressure: Main to Meter (Old Main) | | | | | | | |
| 1108 | Main to Meter (New Main) | | | | | | | |
| 1109 | Curb to Meter (Extension) | | | | | | | |
| 1110 | Total Complete Services | | | | | | | |
| 1111 | Main to Curb (Account Paving) | | | | | | | |
| 1112 | Total Number of Services | | | | | | | |

## COST OF SERVICES

| | | Gross Cost (A) | Charged Customers (B) | Net Cost (C) | Gross Cost Per Service (D) | Gross Cost Per Ft. (E) | Net Cost Per Service (F) | Net Cost Per Ft. (G) |
|---|---|---|---|---|---|---|---|---|
| 1113 | Material | 76 79 | 0 | | 4.52 | .076 | | |
| 1114 | Labor | 118 20 | 0 | | 6.95 | .117 | | |
| 1115 | Total This Month | 194 99 | 191 00 | 3 99 | 11.41 | .193 | .232 | .0040 |
| 1116 | Previously Reported This Year | 5942 60 | 5953 02 | R 10 42 | 7.74 | .160 | R.014 | R.0003 |
| 1117 | Total This Year to Date | 6137 59 | 6144 02 | R 6 43 | 7.82 | .161 | R.008 | R.0002 |
| 1118 | Total Last Year | 5501 74 | 5797 86 | R296 12 | 9.12 | .162 | R.493 | R.0088 |

## PIPE USED FOR SERVICES

| | | This Month (A) | This Year to Date (B) | Total Last Year (C) |
|---|---|---|---|---|
| 1119 | Pipe Used for Complete Services | 1008 | 30948 | 28598 |
| 1120 | Pipe Used for Service Extensions | 0 | 2455 | 2484 |
| 1121 | Pipe Used for Total Compl. Services | 1008 | 33403 | 31082 |
| 1122 | Pipe Used For Services to Curb | 0 | 4815 | 2801 |
| 1123 | Total Pipe Used | 1008 | 38218 | 33883 |

## METER AND APPLIANCE DATA

| | | | First of Month (A) | Connected During Month (B) | Total (C) | Discontinued During Month (D) | Connected Close of Month (E) | Connected First of Year (F) | Increase (G) | Decrease (H) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1124 | Number of Customers | | 8498 | 244 | 8742 | 293 | 8449 | 7816 | 633 | 0 |
| 1125 | Number of Meters in Use | | 8664 | 307 | 8971 | 251 | 8720 | 8269 | 451 | 0 |
| 1126 | Domestic Fuel Appliances | Ranges | 9161 | 29 | 9190 | 38 | 9152 | 9404 | 0 | 252 |
| 1127 | | Hot Plates | 2432 | 19 | 2451 | 0 | 2451 | 2161 | 290 | 0 |
| 1128 | | Water Heaters | 1994 | 3 | 1997 | 0 | 1997 | 1648 | 349 | 0 |
| 1129 | | Heaters and Grates | 470 | 3 | 473 | 0 | 473 | 411 | 62 | 0 |
| 1130 | | | | | | | | | | |
| 1131 | | Miscellaneous | 589 | 0 | 589 | 0 | 589 | 584 | 5 | 0 |
| 1132 | | Total | 14646 | 54 | 14700 | 38 | 14662 | 14208 | 454 | 0 |
| 1133 | Industrial Appliances | | 53 | 2 | 55 | 0 | 55 | 0 | 55 | 0 |
| 1134 | Gas Engines | Number | | | | | | | | |
| 1135 | | Horse Power | | | | | | | | |

## MISCELLANEOUS PER UNIT DATA THIS MONTH

| | | Per Mile of Main: This Year (A) | Per Mile of Main: Last Year (B) | Per 1,000 Population: This Year (C) | Per 1,000 Population: Last Year (D) |
|---|---|---|---|---|---|
| 1136 | Number of Service Pipes | 95.40 | 92.76 | 183.0 | 172.2 |
| 1137 | Number of Customers | 82.97 | 80.68 | 158.2 | 149.7 |
| 1138 | Number of Meters in Use | 85.63 | 85.36 | 163.3 | 158.4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1139 | Number of Services Handled | 1 | Service Maintenance Per Service Handled | 6.24 | Per Complete Service in Use | .00064 | |
| 1140 | No. of Meters Passing thru Shop | 494 | Meter Maintenance Per Meter Handled | .5964 | Per Meter in Use | .0338 | |
| 1141 | Leakage Per Mile of Actual Main | This Year 16880 | Cu. Ft. | Last Year 19464 | Cu. Ft. | | |
| 1142 | Leakage Per Mile of Main on a 3" Basis | This Year 17340 | Cu. Ft. | Last Year 13687 | Cu. Ft. | | |

Form 345—12-10-13-5000

1826

H. D. L.

| | Reprod Cost | Present Value |
|---|---|---|
| | $ | $ |
| Organ. & Exp. | 33000.00 | 33000,00 |
| Wkg Cap. | 72038,00 | 72038,00 |
| Real Estate | 19320,00 | 19320.00 |
| Buildings | 41312.00 | 30967.00 |
| Works Equipment | 253298,00 | 196759,00 |
| Distr. System | 614493,00 | 513829,00 |
| Going Value | 225000.00 | 225000.00 |
| | 1,258 461.00 | 1,090 913.00 |

1827

EXHIBIT 426

**DO NOT FOLD OR ROLL.**

THIS RETURN IS DUE NOW. PER DIEM PENALTY AFTER SEPT. 9.

# RETURN

OF THE

_____

COMPANY

TO THE

# BOARD OF

# GAS AND ELECTRIC LIGHT COMMISSIONERS

OF MASSACHUSETTS.

FOR THE YEAR ENDING JUNE 30,

# 1908.

1828

# Commonwealth of Massachusetts.

OFFICE OF THE

BOARD OF GAS AND ELECTRIC LIGHT COMMISSIONERS,

Room 145, State House.

BOSTON, June 30, 1908.

*To the Presidents and Directors of the Several Gas and Electric Light Companies in the Commonwealth:*

These blanks for the Annual Returns are sent in duplicate, one to be filled out, sworn to and returned to this Board on or before ***September 9, 1908.*** On the other blank a copy of the return should be made, and retained by the Company for future reference. The Returns are for the year ending June 30, 1908.

The Returns should be made in accordance with the General Instructions regarding books and accounts, and special attention should be given to Expenses, Income, Profit and Loss and Balance Sheet, WHICH MUST BE AN EXACT TRANSCRIPT FROM THE BOOKS OF THE COMPANY at the close of business June 30, 1908.

***Read carefully the various explanatory foot-notes and General Instructions.***

When, from any cause, it is not possible to answer any particular question, the spaced designed for the answer should be filled with a dash (——), to indicate that the question has not been overlooked.

Manufacturing and other companies engaged in the manufacture of gas or electricity for sale, in connection with their other business, will state the value of their gas or electric plant and answer all other questions fully.

Although special questions (see pages 22 and 23) have been arranged for companies making water, oil, or acetylene gas, those companies are, nevertheless, expected to answer as many of the other questions as the nature of the business will admit.

Great care should be taken by companies doing but one kind of lighting to answer all the questions applicable to their business.

***Special attention is called to the legislation in regard to the Returns, printed as section 32 of chapter 121 of the Revised Laws, and chapter 406, Acts of 1903, on the third page of the cover.***

Any inquiries, or other communications in relation to the Returns, should be addressed to this office.

By order of the Board of Gas and Electric Light Commissioners,

ROBERT G. TOBEY, *Clerk.*

# RETURN

OF THE

.....

# COMPANY

TO THE

# BOARD OF

# GAS AND ELECTRIC LIGHT COMMISSIONERS

OF MASSACHUSETTS.

FOR THE YEAR ENDING JUNE 30,

# 1908.

1830

Please give full corporate title of Company,

Date of organization, if since June 30, 1907,

Date when Company began to sell Gas or Electric light, if since June 30, 1907,

Date or dates during the year of the return when capital was paid in,

Location of principal business office,

Names of the cities or towns supplied with Gas by the Company, with number of consumers' meters in each place,

Names of the cities or towns supplied with Electricity by the Company, with the number of customers (*not including the city or town*) in each place,

## LIST OF SALARIED OFFICERS.

| NAME. | OFFICIAL POSITION. | ANNUAL SALARY. |
|---|---|---|
| | | |

If organized since June 30, 1907, give the date when, and amount of capital paid in:

CAPITAL.

1. Capital authorized by charter, . . . . . $
2. Capital authorized by vote of Company, . . . . . .
3. Capital paid in prior to June 5, 1894:

   ..... shares, par value, $ ..... $
4. Capital approved by Board $ ....., date of same, .....

If additional stock has been issued since June 30, 1907, give the date, amount and market value thereof as approved by the Board, the date and terms upon which such issue was offered to stockholders, the date or dates on which the same was paid in, and if the whole or any part of the issue was sold at auction, the date or dates of such sale or sales, the number of shares so sold and the amounts realized therefrom:

1832

## SCHEDULE A. DEBTS, COST OF PLANT, JUNE 30, 1908.

Whole number of stockholders, . . . . . .

Number of stockholders resident in Massachusetts . . . . . .

Amount of stock held in Massachusetts, . . . . . shares.

**DEBITS.**

5. Bonds or notes issued,* viz.:—

| DATE. | WHEN DUE. | HOW SECURED. | RATE OF INTEREST. | AMOUNT. |
|---|---|---|---|---|
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |
| | | | | $ |

6. Total amount of bonds and notes, . . . . . $

7. Other permanent debts, if any,* . . . . . $

8 Capital paid in (as per items 3 and 4), . . . . . $

9 Total liability for capital and loans, . . . . . $

*This should not include deposits, unpaid interest, dividends, amounts due or notes given for coal or other current supplies.

SCHEDULE A — *continued.*

| | |
|---|---|
| **COST OF PLANT.** (As the accounts stand on the books of the Company at the close of business June 30, 1908.) | |
| GAS WORKS: | |
| 10. Cost of real estate, | $ |
| 11. Cost of machinery, apparatus and other appliances used in the manufacture of gas, | |
| 12. Cost of street mains, | |
| 13. Cost of services, | |
| 14. Cost of meters, | |
| 15. Total cost of gas plant as per books of the Company June 30, 1908, | |
| ELECTRIC WORKS: | |
| 16. Cost of real estate, | |
| 17. Cost of steam plant, | |
| 18. Cost of electric plant, | |
| 19. Cost of overhead lines, | |
| 20. Cost of underground lines, | |
| 21. Cost of transformers, | |
| 22. Cost of meters, | |
| 23. Cost of arc lamps, | |
| 24. Total cost of electric light plant as per books of the Company June 30, 1908, | |
| OTHER WORKS: | |
| 25. Cost and description of other permanent works, if any, | |
| | |
| 26. Total cost of all plant as per books of the Company June 30, 1908, | |
| 27. Amount (if any) charged to construction accounts during the year, | |
| **COMPARISON OF VALUES.** | |
| 28. Value of Gas works real estate, as assessed in the city or town where located, | $ |
| 29. " Electric works real estate, " " " " | |
| 30. " other Gas works property, " " " " | |
| 31. " other Electric works property, as assessed in the city or town where located, | |
| 32. " any other property, as assessed in the city or town where located, | |
| 33. Total value of plant, as assessed by local assessors May, 1908, | |
| Total cost of plant (as per item 26), | |
| 34. Excess of _____ * value, over _____ * value, | |
| Total cost of plant (as per item 26), | |
| Amount of capital and loans (as per item 9), | |
| 35. Cost of plant _____ † than capital and loans, | |

* This blank to be filled with the word "assessed" or "cost," as required.
† This blank to be filled with the word "more" or "less," as required.

# GAS.

## SCHEDULE B. STATEMENT OF INCOME AND EXPENSES.

| EXPENSES. | Dolls. | Cts. | Dolls. | Cts. |
|---|---|---|---|---|
| **For Manufacture of Gas:** | | | | |
| 1. Coals (other than those used for enriching), including all expenses of depositing at works, { Coal gas, . / Water gas, . | | | | |
| 2. Enrichers, { Coal, . / Oil, . | | | | |
| 3. Purifying materials, | | | | |
| 4. Water, | | | | |
| 5. Wages at works, | | | | |
| 6. Repairs and maintenance of works, | | | | |
| 7. Renewal of plant (including retorts), | | | | |
| 8. Apparatus and machinery (station tools and appliances), | | | | |
| **For Purchase of Gas:** | | | | |
| 9. Gas bought of ..... Company, | | | | |
| **For Distribution of Gas:** | | | | |
| 10. Wages of meter takers, clerical labor in this department, and salary or commission of collectors, | | | | |
| 11. Repairs, renewals and maintenance of mains and service pipes, | | | | |
| 12. Distribution tools and appliances, | | | | |
| 13. Repairs and renewals of meters, { Repairs, . / Renewals, . | | | | |
| 14. Gas stove fixing, repairs and renewals, | | | | |
| **For Public Lamps:** | | | | |
| 15. Lighting and repairing (gas lamps only), | | | | |
| 16. " " " and material used for other lamps, | | | | |
| **For Office Expenses and Management:** | | | | |
| 17. Directors' allowances, | | | | |
| 18. Salaries of officers, | | | | |
| 19. General salaries, | | | | |
| 20. Rent of offices, not owned by Company, | | | | |
| 21. General office expenses, | | | | |
| **For Miscellaneous Expenses:** | | | | |
| 22. Taxes. Town or city, $ ..... | | | | |
| Corporation, ..... | | | | |
| State commission, ..... | | | | |
| 23. Insurance { Fire, $ ..... / Employer's liability, ..... | | | | |
| 24. Law expenses, | | | | |
| 25. Claims, | | | | |
| 26. Bad debts,* | | | | |
| 27. Incidental expenses, viz.:† | | | | |
| *a* ..... | | | | |
| *b* ..... | | | | |
| 28. Total expenses, | | | | |
| 29. Balance to Profit and Loss, | | | | |
| Total Debits, | | | | |
| Ratio of operating expenses to gross earnings, | | | | |

* Only those included in Income statement, page 7.

† To include only such items of expenses attending the manufacture and sale of Gas as are not already given.

1835

FOR THE YEAR ENDING JUNE 30, 1908. **GAS.**

## INCOME.

| | | Dolls. | Cts. | Dolls. | Cts. |
|---|---|---|---|---|---|
| **From Sale of Gas:** | | | | | |
| 1. | Supplied by meter, — | | | | |
| | ..... feet @ $ ..... per M feet, | | | | |
| | ..... " $ ..... " " | | | | |
| | ..... " $ ..... " " | | | | |
| | ..... " $ ..... " " | | | | |
| | ..... " $ ..... " " | | | | |
| | ..... " $ ..... " " | | | | |
| | Total, | | | | |
| | Less discounts for prompt payments, | | | | |
| | Plus prompt payment discounts lost, | | | | |
| 2. | Net Total from Sales by Meter, | | | | |
| 3. | For public lamps, estimated ..... feet @ ..... per M feet, | | | | |
| 4. | Under contract, estimated ..... feet @ ..... per M feet, | | | | |
| 5. | Sold to other gas companies: — | | | | |
| | ..... Light Co., ..... feet @ ..... per M, | | | | |
| | ..... " ..... " ..... " | | | | |
| | ..... " ..... " ..... " | | | | |
| | ..... " ..... " ..... " | | | | |
| | Total, | | | | |
| 6. | Total from Sale of Gas, | | | | |
| **From Residual Products:** | | | | | |
| 7. | Coke { ..... tons to Electric department, ..... tons sold elsewhere, | | | | |
| 8. | Tar { ..... gallons to Electric department. ..... gallons sold elsewhere, | | | | |
| 9. | Ammoniacal liquor, | | | | |
| 10. | Totals from Residuals, | | | | |
| **From Other Sources, viz.: —** | | | | | |
| 11. | Rent of meters, | | | | |
| 12. | " gas stoves and engines, | | | | |
| 13. | " gas lamps, | | | | |
| 14. | Public lamps other than gas lamps, | | | | |
| 15 * | ..... | | | | |
| | Total Income, | | | | |
| | Balance to Profit and Loss (if deficit), | | | | |
| | Total Credits, | | | | |

* Such items of income arising only from the manufacture and sale of Gas as are not included above.

# ELECTRIC.

## SCHEDULE BB. STATEMENT OF INCOME AND EXPENSES.

| EXPENSES. | Dolls. | Cts. | Dolls. | Cts. |
|---|---|---|---|---|
| **For Manufacture:** | | | | |
| 1. Coal or other fuel, including all expenses of depositing at works, | | | | |
| 2. Rentals for, { Real estate, / Water power, | | | | |
| 3 Oil and waste, | | | | |
| 4. Water, | | | | |
| 5. Wages at station, | | | | |
| 6. Station repairs, | | | | |
| 7. Steam plant repairs, | | | | |
| 8. Electric plant repairs, | | | | |
| 9. Apparatus and machinery (station tools and appliances), | | | | |
| **For Purchase of Electricity:** | | | | |
| 10. Current bought of ..... Electric Company, quantity ..... K.W. ..... c per K.W., | | | | |
| **For Distribution:** | | | | |
| 11. Wages for care of lights and meters, clerical labor in this department, and salary or commission of collectors, | | | | |
| 12. Repairs and renewals of lines, | | | | |
| 13. Repairs and renewals of meters, lamps and motors, | | | | |
| 14. Distribution tools and appliances, | | | | |
| 15. Carbons, | | | | |
| 16. Incandescent lamps, | | | | |
| **For Office Expenses and Management:** | | | | |
| 17. Directors' allowances | | | | |
| 18. Salaries of officers, | | | | |
| 19. General salaries, | | | | |
| 20. Rent of offices, if separate from plant, | | | | |
| 21. General office expenses, | | | | |
| **For Miscellaneous Expenses:** | | | | |
| 22. Taxes. Town or city $ ..... | | | | |
| Corporation, ..... | | | | |
| State commission, ..... | | | | |
| 23. Insurance { Fire, $ ..... / Employer's liability, ..... | | | | |
| 24. Law expenses, | | | | |
| 25. Claims, | | | | |
| 26. Bad debts,* | | | | |
| 27. Incidental expenses, viz.:† | | | | |
| 28. Total expenses, | | | | |
| 29. Balance to Profit and Loss, | | | | |
| Total Debits, | | | | |
| Ratio of operating expenses to gross earnings, | | | | |

* Only those included in income statement, page 9.

† To include only such items of expenses attending the manufacture and sale of Electricity as are not already given.

FOR THE YEAR ENDING JUNE 30, 1908. **ELECTRIC.**

| | Dolls. | Cts. | Dolls. | Cts. |
|---|---|---|---|---|
| **INCOME.** | | | | |
| 1. From Commercial Arc Lights by contract, . . . | | | | |
| Less discounts or rebates allowed, . . . | | | | |
| 2. " Commercial Incandescent lights by contract, . | | | | |
| Less discounts or rebates allowed, . . . | | | | |
| 3. " Commercial Arc and Incandescent lights by meter, . | | | | |
| Less discounts or rebates allowed, . . . | | | | |
| 4. " Public Street Arc Lights, . . . | | | | |
| Less discounts or rebates allowed, . . . | | | | |
| 5. " Public Street Incandescent Lights, . . . | | | | |
| Less discounts or rebates allowed, . . . | | | | |
| 6. " Electric Power, . . . { For Railways, / Other uses, | | | | |
| Total Electric Power, . . . . . | | | | |
| Less discounts or rebates allowed, . . | | | | |
| TOTAL, . . . . . | | | | |
| 7. Amount of current sold to other electric light companies: | | | | |
| ..... El'tric L'g't Co., ..... kilo. hrs. @ .... c. per K. W., | | | | |
| ..... " " ..... " " .... " " | | | | |
| TOTAL NET FROM LIGHT AND POWER, . . | | | | |
| FROM OTHER SOURCES, VIZ.: — | | | | |
| 8. Rent of fixtures, . . . . . | | | | |
| 9. Rent of meters, . . . . . | | | | |
| 10. Steam heating, . . . . . | | | | |
| 11.* ..... | | | | |
| TOTAL CREDITS, . . . . . | | | | |
| Balance to Profit and Loss (if deficit), . . . . | | | | |
| TOTAL, . . . . . | | | | |

* Such items of income arising only from the electric light and power business as are not included above.

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## SCHEDULE C. PROFIT AND LOSS ACCOUNT.

| DEBIT. | Dolls. | Cts. | Dolls. | Cts. |
|---|---|---|---|---|
| For Balance from last account (if any), June 30, 1907, | | | | |
| " Interest paid and accrued to June 30, 1908, on:— Bonds, | | | | |
| " Interest paid and accrued to June 30, 1908, on:— Notes, | | | | |
| " Interest paid and accrued to June 30, 1908, on:— Loans, | | | | |
| " Interest paid and accrued to June 30, 1908, on:— Deposits, | | | | |
| " Dividends declared on stock, viz.:— | | | | |
| ..... per cent. due..... | | | | |
| ..... per cent. due..... | | | | |
| ..... per cent. due..... | | | | |
| ..... per cent. due..... | | | | |
| For Depreciation:— | | | | |
| Gas plant — Buildings. | | | | |
| Gas plant — Machinery and other plant at works, | | | | |
| Gas plant — Mains, | | | | |
| Gas plant — Services, | | | | |
| Gas plant — Meters (Gas), | | | | |
| Electric plant — Buildings, | | | | |
| Electric plant — Steam Plant, | | | | |
| Electric plant — Electric Plant, | | | | |
| Electric plant — Street lines, | | | | |
| Electric plant — Transformers, | | | | |
| Electric plant — Meters (Electric), | | | | |
| Electric plant — Arc lamps, | | | | |
| For other items, giving particulars, viz.:— | | | | |
| For Amount carried to reserve fund, | | | | |
| " " " " depreciation fund, | | | | |
| " Total amount of debit, | | | | |
| " Balance (if surplus), | | | | |
| TOTAL DEBIT, | | | | |

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FOR THE YEAR ENDING JUNE 30, 1908.

| CREDIT. | Dolls. | Cts. | Dolls. | Cts. |
|---|---|---|---|---|
| By Balance from last account (if any), June 30, 1907, | | | | |
| " " of income as per item 29, Schedule B, Gas business, | | | | |
| " " " " " 29, " BB, Electric business, | | | | |
| " Interest received on loans or deposits, | | | | |
| " Rents. | | | | |
| " Other items, giving particulars, viz.:— | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Total amount at credit, | | | | |
| By Balance (if deficit), | | | | |
| TOTAL CREDITS, | | | | |

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## SCHEDULE D. RESERVED FUND ACCOUNT.

**CREDIT.**

| | | |
|---|---|---|
| 1. | By Balance of account June 30, 1907, | $ |
| 2. | By Income during the year from amount invested, | |
| 3. | By Amount transferred from profit and loss account, | |
| | | $ |

**DEBIT.**

| | | |
|---|---|---|
| 4. | For * | $ |
| 5. | Balance, June 30, 1908, | |
| | | $ |
| 6. | How is fund invested ? | |

* Any sums charged to this account during the year ending June 30, 1908, stating the purpose for which the same were used.

## SCHEDULE E. DEPRECIATION FUND ACCOUNT.

**CREDIT.**

By Balance of account June 30, 1907, . . . . . $

By Amount transferred from Profit and Loss Account, . . . . . .

$

**DEBIT.**

For* $

For Balance June 30, 1908, . . . . . .

$

How is fund invested ?

* Any sums charged to this account during the year ending June 30, 1908, stating purpose for which used.

## SCHEDULE F. BALANCE SHEET.

| From Return of 1907. | ASSETS. | |
|---|---|---|
| $ | Real estate (land and buildings) (Gas), | $ |
| | Machinery and manufacturing appliances (Gas), | |
| | Street mains (Gas), | |
| | Services (Gas), | |
| | Meters (Gas), | |
| | Due for gas,* | |
| | Gas coal on hand, | |
| | Coke on hand, | |
| | Tar on hand, | |
| | Enrichers on hand, | |
| | Purifying materials on hand, | |
| | Other gas materials on hand, | |
| | Stoves on hand, | |
| | Gas fixtures, tools, etc., on hand, | |
| | Real estate (land and buildings) (Electric), | |
| | Steam plant (Electric), | |
| | Electric plant, | |
| | Electric overhead lines, | |
| | Electric underground lines, | |
| | Transformers, | |
| | Electric meters, | |
| | Arc lamps, | |
| | Patent rights, | |
| | Due for electric light and power,* | |
| | Fuel on hand (Electric), | |
| | Carbons on hand, | |
| | Oil and waste on hand, | |
| | Incandescent lamps on hand, | |
| | Globes on hand, | |
| | Other electric materials on hand, | |
| | Motors on hand, | |
| | Electric fixtures, tools, etc., on hand, | |
| | Horses, wagons, etc., | |
| | Sundry accounts due the Company, | |
| | Office furniture, | |
| | Cash on hand, | |
| | Notes receivable, | |
| | Investments (giving particulars thereof),† | |
| $ | Total Assets as per books of the Company, | $ |
| | Profit and Loss Balance (if deficit), | |
| $ | TOTAL DEBITS, | $ |

* These items should include the amount of all bills for gas and electric light and power for the month or quarter ending June 30.
† Including any real estate so held.

JUNE 30, 1908.

| From Return of 1907. | LIABILITIES. | |
|---|---|---|
| $ | Capital stock, | $ |
| | Bonds issued, | |
| | Coupon notes,* | |
| | Other notes payable,* | |
| | Unpaid bills. | |
| | Deposits by customers, | |
| | Unpaid dividends, | |
| | Interest due but not paid, | |
| | Interest accrued but not due, | |
| | Reserved fund, | |
| | Depreciation fund, | |
| | Amounts due from the Company, not included above, | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| $ | Total Liabilities as per books of the Company, | $ |
| | Profit and Loss Balance (if surplus), | |
| $ | TOTAL CREDITS, | $ |

* State whether secured by mortgage or not.

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## GENERAL INFORMATION. GAS.

Location of gas works,

Area of land occupied,

Number of retorts, viz.: —

benches of 1 each. benches of 4 each. benches of 7 each.

benches of 2 each. benches of 5 each. benches of 8 each.

benches of 3 each. benches of 6 each. benches of 9 each.

Number of benches rebuilt during the last year,

How long were such benches in actual use?

Average number of retorts employed from October to March, inclusive,

Average number of retorts employed the remainder of the year,

Description of Purifiers: —

No. Length, Width, Depth,

No. Length, Width, Depth,

Materials used in purifiers,

Total amount of lime used during the year, bushels.

Quantity of gas purified per bushel of lime,

Estimated total cost for the year of iron sponge used, $

Estimated total quantity of gas purified per bushel of iron sponge,

Number of holders and their location, viz.: —

| No. | Location.* | Open or Covered. | Dimensions. | Date of Construction. | Working Capacity. |
|---|---|---|---|---|---|
| | | | | | |

* If not "at works" give the distance therefrom.

## GENERAL INFORMATION — *Gas, continued.*

Sizes of Street Mains, and lengths of each size in feet, viz.: —

| Sizes — Diameters. | Total Length in Feet, June 30, 1907. | Taken Up. | Abandoned, but not Removed. | Laid Since. | Total Length in Feet, June 30, 1908. |
|---|---|---|---|---|---|
| 1 inch, | | | | | |
| 1¼ " | | | | | |
| 1½ " | | | | | |
| 2 " | | | | | |
| 2½ " | | | | | |
| 3 " | | | | | |
| 4 " | | | | | |
| 6 " | | | | | |
| 8 " | | | | | |
| 10 " | | | | | |
| 12 " | | | | | |
| 14 " | | | | | |
| 16 " | | | | | |
| 18 " | | | | | |
| 20 " | | | | | |
| 24 " | | | | | |
| 30 " | | | | | |
| 36 " | | | | | |
| 42 " | | | | | |
| 48 " | | | | | |
| 54 " | | | | | |
| Totals, | | | | | |

Total services in use June 30, 1908, . . .

" " " " 30, 1907, . . .

Increase during the year, . . .

Estimated capacity of works per diem, { Acetylene gas, / Coal gas, / Water gas,

Number of feet of gas on hand June 30, 1907, . . . . .

" " made during the year, { Acetylene gas, / Coal gas, / Water gas,

" " bought of ..... Gas Light Co., .

Total, . . .

" " of gas sold by meter during the year, . . .

" " " supplied to public lamps during the year, .

" " " sold to other companies during the year, .

" " " used at works and offices during the year, .

" " " used in the mills of the Company* during the year,

" " " on hand June 30, 1908, . . . . .

Total, . . .

" " " unaccounted for during the year, . . .

* This question will require an answer only from companies engaged in other manufactures.

## GENERAL INFORMATION — *Gas, continued.*

Greatest output in 24 hours, with date of same, . . . . . .

Least output in 24 hours, with date of same, . . . . . .

Number of feet of gas sent out in the daytime during the year, . . . . . .

Length and sizes of mains laid during the year for which contributions have been required from consumers, and amount of such contributions. . . . . .

Capacity of Meters and number of each size in use, viz.: —

| Size, No. of Lights. | Number in Use June 30, 1907. | Removed Since. | Added Since. | Number in Use June 30, 1908. | Number Meter Lights June 30, 1908. |
|---|---|---|---|---|---|
| 2, . | | | | | |
| 3, . | | | | | |
| 5, . | | | | | |
| 10, . | | | | | |
| 20, . | | | | | |
| 25, . | | | | | |
| 30, . | | | | | |
| 35, . | | | | | |
| 40, . | | | | | |
| 45, . | | | | | |
| 50, . | | | | | |
| 60, . | | | | | |
| 80, . | | | | | |
| 100, . | | | | | |
| 125, . | | | | | |
| 150, . | | | | | |
| 180, . | | | | | |
| 200, . | | | | | |
| 250, . | | | | | |
| 300, . | | | | | |
| 400, . | | | | | |
| 500, . | | | | | |
| Totals, | | | | | |

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## GENERAL INFORMATION — *Gas, continued.*

Is any meter rent charged, and what is the rule governing such charge?

Number and size of prepayment meters in use: 3 Lts., 5 Lts., 10 Lts., 20 Lts. Total.

Number and size of meters condemned: 3 Lts., 5 Lts., 10 Lts., 20 Lts., 25 Lts., 30 Lts., 35 Lts., 40 Lts., 45 Lts., 50 Lts., 60 Lts., 80 Lts., 100 Lts., 125 Lts., 150 Lts., 180 Lts., 200 Lts., 250 Lts., 300 Lts., 400 Lts., 500 Lts., Total,

Number of gas stoves used by consumers during the year,

Number of stoves leased by the Company,

Number of high candle power lamps used by consumers during the year,

Number of such lamps leased by Company,

Rental price of same per lamp,

Number of gas engines used by consumers during the year,

Number of gas engines leased by Company,

Rental price of same,

Usual day pressure on street mains, as indicated at works,

Usual night pressure on street mains, as indicated at works,

Average candle power of the gas, as determined by State Inspector,

Gross price per 1,000 feet at the close of the year, $

Are discounts allowed, and if so, how are they made?

What changes have been made in price or discounts during the year, and when made?

Number of public gas lamps supplied at close of year,

Price for public gas lamps,

Estimated hourly consumption of each lamp, cubic feet.

Estimated number of hours during the year that each lamp is lighted,

Kind of burner principally used on public lamps,

Number and kind of public lamps other than gas or electric lamps maintained by the Company,

GENERAL INFORMATION — *Gas, continued.*

Kinds of coal carbonized (not including those for making water gas),

Proportions of each, if used together,

Kind of gas coal used,

What materials were used for enriching the coal gas?

Amount of each per ton of coal carbonized?

STATEMENT OF COAL GAS MATERIALS FOR YEAR ENDING JUNE 30, 1908.

| | On Hand June 30, 1907. | Received during the Year. | Carbonized during the Year. | Unaccounted for. | On Hand June 30, 1908. | Average Cost per Ton of 2,240 Lbs. of Each Kind Used and Unaccounted for. |
|---|---|---|---|---|---|---|
| | Tons. | Tons. | Tons. | Tons. | Tons. | |
| Enriching coals, | | | | | | |
| Other gas coals, | | | | | | |
| | | | | | | |
| | | | | | | |
| | Gals. | Gals. | Gals. | Gals. | Gals. | Average Cost per Gallon of Each Kind Used and Unaccounted for. |
| Naphtha, | | | | | | |
| Other oils, | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

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## GENERAL INFORMATION — *Gas, continued.*

Statement of Residual Products for the year ending June 30, 1908:

| | On Hand June 30, 1907. Estimated. | Made During the Year, Estimated. | Used During the Year, Estimated. | Sold During the Year. | | On Hand June 30, 1908, Estimated. |
|---|---|---|---|---|---|---|
| | | | | To Electric Dept. | To Private Customers. | |
| Coke, tons, | | | | .....tons @$.....per ton | .....tons @$.....per ton | |
| Tar (coal gas), gallons, | | | | .....gals. @.....cts. per gal. | .....gals. @.....cts. per gal. | |
| Tar (water gas), gallons, | | | | .....gals. @.....cts. per gal. | .....gals. @.....cts. per gal. | |
| Ammoniacal liquor, gallons, | | | | | | |

Prices now obtained for residuals:

Tar per gallon (coal gas), . $..... Tar per gallon (water gas), $.....

Coke per bush., . . . $..... Ammoniacal liquor per..... $.....

Average number of men employed, viz.:—

| April to September. | October to March. | How Employed.* |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

* Whether Foremen, Stokers, Yardmen, etc.

## GENERAL INFORMATION — *Gas, continued.*

**ONLY THOSE COMPANIES MAKING "WATER GAS" ARE TO ANSWER THE QUESTIONS ON THIS PAGE.**

What patent process, if any, is used in the manufacture of gas?

How long has such process been employed?

Is said process used alone, or as an auxiliary to the making of coal gas?

If used as an auxiliary, how often is it so used, and how long each time?

At what point in the works is the gas so made mixed with the coal gas?

Total amount of water gas made during the year,

What kinds of fuel were used for *generating the gas?*

What kinds of *fuel* were used in carburetting the gas (not to include generator fuel)?

What kinds of fuel were used for *generating the steam?*

STATEMENT OF WATER GAS MATERIALS FOR YEAR ENDING JUNE 30, 1908.

| | On Hand June 30, 1907. | Received during the Year. | Carbonized during the Year. | Unaccounted for | On Hand June 30, 1908. | Average Cost per Ton of 2,240 Lbs. of Each Kind Used and Unaccounted for. |
|---|---|---|---|---|---|---|
| | Tons. | Tons. | Tons. | Tons. | Tons. | |
| For generating the gas, coal, . | | | | | | |
| " " " " coke, . | | | | | | |
| " " " " . | | | | | | |
| " carburetting " " coal, . | | | | | | |
| " " " " coke, . | | | | | | |
| " generating " steam, coal, | | | | | | |
| " " " coke, | | | | | | |
| " " " . | | | | | | |
| " " " . | | | | | | |
| | Gals. | Gals. | Gals. | Gals. | Gals. | Average Cost per Gallon of Each Kind Used and Unaccounted for. |
| Naphtha, . . . . . | | | | | | |
| Other oils, . . . . . | | | | | | |
| Fuel oil. . . . . | | | | | | |

Dimensions of generator,

" " superheater,

" " condenser or washer,

Usual length of runs,

Capacity of works per hour, as observed in actual use,

## GENERAL INFORMATION — *Gas, concluded.*

### ONLY THOSE COMPANIES MAKING "OIL GAS" ARE TO ANSWER THE FIVE QUESTIONS FOLLOWING.

What patent process, if any, is used in the manufacture of gas?

How long has such process been employed?

Kinds of coal or other fuel used,

What percentage of the gas in the holder is atmospheric air?

At what point in the works is the air mixed with the gas?

### ONLY THOSE COMPANIES MAKING "ACETYLENE" GAS ARE TO ANSWER THE QUESTIONS FOLLOWING.

What type of generator is used in the manufacture of the gas?

How long has such apparatus been employed by this Company?

### QUANTITY OF CARBIDE USED DURING THE YEAR.

| On Hand June 30, 1907. | Received during the Year. | Used during the Year. | On Hand June 30, 1908. | Average Cost of same per Lb. Delivered at the Works. |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

## GENERAL INFORMATION. ELECTRIC LIGHT.

Location of electric plant,

Area of land, and size and material of buildings occupied,

Are the same owned or leased by the Company?

Description of Motive Power: —

### BOILERS.

| No. of Each Kind. | Maker. | Kind of Setting. | Diameter of Shell. | No. of Tubes. | Diameter of Tubes. | Usual Steam Pressure. | Rated Horse Power of Each. | Total Rated Horse Power. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | Total horse power, | | |

### ENGINES.

| No. of Each Kind. | Maker. | Diameter of Cylinder. | Stroke of Piston. | No. of Revolutions per Min. | Rated Horse Power of Each. | Total Rated Horse Power. |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | Total horse power, | |

### WATER WHEELS.

| No. of Each Kind. | Maker. | Diameter. | Fall. | Total Rated Horse Power. |
|---|---|---|---|---|
| | | | | |

## GENERAL INFORMATION — *Electric Light, continued.*

Description of Dynamos: —

| | No. of Each Kind. | Maker. | Capacity of Each. | | | |
|---|---|---|---|---|---|---|
| | | | In Kilowatts. | In Lamps. | | Amperes. |
| | | | | No. | Candle Power. | |
| Arc: Direct current. | | | | | | |
| Arc: | | | | | | |
| Alternating current. Incandescent: Direct current, Commercial system. | | | | | | |
| Alternating Current, Commercial System. | | | | | | |
| | | | | | | |
| Direct Current, Municipal Incandescent System. | | | | | | |
| | | | | Voltage. | Capacity of Each in K. W. | |
| Power Generators. | | | | | | |

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## GENERAL INFORMATION — *Electric Light, continued.*

**DISTRIBUTION—OVERHEAD SYSTEM.**

Description of the Arc Lines, Direct Current:—

| Circuits. | Length, Out and Return, in Feet. | Size of Wire, | | Arc Lamps Installed. | | | | | Amperes. | Incandescent Series Lamps. | | | | | Amperes. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Public Street. | | In Office and Station. | Commercial. | | | Public Street. | | In Office and Station. | Commercial | | |
| | | No. | Gauge. | No. | C. P. | | No. | C. P. | | No. | C. P. | | No | C. P. | |
| No. 1, | | | | | | | | | | | | | | | |
| No. 2, | | | | | | | | | | | | | | | |
| No. 3, | | | | | | | | | | | | | | | |
| No. 4, | | | | | | | | | | | | | | | |
| No. 5, | | | | | | | | | | | | | | | |
| No. 6, | | | | | | | | | | | | | | | |
| No. 7, | | | | | | | | | | | | | | | |
| No. 8, | | | | | | | | | | | | | | | |
| No. 9, | | | | | | | | | | | | | | | |
| No. 10, | | | | | | | | | | | | | | | |
| No. 11, | | | | | | | | | | | | | | | |
| No. 12, | | | | | | | | | | | | | | | |
| No. 13, | | | | | | | | | | | | | | | |
| No. 14, | | | | | | | | | | | | | | | |
| No. 15, | | | | | | | | | | | | | | | |
| No. 16, | | | | | | | | | | | | | | | |
| No. 17, | | | | | | | | | | | | | | | |
| No. 18, | | | | | | | | | | | | | | | |
| No. 19, | | | | | | | | | | | | | | | |
| Totals, | | | | | | | | | | | | | | | |
| Totals in 1907. | | | | | | | | | | | | | | | |

Motors on direct current, arc lines No. _____ Total horse-power, _____

Description of the Alternating Current Lines operating only Arc lamps:—

| Circuits. | Length, Out and Return, in Feet. | Size of Wire. | | Arc Lamps Installed. | | | | | | In Office and Station. | | Motors Installed. | | Amperes. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Public Street. | | | Commercial. | | | | | | | |
| | | No. | Gauge. | No. | C. P. | Amp. | No. | C. P. | Amp. | No. | C. P. | No. | Total H. P. | |
| No. 1. | | | | | | | | | | | | | | |
| No. 2. | | | | | | | | | | | | | | |
| No. 3, | | | | | | | | | | | | | | |
| No. 4, | | | | | | | | | | | | | | |
| No. 5, | | | | | | | | | | | | | | |
| Totals, | | | | | | | | | | | | | | |
| Totals in 1907. | | | | | | | | | | | | | | |

1855

## GENERAL INFORMATION — *Electric Light, continued.*

Description of the Alternating Current, Municipal (Street Lighting) System, Incandescent Lines:—

| Circuits. | Length, Out and Return, in Feet. | Size of Wire. | | Public Street Lamps Installed. | | In Office and Station. | | Commercial Lamps Installed. | | Amperes. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | Gauge. | No. | C. P. | No. | C. P. | No. | C. P. | |
| No. 1, | | | | | | | | | | |
| No. 2, | | | | | | | | | | |
| No. 3, | | | | | | | | | | |
| No. 4, | | | | | | | | | | |
| No. 5, | | | | | | | | | | |
| No. 6, | | | | | | | | | | |
| No. 7, | | | | | | | | | | |
| No. 8, | | | | | | | | | | |
| No. 9, | | | | | | | | | | |
| No. 10, | | | | | | | | | | |
| No. 11, | | | | | | | | | | |
| No. 12, | | | | | | | | | | |
| No. 13, | | | | | | | | | | |
| No. 14, | | | | | | | | | | |
| No. 15, | | | | | | | | | | |
| No. 16, | | | | | | | | | | |
| No. 17, | | | | | | | | | | |
| No. 18, | | | | | | | | | | |
| No. 19, | | | | | | | | | | |
| No. 20, | | | | | | | | | | |
| No. 21, | | | | | | | | | | |
| No. 22, | | | | | | | | | | |
| No. 23, | | | | | | | | | | |
| No. 24, | | | | | | | | | | |
| No. 25, | | | | | | | | | | |
| No. 26, | | | | | | | | | | |
| No. 27, | | | | | | | | | | |
| No. 28, | | | | | | | | | | |
| No. 29, | | | | | | | | | | |
| No. 30, | | | | | | | | | | |
| No. 31, | | | | | | | | | | |
| No. 32, | | | | | | | | | | |
| No. 33, | | | | | | | | | | |
| No. 34, | | | | | | | | | | |
| No. 35, | | | | | | | | | | |
| No. 36, | | | | | | | | | | |
| No. 37, | | | | | | | | | | |
| No. 38, | | | | | | | | | | |
| No. 39, | | | | | | | | | | |
| No. 40, | | | | | | | | | | |
| Totals, | | | | | | | | | | |
| Totals in 1907, | | | | | | | | | | |

1856

## GENERAL INFORMATION — *Electric Light, continued.*

Description of the Direct Current Municipal (Street Lighting) System, Incandescent Lines: —

| Circuits. | Length of Wire, Out and Return, in Feet. | Size of Wire. | | Lamps Installed. | | Amperes. |
|---|---|---|---|---|---|---|
| | | No. | Gauge. | No. | C. P. | |
| No. 1, | | | | | | |
| No. 2, | | | | | | |
| No. 3, | | | | | | |
| No. 4, | | | | | | |
| No. 5, | | | | | | |
| No. 6, | | | | | | |
| No. 7, | | | | | | |
| No. 8, | | | | | | |
| No. 9, | | | | | | |
| No. 10, | | | | | | |
| No. 11, | | | | | | |
| No. 12, | | | | | | |
| No. 13, | | | | | | |
| No. 14, | | | | | | |
| No. 15, | | | | | | |
| No. 16, | | | | | | |
| No. 17, | | | | | | |
| No. 18, | | | | | | |
| No. 19, | | | | | | |
| No. 20, | | | | | | |
| Totals, | | | | | | |
| Totals, in 1907. | | | | | | |

Description of the Commercial Low Tension Direct Current Mains (not upon the Edison System): —

| Circuits. | No. of Wires. | Length, in Feet, of Each Wire. | Size of Wire. | | In Office and Station. | Lamps Installed. | | | Motors Installed. | | Voltage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. | Gauge. | | No. | C. P. | Amp's. | No. | Total H. P. | |
| No. 1, | | | | | | | | | | | |
| No. 2, | | | | | | | | | | | |
| No. 3, | | | | | | | | | | | |
| No. 4, | | | | | | | | | | | |
| No. 5, | | | | | | | | | | | |
| No. 6, | | | | | | | | | | | |
| No. 7, | | | | | | | | | | | |
| No. 8, | | | | | | | | | | | |
| No. 9, | | | | | | | | | | | |
| No. 10, | | | | | | | | | | | |
| Totals, | | | | | | | | | | | |
| Totals, in 1907. | | | | | | | | | | | |

Total length of each size of wire in FEEDERS, .....

.....

## GENERAL INFORMATION — *Electric Light, continued.*

### Description of the Commercial Alternating Current Lines: —

| Circuits. | Feeders. | | | Mains. | | | Secondaries. | | | Lamps Installed. | | | | Motors Installed. | | Pressure Wires. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Length of Wire, Out and Return, Feet. | Size of Wire. | | Length of Wire, Out and Return, Feet. | Size of Wire. | | Length of Wire, Out and Return, Feet. | Size of Wire. | | Off. & Sta. | Commercial. | | | No. | Total H.P. | Length of Wire, Out & Return, Feet. | Size of Wire. | |
| | | No. | Gauge. | | No. | Gauge. | | No. | Gauge. | No. | No. | C. P. | Amp's. | | | | No. | Gauge. |
| No. 1, | | | | | | | | | | | | | | | | | | |
| No. 2, | | | | | | | | | | | | | | | | | | |
| No. 3, | | | | | | | | | | | | | | | | | | |
| No. 4, | | | | | | | | | | | | | | | | | | |
| No. 5, | | | | | | | | | | | | | | | | | | |
| No. 6, | | | | | | | | | | | | | | | | | | |
| No. 7, | | | | | | | | | | | | | | | | | | |
| No. 8, | | | | | | | | | | | | | | | | | | |
| No. 9, | | | | | | | | | | | | | | | | | | |
| No. 10, | | | | | | | | | | | | | | | | | | |
| No. 11, | | | | | | | | | | | | | | | | | | |
| No. 12, | | | | | | | | | | | | | | | | | | |
| No. 13, | | | | | | | | | | | | | | | | | | |
| Totals, | | | | | | | | | | | | | | | | | | |
| Total in 1907, | | | | | | | | | | | | | | | | | | |

### Edison Overhead System.

### Description of lines: —

| Feeders. | | | Mains. | | | Lamps Installed. | | | | Motors Installed. | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Size of Wire. | | Length of Wire, in Feet. | Size of Wire. | | Length of Wire, in Feet. | Off. & Sta. | Commercial. | | | No. | Total H. P. |
| No. | Gauge. | | No. | Gauge. | | No. | No. | C. P. | Amp's. | | |
| | | | | | | | | | | | |
| Totals, | | | | | | | | | | | |
| Total in 1907, | | | | | | | | | | | |

1858

GENERAL INFORMATION — *Electric Light, continued.*

Description of Power Lines (this should not include those lines described on preceding pages): —

| Circuits. | Length, Out and Return, in Feet. | Size of Wire. | | Motors Installed. | | Voltage. |
|---|---|---|---|---|---|---|
| | | No. | Gauge. | No. | Total H. P. | |
| No. 1, . . | | | | | | |
| No. 2, . . | | | | | | |
| No. 3, . . | | | | | | |
| No. 4, . . | | | | | | |
| No. 5, . . | | | | | | |
| Totals, . . | | | | | | |
| Total in 1907, | | | | | | |

Rated capacity of Transformers and number of each size in use, viz.: —

| Capacity of Each in 16 C. P. Light. | Number in Use June 30, 1907. | Removed Since. | Installed Since. | Number in Use June 30, 1908. |
|---|---|---|---|---|
| 5, . . | | | | |
| 6, . . | | | | |
| 7, . . | | | | |
| 10, . . | | | | |
| 12, . . | | | | |
| 15, . . | | | | |
| 18, . . | | | | |
| 20, . . | | | | |
| 25, . . | | | | |
| 30, . . | | | | |
| 40, . . | | | | |
| 48, . . | | | | |
| 50, . . | | | | |
| 60, . . | | | | |
| 70, . . | | | | |
| 75, . . | | | | |
| 80, . . | | | | |
| 90, . . | | | | |
| 100, . . . | | | | |
| 120, . . | | | | |
| 125, . . | | | | |
| 150, . . | | | | |
| 175, . . | | | | |
| 200, . . | | | | |
| 240, . . | | | | |
| 250, . . | | | | |
| 300, . . | | | | |
| 350, . . | | | | |
| 600, . . | | | | |
| Totals, | | | | |

No. of each size of Transformers Condemned, _____ Lt. _____ Lt. _____ 10 Lt. _____ 12 Lt. _____ 15 Lt.
_____ 18 Lt. _____ 20 Lt. _____ 25 Lt. _____ 30 Lt. _____ 40 Lt. _____ 48 Lt. _____ 50 Lt.
_____ 60 Lt. _____ 70 Lt. _____ 75 Lt. _____ 80 Lt. _____ 90 Lt. _____ 100 Lt. _____ 120 Lt.
_____ 125 Lt _____ 150 Lt. _____ 175 Lt. _____ 200 Lt. _____ 240 Lt. _____ 250 Lt. _____ 300 Lt.
_____ 350 Lt. _____ 600 Lt.

Totals, _____

1859

GENERAL INFORMATION — *Electric Light, continued.*

**DISTRIBUTION — UNDERGROUND SYSTEM.**

Description of subways or conduits owned by the Company (not including Edison tubing) viz.: —

| Size of Conduit. | Total Length in Feet Installed June 30, 1907. | Taken up Since. | Added Since. | Total Length in Feet Installed June 30, 1908. |
|---|---|---|---|---|
| Single duct, . . | | | | |
| 2 ducts, . . . | | | | |
| 3 ducts, . . . | | | | |
| 4 ducts, . . . | | | | |
| 5 ducts, . . . | | | | |
| 6 ducts, . . . | | | | |
| 7 ducts, . . . | | | | |
| 8 ducts, . . . | | | | |
| 9 ducts, . . . | | | | |
| 10 ducts, . . . | | | | |
| 11 ducts, . . . | | | | |
| 12 ducts, . . . | | | | |
| 13 ducts, . . . | | | | |
| 14 ducts, . . . | | | | |
| 15 ducts, . . . | | | | |
| 16 ducts, . . . | | | | |
| 17 ducts, . . . | | | | |
| 18 ducts, . . . | | | | |
| 20 ducts, . . . | | | | |
| 21 ducts, . . . | | | | |
| 22 ducts, . . . | | | | |
| 24 ducts, . . . | | | | |
| 25 ducts, . . . | | | | |
| 26 ducts, . . . | | | | |
| 28 ducts, . . . | | | | |
| 29 ducts, . . . | | | | |
| 30 ducts, . . . | | | | |
| 36 ducts, . . . | | | | |
| 39 ducts, . . . | | | | |
| 45 ducts, . . . | | | | |
| 54 ducts, . . . | | | | |
| Total, . . | | | | |

Type of duct above described: —

Total number of Incandescent lamps (rated at 16 c. p.) supplied from all Edison lines, . .

Total number of each size of arc lamps supplied from all Edison lines,

1860

GENERAL INFORMATION — *Electric Light, continued.*

Description of cables owned by the Company in underground conduits not of the Edison type: —

| Size of Cable. | Total Length in Feet Installed June 30, 1907. | Taken up Since. | Added Since. | Total Length in Feet Installed June 30, 1908. |
|---|---|---|---|---|
| No. 6, . . . | | | | |
| No. 4, . . . | | | | |
| No. 0, . . . | | | | |
| No. 00, . . . | | | | |
| No. 0000, . . . | | | | |
| 350,000 c. m., . | | | | |
| 500,000 c. m., . | | | | |
| 600,000 c. m., . | | | | |
| 1,000,000 c. m., . | | | | |
| Total, . . . | | | | |

Number of manholes,

Number of service connections,

Number of each size of arc lamps supplied from the foregoing underground lines and not given on preceding pages, giving street and commercial lights separately,

Number of each size of incandescent lamps supplied from the foregoing underground lines and not given on preceding pages, giving street and commercial lights separately,

Storage Batteries.

Number of storage batteries in use by company,

Maker of each battery: No. 1, ; No. 2, ; No. 3, ; No. 4,

Number of cells in each battery: No. 1, ; No. 2, ; No. 3, ; No. 4,

Number of plates in each cell: No. 1, pos., , neg. ; No. 2, pos. , neg. ; No. 3, pos. , neg. ; No. 4, pos. , neg.

Area of plates; Battery No. 1, ; No. 2, ; No. 3, ; No. 4,

Rate of charging in amperes: No. 1, ; No. 2, ; No. 3, ; No. 4,

| Rate of Discharging in Amperes. | No. 1. | No. 2. | No. 3. | No. 4. |
|---|---|---|---|---|
| 1 hour, . . . . | | | | |
| 5 hours, . . . . | | | | |
| 10 hours, . . . . | | | | |

Voltage per cell: No. 1, max. , min. ; No. 2, max. min. ; No. 3, max. , min. ; No. 4, max. , min.

Total number of motors supplied from all Edison lines, . . . . . .

Total rated horse-power of such motors, . . . . . .

Number of Company's poles set in streets or public ways,

Number of Company's poles set elsewhere,

Materials used for poles,

What other means of supporting wires are used, and to what extent?

Length in feet of streets or public ways occupied by overhead lines,

Number of enclosed arc lamps in use June 30, 1908,

Number of single open arc lamps in use (not including enclosed arcs), June 30, 1908,

Number of double open arc lamps in use June 30, 1908,

Number of carbons used during the year,

GENERAL INFORMATION — *Electric Light, continued.*

EDISON UNDERGROUND SYSTEM.

Feeder Tubes, — Length of each size in feet, viz.: —

| SIZES. | TOTAL LENGTH INSTALLED JUNE 30, 1907. | TAKEN UP SINCE. | ADDED SINCE. | TOTAL LENGTH INSTALLED JUNE 30, 1908. |
|---|---|---|---|---|
| No. 67, | | | | |
| No. 90, | | | | |
| No. 168, | | | | |
| No. 206, | | | | |
| No. 250, | | | | |
| No. 300, | | | | |
| No. 350, | | | | |
| No. 400, | | | | |
| No. 450, | | | | |
| No. 500, | | | | |
| No. 550, | | | | |
| No. 600, | | | | |
| No. 650, | | | | |
| No. 750, | | | | |
| No. 1000, | | | | |
| TOTALS, | | | | |

Main Tubes, — Length of each size in feet, viz.: —

| SIZES. | TOTAL LENGTH INSTALLED JUNE 30, 1907. | TAKEN UP SINCE. | ADDED SINCE. | TOTAL LENGTH INSTALLED JUNE 30, 1908. |
|---|---|---|---|---|
| No. 27, | | | | |
| No. 41, | | | | |
| No. 48, | | | | |
| No. 56, | | | | |
| No. 80, | | | | |
| No. 100, | | | | |
| No. 105, | | | | |
| No. 120, | | | | |
| No. 150, | | | | |
| No. 168, | | | | |
| No. 180, | | | | |
| No. 200, | | | | |
| No. 206, | | | | |
| No. 250, | | | | |
| No. 300, | | | | |
| No. 350, | | | | |
| No. 400, | | | | |
| No. 450, | | | | |
| No. 500, | | | | |
| TOTALS, | | | | |

Junction boxes, — Number of each size installed June 30, 1908.

4 tube,..... 6 tube,..... 10 tube,..... .....tube,.....

1862

GENERAL INFORMATION — *Electric Light, continued.*

Rated Capacity of Meters and number of each size in use, viz.: —

| Capacity of Each in 16 C. P. Lamps. | Number in Use June 30, 1907. | Removed Since. | Added Since. | Number in Use June 30, 1908. |
|---|---|---|---|---|
| 3, . . | | | | |
| 5, . . | | | | |
| 10, . . | | | | |
| 15, . . | | | | |
| 20, . . | | | | |
| 25, . . | | | | |
| 30, . . | | | | |
| 40, . . | | | | |
| 50, . . | | | | |
| 60, . . | | | | |
| 75, . . | | | | |
| 80. . . | | | | |
| 100, . | | | | |
| 120, . . | | | | |
| 150, . . | | | | |
| 160, . . | | | | |
| 200, . . | | | | |
| 240, . . | | | | |
| 300, . . | | | | |
| 320, . . | | | | |
| 450, . . | | | | |
| 480, . . | | | | |
| 600, . . | | | | |
| 640, . . | | | | |
| Totals, | | | | |

Number condemned, ..... 3 Lt. ..... 5 Lt. ..... 10 Lt. ..... 15 Lt. ..... 20 Lt. ..... 25 Lt. ..... 30 Lt.

..... 40 Lt. ..... 50 Lt. ..... 60 Lt. ..... 75 Lt. ..... 80 Lt. ..... 100 Lt. ..... 120 Lt. ..... 150 Lt.

..... 160 Lt. ..... 200 Lt. ..... 240 Lt. ..... 300 Lt. ..... 320 Lt. ..... 450 Lt. ..... 480 Lt.

..... 600 Lt. ..... 640 Lt. Total .....

Number of customers supplied with incandescent lights upon contract system, and number of lamps so supplied,

.....

What minimum monthly charge, if any, is made for service? .....

Total number of customers using commercial arc lights, .....

Total number of customers using commercial * incandescent lights, .....

Total number of customers using only electric power, .....

Total number of commercial customers using *both* arc and incandescent lights, .....

Total number of customers using only commercial incandescent lights on arc circuits, .....

Total number of each size of lamps used at station and office, .....

.....

* This term to include "domestic" lights or residence lighting.

1863

## GENERAL INFORMATION — *Electric Light, continued.*

Total kilowatt hours delivered at switch-board during the year, _____

No. of kilowatt hours delivered at switch-board during the year for street lights, _____

No. of kilowatt hours sold during the year to commercial customers: —

- for light by meter, _____
- for power, except for street railways, _____
- for light by contract, _____
- for railways, _____
- to other companies, _____

Total accounted for, _____

Maximum load during the year, and date of same, _____

Maximum load on day of least output during the year, and date of same, _____

Public street lamps installed June 30, 1908, . { arcs, . . number ____ c.p., ____ amperes, / incandescents, number ____ c.p., ____ amperes,

Average daily number of same lighted in each month:

| Month. | Arc. | Incandescent. | Month. | Arc. | Incandescent. | Month. | Arc. | Incandescent. |
|---|---|---|---|---|---|---|---|---|
| July, . | | | Nov., . | | | March, | | |
| Aug., . | | | Dec., . | | | April, . | | |
| Sept., . | | | Jan., . | | | May, . | | |
| Oct., . | | | Feb., . | | | June, . | | |

Number of days in each month that street circuits were lighted:

| Month. | No. of Days. | Month. | No. of Days. | Month. | No. of Days. | Month. | No. of Days. |
|---|---|---|---|---|---|---|---|
| July, . | | Oct., . | | Jan., . | | April, . | |
| Aug., . | | Nov., . | | Feb., . | | May, . | |
| Sept., . | | Dec., . | | March, | | June, . | |

Total number of hours street lights were run in each month:

| Month. | Hours. | Month. | Hours. | Month. | Hours. | Month. | Hours. |
|---|---|---|---|---|---|---|---|
| July, . | | Oct., . | | Jan., . | | April, . | |
| Aug., . | | Nov., . | | Feb., . | | May, . | |
| Sept., . | | Dec., . | | March, | | June, . | |

Schedule of prices for public street arc lights, _____

GENERAL INFORMATION — *Electric Light, continued.*

Schedule of prices for public street incandescent lights,

Number of each size of public street incandescent lamps renewed during the year,

Schedule of prices for commercial arc lights,

Schedule of prices for commercial incandescent lights,

Schedule of prices for electric power,

Is any meter rent charged? What is the rule governing such charge?

What changes have been made during the year in prices for lights or power, and when made?

What kind of electric motors are used, and for what kinds of work are they employed?

Is current furnished for light during the daytime?

Is current furnished for operating street cars?

Is current furnished for other power during the daytime?

GENERAL INFORMATION — *Electric Light, continued.*

STATEMENT OF EACH KIND OF COAL (OF 2,240 LBS. PER TON) OR OTHER FUEL AT STATION FOR YEAR ENDING JUNE 30, 1908.

| KIND OF FUEL. | ON HAND JUNE 30, 1907. | RECEIVED DURING THE YEAR. | USED DURING THE YEAR. | UNACCOUNTED FOR. | ON HAND JUNE 30, 1908. | AVERAGE COST PER TON OF EACH KIND USED AND UNACCOUNTED FOR. |
|---|---|---|---|---|---|---|
| | Tons. | Tons. | Tons. | Tons. | Tons. | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Does the Company wire buildings? If so, on what terms?

On what terms does the Company furnish incandescent lamps and renewals of the same?

Average number of men employed, viz.: —

| NUMBER OF MEN. | HOW EMPLOYED. |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

## GENERAL INFORMATION.

What additions, alterations or improvements, have been made to or in the property of the Company since the last return?
In Gas Works:

In Electric Works:

What experiments or changes in methods of manufacture has the Company made since its last return?
In Gas Works:

In Electric Works:

Give the entire plant accounts for years 1907 and 1908, with additions, also depreciation and other credits, if any, during the year, viz.:

| | Plant Account June 30, 1907. | Additions Made During the Year. | Depreciation and Other Credits During the Year. | Plant Account June 30, 1908. |
|---|---|---|---|---|
| In Gas Works: | | | | |
| Lands, | | | | |
| Buildings, | | | | |
| Machinery and Appliances, | | | | |
| Mains, | | | | |
| Services, | | | | |
| Meters, | | | | |
| In Electric Works: | | | | |
| Lands, | | | | |
| Buildings, | | | | |
| Steam Plant, | | | | |
| Electric Plant, | | | | |
| Lines, | | | | |
| Transformers, | | | | |
| Meters, | | | | |
| Arc Lamps, | | | | |
| Total, | | | | |

1867

NAMES AND RESIDENCE OF OFFICERS.

*President,*

*Vice-President,*

*Manager,*

*Superintendent,*

*Treasurer,*

*Clerk of the Corporation,*

NAMES AND RESIDENCE OF DIRECTORS.

1868

_____ *President.*

_____ *Treasurer.*

_____

_____

_____

_____ } *Directors.*

_____

_____

_____

_____

## COMMONWEALTH OF MASSACHUSETTS.

_____ ss. _____ 1908.

Then personally appeared _____

_____

_____

_____

_____

and severally made oath to the truth of the foregoing statement by them subscribed according to their best knowledge and belief.

_____ *Justice of the Peace.*

## Extracts from Chapter 121 of the Revised Laws.

SECTION 5. Said board shall have the general supervision of all corporations and companies which are engaged in the manufacture and sale of gas or electricity for light or heat, and shall make all necessary examinations and inquiries and keep themselves informed as to the compliance of the several corporations and companies with the provisions of law.

SECTION 29. Corporations and companies which are engaged in the manufacture and sale of gas or electricity for light or heat shall keep their books and accounts in a form to be prescribed by the board of gas and electric light commissioners, and the accounts shall be closed annually on the thirtieth day of June, so that a balance sheet of that date can be taken therefrom. Manufacturing companies in which the manufacture of gas is a minor portion of their business shall be required to keep accounts of the expenses and income of their gas business only.

SECTION 30. Persons or corporations engaged in the manufacture or sale of gas or electric light shall keep such records of their work at their manufacturing station, and in respect to their distributing plant, as the board of gas and electric light commissioners may from time to time require. Said records shall be in such form as the board may prescribe.

SECTION 32. Each such gas or electric light corporation or company neglecting to make the annual return required by the preceding section, shall, for the first fifteen days or portion thereof during which such neglect continues, forfeit five dollars a day; for the second fifteen days or any portion thereof, ten dollars a day; and for each day thereafter not more than fifteen dollars a day. If any company unreasonably refuses or neglects to make such return, it shall, in addition thereto, forfeit not more than five hundred dollars for each offence. All forfeitures recovered under the provisions of this section shall be paid into the treasury of the commonwealth and applied to the payment of the expenses of the board.

SECTION 41. In the construction of sections four, five, six, seven, eight, twenty-eight, twenty-nine, thirty-one, thirty-three and thirty-four of this chapter, the terms "gas company" and "corporation" shall include all persons owning or operating works for the manufacture and sale of gas for heating or illuminating purposes within the commonwealth, and the terms "company" and "companies" shall include all corporations or individuals engaged in the manufacture and sale of electric light within the commonwealth.

## From Chapter 406 of the Acts of 1903.

SECTION 1. Corporations and companies engaged in the manufacture and sale of gas or electricity for light or heat shall annually, on or before the second Wednesday of September, make to said board, in a form prescribed by it, a return for the year ending on the thirtieth day of June preceding, signed and sworn to by its president and treasurer and a majority of the directors, of the amount of its authorized capital, its indebtedness and financial condition, on the said thirtieth day of June preceding, its income and expenses during the preceding year, its dividends paid out and declared, a list of the names of all of its salaried officers, and the amount of the annual salary paid to each, and the balance sheet of its accounts as of said preceding thirtieth day of June. Every such corporation and company shall at all times, upon request, furnish any information required by the board relative to its condition, management and operation, and shall comply with all lawful orders of said board.

1827 H. I. L.

| | Reprod. cost. | Present value. |
|---|---|---|
| Organ. & L. Exp. | $33,000.00 | $33,000.00 |
| W'k'g Cap. | 72,038.00 | 72,038.00 |
| Real Estate | 19,320.00 | 19,320.00 |
| Buildings | 41,312.00 | 30,967.00 |
| Works Equipment | 253,298.00 | 196,759.00 |
| Distr. System | 614,493.00 | 513,829.00 |
| Going Value | 225,000.00 | 225,000.00 |
| | 1,258,461.00 | 1,090,913.00 |

(Here follow photo-lithographs, marked pages 1828-1870.)

1871

| | Full year, 1912. | Full year, 1913. |
|---|---|---|
| Gross Earnings Gas Dep't as Reported | $282,162.11 | $273,595.52 |
| Deduct Receipts from Gas Sales Outside Lincoln | 8,986.18 | 8,471.35 |
| Corrected Gross Earnings Gas Department | $273,175.93 | $265,124.17 |
| Total Operating Expenses as Reported | $175,573.49 | $183,436.77 |
| Deduct Output Cost Gas Sold Outside Lincoln | 1,873.62 | 2,471.92 |
| | $173,689.87 | 180,964.85 |
| Add for Excessive Residual Credits Reported | 2,722.23 | ..... |
| Add for Depreciation (minimum shown by sinking fund calculation) | 20,865.03 | 20,865.03 |
| Corrected Operating Expenses Gas Dep't | $197,277.13 | $201,829.88 |
| Corrected Net Earnings Gas Dep't | $75,898.80 | $63,294.29 |
| Corrected Net Earnings Gas Dep't in % of Reproduction Cost | 5.810 | 5.029 |
| Corrected Net Earnings Gas Dep't in % of Their Present Value | 6.698 | 5.801 |
| Total Reproduction Cost Real Estate, Buildings, Works, Equipment and Distribution System | $976,037.00 | $928,423.00 |
| The Then Reproduction Cost of Entire Property | $1,306,075.00 | $1,258,461.00 |
| The Then Present Value of Entire Property | $1,133,114.00 | $1,090,913.00 |

3. NET EARNINGS AND THEIR APPLICATION — *Concluded.*

| No. of Company. | COMPANY. | DIVIDENDS. | | | INTEREST. | | UNAPPLIED EARNINGS. | | No. of Company. |
|---|---|---|---|---|---|---|---|---|---|
| | | Amount. | Rate Per Cent. | Per M sold. | Amount. | Per M sold. | Amount. | Per M sold. | |
| 1 | Boston, | $1,361,240 00 | 9 | $0.24476 | $96,292 25 | $0.01731 | $27,413 25[1] | - | 1 |
| 2 | Brockton, | 33,540 00 | 6 | .15487 | 17,409 99 | .08039 | 1,158 39[1] | - | 2 |
| 3 | Cambridge, | 120,000 00 | 10 | .15735 | 18,531 24 | .02430 | 36,004 86 | $0.04721 | 3 |
| 4 | Charlestown, | 75,000 00 | 12½ | - | 2,695 74 | - | 3,102 37 | - | 4 |
| 5 | East Boston, | 57,500 00 | 10 | .15326 | 2,065 28 | .00550 | 2,723 40 | .00726 | 5 |
| 6 | Fall River, | 82,800 00 | 12 | .15034 | 7,424 78 | .01348 | 3,259 35[1] | - | 6 |
| 7 | Fitchburg, | 56,615 00 | 10 | - | 15,015 96 | - | 20,755 95[1] | - | 7 |
| 8 | Haverhill, | - | - | - | 13,343 17 | .05674 | 42,648 82 | .18136 | 8 |
| 9 | Lawrence, | 152,000 00 | 8 | - | 41,974 97 | - | 24,569 21 | - | 9 |
| 10 | Lowell, | 120,000 00 | 12 | .20203 | 7,264 62 | .01223 | 10,133 14 | .01706 | 10 |
| 11 | Lynn, | 189,200 00 | 16 | - | 410 55 | - | 65,993 77 | - | 11 |
| 12 | Malden, | 110,880 00 | 7 | .19091 | 16,139 98 | .02778 | 1,451 96 | .00250 | 12 |
| 13 | New Bedford, | 127,188 00 | 12 | - | 2,706 74 | - | 179,570 97 | - | 13 |
| 14 | Newton, | 61,600 00 | 11 | .14799 | 7,419 57 | .01783 | 5,759 95 | .01384 | 14 |
| 15 | Pittsfield, | 27,720 00 | 7 | .18599 | 1,291 18 | .00867 | 4,496 57 | .03017 | 15 |
| 16 | Salem, | 44,964 00 | 9 | .26714 | 2,830 20 | .01681 | 12,873 94 | .07649 | 16 |
| 17 | Springfield, | 136,500 00 | 12 | .19725 | 18,161 83 | .02625 | 10,374 12 | .01499 | 17 |
| 18 | Suburban, | 61,310 50 | 9 | - | 4,783 84 | - | 6,917 02 | - | 18 |
| 19 | Taunton, | 22,000 00 | 10 | .17394 | 705 58 | .00558 | 1,028 60 | .00813 | 19 |
| 20 | Worcester, | 138,000 00 | 12 | .17608 | 11,849 43 | .01512 | 35,192 26[1] | - | 20 |

[1] Deficit.

1872

## 3. Net Earnings and their Application.

| No. of Company | COMPANY. | Balance from Year's Operation. Amount. | Per M sold. | Depreciation and Other Reserves. Amount. | Per M sold. | Other Expenses. Amount. | Per M sold. | No. of Company |
|---|---|---|---|---|---|---|---|---|
| 1 | Boston, | $1,555,662 30 | $0.27972 | $74,098 16 | $0.01332 | $51,471 14 | $0.00926 | 1 |
| 2 | Brockton, | 66,252 74 | .30591 | 16,000 00 | .07388 | 631 26 | .00291 | 2 |
| 3 | Cambridge, | 234,291 94 | .30722 | 55,664 33 | .07299 | 4,091 51 | .00537 | 3 |
| 4 | Charlestown, | 29,315 81 [1] | – | – | – | 532 39 | – | 4 |
| 5 | East Boston, | 77,127 68 [2] | .28901 | 22,977 50 | .08610 | 1,168 40 | .00311 | 5 |
| 6 | Fall River, | 65,010 95 | .17327 | 1,553 87 | .00414 | 1,768 84 | .00325 | 6 |
| 7 | Fitchburg, | 138,752 27 | .25194 | 50,000 00 | .09079 | 6,575 17 | – | 7 |
| 8 | Haverhill, | 22,376 97 [2] | .21766 | 5,989 91 | – | 11,826 91 | .05029 | 8 |
| 9 | Lawrence, | 51,938 66 [1] | – | – | – | 3,995 60 | – | 9 |
| 10 | Lowell, | 67,818 90 | .28839 | – | – | 7,750 50 | .01305 | 10 |
| 11 | Lynn, | 105,875 22 [2] | .23090 | 5,000 00 | – | – | – | 11 |
| 12 | Malden, | 118,103 39 [1] | – | 34,542 81 | .05816 | – | – | 12 |
| 13 | New Bedford, | 179,691 07 | .30253 | 1,947 04 [2] | .00262 | 3,384 73 | .00582 | 13 |
| 14 | Newton, | 166,585 17 [2] | .22419 | 31,633 06 [2] | – | 757 38 | – | 14 |
| 15 | Pittsfield, | 194,307 68 [1] | – | 5,211 47 [2] | – | 579 29 | .00139 | 15 |
| 16 | Salem, | 134,583 43 | .23171 | 2,726 76 | .00470 | 447 41 | .00300 | 16 |
| 17 | Springfield, | 154,024 52 [2] | .32597 | 943 89 | – | 510 20 | .00303 | 17 |
| 18 | Suburban, | 104,172 67 [1] | – | 4,413 07 | .01060 | 2,438 81 | .00352 | 18 |
| 19 | Taunton, | 79,771 88 | .19165 | 15,866 44 | .10646 | 4,040 83 | – | 19 |
| 20 | Worcester, | 49,821 60 | .33429 | 628 45 | .00373 | 75 00 | .00059 | 20 |
| | | 61,806 79 | .36721 | 6,448 40 | .00932 | – | – | |
| | | 173,923 16 | .25133 | | | | | |
| | | 25,066 50 [2] | .19000 | 15,979 63 | – | | | |
| | | 62,697 11 [1] | – | | | | | |
| | | 38,371 04 | .30337 | 14,561 86 | .11513 | | | |
| | | 187,994 58 | .23987 | 73,337 41 | .09357 | | | |

[1] Electricity. [2] Gas. [3] Reserves.

1873

## 2. Operating Expenses — *Concluded.*

### (c) *Office and Other Operating Expenses.*

| No. of Company. | COMPANY. | Office Expenses. | | Taxes. | | Miscellaneous Expenses. | | Total Cost of Manufacture, Purchase and Distribution of Gas less Residuals. | | No. of Company. |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount. | Per M sold. | Amount. | Per M sold. | Amount. | Per M sold. | Amount. | Per M sold. | |
| 1 | Boston, | $322,247 80 | $0.06794 | $429,780 20 | $0.07728 | $24,107 39 | $0.00433 | $2,719,289 03 | $0.48895 | 1 |
| 2 | Brockton, | 20,323 77 | .09384 | 14,070 85 | .06497 | 2,429 38 | .01122 | 176,596 39 | .81541 | 2 |
| 3 | Cambridge, | 39,123 14 | .05130 | 57,536 49 | .07545 | 8,064 30 | .01057 | 432,582 42 | .56723 | 3 |
| 4 | Charlestown, | 12,528 48 | .04695 | 22,742 64 | .08522 | 1,722 57 | .00645 | 151,291 77 | .56691 | 4 |
| 5 | East Boston, | 38,653 15 | .10302 | 22,830 00 | .06085 | 2,351 64 | .00627 | 243,686 54 | .64950 | 5 |
| 6 | Fall River, | 36,999 68 | .06718 | 40,836 46 | .07415 | 4,840 39 | .00879 | 311,807 67 | .56617 | 6 |
| 7 | Fitchburg, | 21,171 81 | .20594 | 9,304 44 | .09050 | 3,420 42 | .03327 | 95,636 76 | .93027 | 7 |
| 8 | Haverhill, | 31,632 66 | .13452 | 14,747 29 | .06271 | 4,624 07 | .01966 | 148,144 51 | .62997 | 8 |
| 9 | Lawrence, | 35,774 61 | .08106 | 43,881 66 | .09943 | 8,192 34 | .01856 | 294,629 51 | .66760 | 9 |
| 10 | Lowell, | 26,714 13 | .04408 | 55,177 96 | .09290 | 11,591 85 | .01951 | 375,145 93 | .63159 | 10 |
| 11 | Lynn, | 24,663 12 | .03319 | 52,874 80 | .07116 | 8,220 63 | .01107 | 375,253 51 | .50502 | 11 |
| 12 | Malden, | 48,417 02 | .08336 | 48,381 84 | .08330 | 13,002 11 | .02238 | 333,519 47 | .57422 | 12 |
| 13 | New Bedford, | 25,635 83 | .05425 | 42,056 03 | .08900 | 2,842 41 | .00602 | 265,437 37 | .56172 | 13 |
| 14 | Newton, | 46,974 60 | .11285 | 17,880 00 | .04296 | 2,190 93 | .00526 | 316,649 79 | .76071 | 14 |
| 15 | Pittsfield, | 19,639 44 | .13178 | 10,694 58 | .07176 | 4,497 30 | .03018 | 109,271 45 | .73319 | 15 |
| 16 | Salem, | 16,840 67 | .10006 | 17,554 27 | .10430 | 3,556 38 | .02113 | 113,836 26 | .67634 | 16 |
| 17 | Springfield, | 74,344 77 | .10743 | 46,292 85 | .06690 | 11,046 72 | .01596 | 399,109 65 | .57673 | 17 |
| 18 | Suburban, | 18,264 03 | .13855 | 9,938 46 | .07539 | 5,865 10 | .04449 | 104,162 02 | .79017 | 18 |
| 19 | Taunton, | 8,922 37 | .07054 | 8,125 90 | .06425 | 1,208 50 | .00956 | 86,661 94 | .68517 | 19 |
| 20 | Worcester, | 31,554 60 | .04026 | 49,396 69 | .06303 | 11,564 48 | .01476 | 426,851 53 | .54464 | 20 |

1874 2

2. Operating Expenses — *Continued.*

(*b*) *Expenses of Distribution* — Concluded.

| No. of Company | COMPANY. | Gas Stoves. | | Public Lamps. | | Other Expenses. | | Total Cost of Distribution. | | No. of Company |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount. | Per M sold. | Amount. | Per M sold. | Amount. | Per M sold. | Amount. | Per M sold. | |
| 1 | Boston, | $32,507 00 | $0.00586 | – | – | – | – | $446,562 44 | $0.08030 | 1 |
| 2 | Brockton, | 6,185 32 | .02560 | $6,423 19 | $0.02966 | – | – | 49,240 56 | .22736 | 2 |
| 3 | Cambridge, | 7,741 13 | .01015 | – | – | – | – | 98,002 45 | .12851 | 3 |
| 4 | Charlestown, | 147 13 | .00055 | – | – | – | – | 25,119 20 | .09412 | 4 |
| 5 | East Boston, | 2,515 15 | .00671 | 313 41 | .00083 | – | – | 41,344 93 | .11020 | 5 |
| 6 | Fall River, | 11,984 59 | .02176 | – | – | – | – | 69,880 43 | .12688 | 6 |
| 7 | Fitchburg, | 3,037 79 | .02955 | – | – | – | – | 16,157 50 | .15717 | 7 |
| 8 | Haverhill, | 7,660 61 | .03258 | 9,358 02 | .03974 | – | – | 32,360 13 | .13761 | 8 |
| 9 | Lawrence, | 5,249 17 | .01190 | 451 66 | .00102 | – | – | 36,003 00 | .08158 | 9 |
| 10 | Lowell, | 23,622 43 | .03977 | 19,861 98 | .03344 | – | – | 101,600 01 | .17105 | 10 |
| 11 | Lynn, | 9,960 10 | .01340 | – | – | – | – | 86,716 15 | .11670 | 11 |
| 12 | Malden, | 4,703 38 | .00810 | – | – | – | – | 46,820 04 | .08061 | 12 |
| 13 | New Bedford, | – | – | 35,868 16 | .07590 | – | – | 66,785 74 | .14133 | 13 |
| 14 | Newton, | 2,180 92 | .00524 | 8,714 05 | .02094 | – | – | 60,806 32 | .14608 | 14 |
| 15 | Pittsfield, | 120 69 | .00081 | – | – | – | – | 15,729 55 | .10554 | 15 |
| 16 | Salem, | – | – | – | – | – | – | 19,785 94 | .11755 | 16 |
| 17 | Springfield, | 5,497 32 | .00793 | 2,657 74 | .00384 | – | – | 58,576 25 | .08464 | 17 |
| 18 | Suburban, | – | – | – | – | – | – | 13,743 31 | .10426 | 18 |
| 19 | Taunton, | – | – | – | – | – | – | 9,237 74 | .07303 | 19 |
| 20 | Worcester, | 4,379 46 | .00559 | – | – | – | – | 56,445 85 | .07202 | 20 |

2. Operating Expenses — *Continued.*

(b) *Expenses of Distribution.*

| No. of Company | COMPANY. | Wages. | | Repairs of Mains and Services. | | Repairs and Renewals of Meters. | | Tools and Appliances. | | No. of Company |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount. | Per M sold. | Amount. | Per M sold. | Amount. | Per M sold. | Amount. | Per M sold. | |
| 1 | Boston, | $162,490 13 | $0.02922 | $138,031 05 | $0.02482 | $81,696 53 | $0.01469 | $31,747 73 | $0.00571 | 1 |
| 2 | Brockton, | 9,904 79 | .04573 | 9,775 16 | .04513 | 4,166 15 | .01924 | 12,785 95 | .05904 | 2 |
| 3 | Cambridge, | 31,960 09 | .04191 | 29,842 84 | .03913 | 22,360 47 | .02932 | 6,097 92 | .00800 | 3 |
| 4 | Charlestown, | 12,391 70 | .04643 | 8,758 11 | .03282 | 2,880 67 | .01079 | 941 59 | .00353 | 4 |
| 5 | East Boston, | 21,096 40 | .05623 | 3,821 00 | .01018 | 7,836 88 | .02089 | 5,762 09 | .01536 | 5 |
| 6 | Fall River, | 14,075 22 | .02556 | 19,188 20 | .03484 | 20,630 71 | .03746 | 4,001 71 | .00726 | 6 |
| 7 | Fitchburg, | 4,597 14 | .04472 | 3,164 56 | .03078 | 1,563 64 | .01521 | 3,794 37 | .03691 | 7 |
| 8 | Haverhill, | 2,415 96 | .01028 | 3,694 79 | .01571 | 6,063 46 | .02578 | 3,167 29 | .01347 | 8 |
| 9 | Lawrence, | 6,112 67 | .01385 | 7,898 88 | .01790 | 16,290 62 | .03691 | – | – | 9 |
| 10 | Lowell, | 28,372 52 | .04777 | 12,418 81 | .02091 | 14,591 18 | .02456 | 2,733 09 | .00460 | 10 |
| 11 | Lynn, | 22,665 51 | .03051 | 26,876 44 | .03617 | 17,388 91 | .02340 | 9,825 19 | .01322 | 11 |
| 12 | Malden, | 14,877 14 | .02561 | 12,451 74 | .02144 | 6,933 48 | .01194 | 7,854 30 | .01352 | 12 |
| 13 | New Bedford, | 21,579 64 | .04567 | 2,130 93 | .00451 | 5,387 82 | .01140 | 1,819 19 | .00385 | 13 |
| 14 | Newton, | 13,487 37 | .03240 | 10,178 60 | .02445 | 5,414 94 | .01301 | 20,830 44 | .05004 | 14 |
| 15 | Pittsfield, | 6,887 95 | .04622 | 4,395 18 | .02949 | 3,332 57 | .02236 | 993 16 | .00666 | 15 |
| 16 | Salem, | 6,772 43 | .04024 | 5,368 30 | .03189 | 1,911 82 | .01136 | 5,733 39 | .03406 | 16 |
| 17 | Springfield, | 18,678 03 | .02699 | 5,119 18 | .00740 | 3,368 24 | .00487 | 23,255 74 | .03360 | 17 |
| 18 | Suburban, | 3,776 78 | .02865 | 2,765 83 | .02098 | 1,714 48 | .01301 | 3,937 70 | .03030 | 18 |
| 19 | Taunton, | 8,115 44 | .06416 | 871 65 | .00689 | 250 65 | .00198 | – | – | 19 |
| 20 | Worcester, | 19,866 60 | .02535 | 10,892 73 | .01390 | 21,307 06 | .02718 | – | – | 20 |

1876

E 4 29-3



2. Operating Expenses — *Continued.*

(a) *Expenses of Manufacture* — Concluded.

| No. of Company. | Company. | Total Cost of Manufacture. | | Net Cost in Holder (Cost less Residuals sold). | | Gas purchased. | | | Total Net Cost of Gas made and purchased in Holder. | | No. of Company. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount. | Per M made. | Amount. | Per M made. | Amount. | Per M bought. | | Amount. | Per M sold. | |
| 1 | Boston, | $784,202 11 | $0.24827 | $753,344 40 | $0.23850 | $743,325 48 | $0.28454 | | $1,496,669 88 | $0.26910 | 1 |
| 2 | Brockton, | 94,307 84 | .37790 | 90,531 83 | .36276 | — | — | | 90,531 83 | .41802 | 2 |
| 3 | Cambridge, | 306,512 60 | .38184 | 229,856 04 | .29635 | — | — | | 229,856 04 | .30140 | 3 |
| 4 | Charlestown, | 151,006 99 | .50383 | 88,923 78 | .29669 | 258 10 | .47500 | | 89,178 88 | .32417 | 4 |
| 5 | East Boston, | 71,492 57 | .37977 | 55,394 82 | .31019 | 80,112 00 | .40000 | | 135,506 82 | .30916 | 5 |
| 6 | Fall River, | 161,355 51 | .27665 | 159,250 71 | .27304 | — | — | | 159,250 71 | .28916 | 6 |
| 7 | Fitchburg, | 82,058 64 | .46660 | 45,582 59 | .40856 | — | — | | 45,582 59 | .44339 | 7 |
| 8 | Haverhill, | 68,066 96 | .27320 | 64,780 36 | .26000 | — | — | | 64,780 36 | .27547 | 8 |
| 9 | Lawrence, | 209,521 00 | .44731 | 170,777 90 | .36460 | — | — | | 170,777 90 | .38697 | 9 |
| 10 | Lowell, | 253,111 06 | .41351 | 180,061 98 | .29417 | — | — | | 180,061 98 | .30315 | 10 |
| 11 | Lynn, | 241,749 50 | .30449 | 202,778 81 | .25540 | — | — | | 202,778 81 | .27290 | 11 |
| 12 | Malden, | 202,187 92 | .33814 | 176,384 89 | .29498 | 513 57 | .85000 | | 176,898 46 | .30457 | 12 |
| 13 | New Bedford, | 152,119 82 | .30057 | 128,117 36 | .25320 | — | — | | 128,117 36 | .27112 | 13 |
| 14 | Newton, | — | — | 188,797 94 | .43863 [1] | 176,475 17 | .41000 | | 188,797 94 | .45356 | 14 |
| 15 | Pittsfield, | 60,568 23 | .38961 | 58,710 58 | .37766 | — | — | | 58,710 58 | .39393 | 15 |
| 16 | Salem, | 71,829 92 | .36449 | 56,019 62 | .28426 | 79 38 | .63000 | | 56,099 00 | .33330 | 16 |
| 17 | Springfield, | 253,203 01 | .35160 | 208,849 06 | .29001 | — | — | | 208,849 06 | .30180 | 17 |
| 18 | Suburban, | — | — | 56,351 12 [1] | .41312 [1] | 56,307 32 | .41280 | | 56,351 12 | .42748 | 18 |
| 19 | Taunton, | 82,515 56 | .56983 | 59,167 43 | .40859 | — | — | | 59,167 43 | .46779 | 19 |
| 20 | Worcester, | 332,893 40 | .40515 | 277,880 91 | .33821 | — | — | | 277,880 91 | .35457 | 20 |

[1] All gas bought.

[1] Per M bought.

1877

## 2. Operating Expenses — *Continued.*

### (a) *Expenses of Manufacture* — Continued.

| No. of Company | COMPANY. | Wages. | | Repairs and Maintenance. | | Renewals. | | Apparatus and Machinery. | | No. of Company |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount | Per M made. | Amount. | Per M made. | Amount. | Per M made. | Amount. | Per M made. | |
| 1 | Boston, | $114,228 21 | $0.03616 | $49,299 02 | $0.01561 | – | – | $17,420 11 | $0.00551 | 1 |
| 2 | Brockton, | 18,617 14 | .07460 | 12,087 14 | .04844 | $2,510 31 | $0.01006 | 494 97 | .00198 | 2 |
| 3 | Cambridge, | 40,271 75 | .05197 | 51,745 79 | .06446 | 4,597 07 | .00572 | 518 87 | .00065 | 3 |
| 4 | Charlestown, | 23,776 52 | .07938 | 26,915 64 | .08990 | – | – | 481 67 | .00161 | 4 |
| 5 | East Boston, | 20,095 11 | .10674 | 6,028 43 | .03202 | – | – | 989 15 | .00526 | 5 |
| 6 | Fall River, | 16,100 47 | .02761 | 5,411 84 | .00928 | – | – | 8,365 28 | .01434 | 6 |
| 7 | Fitchburg, | 11,028 93 | .09885 | 851 69 | .00764 | 2,804 73 | .02514 | 2,468 06 | .02212 | 7 |
| 8 | Haverhill, | 9,115 83 | .03659 | 6,416 21 | .02575 | – | – | – | – | 8 |
| 9 | Lawrence, | 40,115 19 | .08564 | 16,096 04 | .03437 | 6,135 01 | .01310 | 3,329 65 | .00711 | 9 |
| 10 | Lowell, | 34,941 10 | .05709 | 15,941 53 | .02604 | – | – | 11,589 68 | .01893 | 10 |
| 11 | Lynn, | 33,075 97 | .04166 | 38,885 76 | .04898 | 4,081 33 | .00514 | 346 81 | .00044 | 11 |
| 12 | Malden, | 43,483 36 | .07272 | 2,765 71 | .00463 | 14,791 17 | .02474 | 8,457 79 | .01414 | 12 |
| 13 | New Bedford, | 22,889 59 | .04613 | 18,400 34 | .03708 | – | – | 671 66 | .00136 | 13 |
| 14 | Newton, | – | – | 9,715 91 | .02334 | – | – | 2,802 35 | .00673 | 14 |
| 15 | Pittsfield, | 12,486 63 | .08032 | 4,216 79 | .02712 | 2,441 65 | .01571 | 465 50 | .00299 | 15 |
| 16 | Salem, | 20,116 12 | .10208 | – | – | 5,433 52 | .02757 | 460 21 | .00234 | 16 |
| 17 | Springfield, | 48,121 98 | .06682 | 5,136 99 | .00713 | 25,220 34 | .03502 | 9,848 48 | .01368 | 17 |
| 18 | Suburban, | – | – | – | – | 43 80 | – | – | – | 18 |
| 19 | Taunton, | 20,030 03 | .15213 | 5,361 35 | .03703 | 1,488 56 | .01028 | 302 80 | .00209 | 19 |
| 20 | Worcester, | 33,789 83 | .04112 | 67,676 13 | .08237 | – | – | – | – | 20 |

Ex 429-1
Wm



2. Operating Expenses.

(a) *Expenses of Manufacture.*

| No. of Company | COMPANY. | Coal. | | Engineers. | | Purifiers. | | Water. | | No. of Company |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount. | Per M made. | Amount. | Per M made. | Amount. | Per M made. | Amount. | Per M made. | |
| 1 | Boston, | $247,636 58 | $0.07840 | $342,216 90 | $0.10834 | $7,315 86 | $0.00232 | $6,085 83 | $0.00193 | 1 |
| 2 | Brockton, | 34,105 60 | .13666 | 24,928 43 | .09989 | 945 00 | .00379 | 619 25 | .00248 | 2 |
| 3 | Cambridge, | 182,619 54 | .22750 | 22,215 61 | .02768 | 1,650 73 | .00206 | 2,893 24 | .00360 | 3 |
| 4 | Charlestown, | 98,440 98 | .32845 | - | - | 88 98 | .00029 | 1,303 20 | .00435 | 4 |
| 5 | East Boston, | 31,082 77 | .16611 | 11,834 20 | .06287 | 596 51 | .00317 | 866 40 | .00460 | 5 |
| 6 | Fall River, | 57,760 64 | .09905 | 73,192 75 | .12549 | 515 53 | .00088 | - | - | 6 |
| 7 | Fitchburg, | 24,119 53 | .21618 | 10,126 42 | .09076 | 370 21 | .00332 | 289 07 | .00259 | 7 |
| 8 | Haverhill, | 33,895 70 | .09691 | 26,723 53 | .10324 | 2,404 20 | .00965 | 511 49 | .00206 | 8 |
| 9 | Lawrence, | 119,148 23 | .25437 | 22,863 02 | .04881 | 1,374 33 | .00293 | 459 53 | .00098 | 9 |
| 10 | Lowell, | 158,285 24 | .25859 | 28,313 60 | .04626 | 4,032 60 | .00659 | 7 31 | .00001 | 10 |
| 11 | Lynn, | 110,206 19 | .13892 | 50,179 21 | .06320 | 1,713 66 | .00216 | 3,170 53 | .00399 | 11 |
| 12 | Malden, | 91,442 37 | .15293 | 37,331 54 | .06243 | 1,444 07 | .00242 | 2,471 91 | .00413 | 12 |
| 13 | New Bedford, | 80,050 86 | .16133 | 28,298 55 | .05703 | 49 45 | .00010 | 1,750 37 | .00354 | 13 |
| 14 | Newton, | - | - | - | - | - | - | - | - | 14 |
| 15 | Pittsfield, | 24,426 03 | .15714 | 15,700 91 | .10100 | 105 90 | .00068 | 722 77 | .00465 | 15 |
| 16 | Salem, | 32,823 00 | .16554 | 12,357 83 | .06271 | 292 62 | .00148 | 546 62 | .00277 | 16 |
| 17 | Springfield, | 113,904 37 | .15817 | 47,586 56 | .06608 | 2,651 33 | .00368 | 732 96 | .00102 | 17 |
| 18 | Suburban, | - | - | - | - | - | - | - | - | 18 |
| 19 | Taunton, | 52,328 35 | .36136 | 378 20 | .00261 | 626 27 | .00433 | - | - | 19 |
| 20 | Worcester, | 179,023 04 | .21788 | 47,150 91 | .05739 | 2,622 30 | .00319 | 2,631 19 | .00320 | 20 |

1879

# CITY OF LINCOLN

GEORGE DAYTON
SUPT. OF ACCOUNTS AND FINANCES AND CITY TREASURER

WILLIAM SCHROEDER
SUPT. OF PARKS AND PUBLIC PROPERTY

THOMAS J. HENSLEY
SUPT. OF STREETS AND PUBLIC IMPROVEMENTS

ORNAN J. KING
SUPT. OF PUBLIC SAFETY

ADNA DOBSON
CITY ENGINEER

FRANK C. ZEHRUNG, MAYOR
SUPT. OF PUBLIC AFFAIRS

GEORGE W. BATES
DEPUTY CITY ENGINEER

LINCOLN, NEBR.

Mch. 4, 1914.

Mr. Alton D. Adams,

City.

Dear Sir:

I find that there are 27.06 miles of alleys running parallel with the paved streets in the City of Lincoln. There are 4.81 miles of alleys paved in the entire city.

Yours truly,

Adna Dobson
City Engineer.

O.K. D.A.R.

E 1441
Mar

27.06
4.81
22.25

Endorsed on cover: File No. 25,574. Nebraska D. C. U. S. Term No. 744. Lincoln Gas and Electric Light Company, appellant, vs. The City of Lincoln et al. Filed October 24th, 1916. File No. 25,574.

IN THE

# Supreme Court of the United States.

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant, *against* THE CITY OF LINCOLN *et al.*, Appellees. | No. 744. Oct. Term, 1916. |



## PETITION FOR LEAVE TO FILE BILL OF REVIEW IN THE COURT BELOW.

To the Honorable the Justices of the Supreme Court of the United States:

Now comes the Lincoln Gas & Electric Light Company, a corporation, appellant, and avers and represents and shows to the Court, that it commenced and has prosecuted the above-entitled suit in equity, to obtain an injunction enjoining the enforcement of a gas rate fixed by ordinance of the City of Lincoln, Nebraska, as confiscatory, illegal and void.



Appellant further shows that upon the 27th day of December, 1906, a temporary injunction was issued by the Circuit Court of the United States for the District of Nebraska, and that thereafter evidence was taken by both parties to said cause, and upon the 20th day of March, 1909, the Court

10 twenty months. That there is no evidence in the record in said cause docketed herein, as above mentioned, showing the earnings and effect upon appellant's income under said rate, the same having occurred since the taking of testimony therein.

That the master found that the company, in the year 1907, would have earned only such a return under the rate ordinance, that said ordinance would have been confiscatory upon the valuations as found by the Master, but the Master made the additional finding as follows: "All human experience has shown that increased consumption follows quickly a reduction in the price of com-
11 modities, and the evidence in this case satisfactorily shows that gas is no exception to the rule."

This Honorable Court, in the case of City of Knoxville v. Knoxville Water Company, 212 U. S., page 1, at page 15 said, "* * * but evidence of the operations of the years succeeding to the ordinance is relevant and of great importance, and by a consideration of such evidence a much greater degree of certainty could be obtained." And in the case of Wilcox v. Consolidated Gas Company, 212 U. S., page 19, at page 51, this Court said, "* * * but it is equally true that a reduction in rates will not always reduce the
12 net earnings, but on the contrary may increase them. The question of how much an increased consumption under a less rate will increase the earnings of complainant, if at all, at a cost not proportioned to the former cost, can be answered only by a practical test." And in the case of Des Moines Gas Company v. Des Moines, 238 U. S., at page 173, the Court said, "We think this is particularly so in view of the fact that ordi-

narily time alone can satisfactorily demonstrate in 13
a case like this whether or not the rates established will prove so unremunerative as to be confiscatory in the sense in which that term has been defined in rate-making cases."

Therefore, it would seem that this Court, as well as the master appointed by the Court below, have a fixed idea which might be generalized into the expression that reduction in rate causes increase in consumption and in earnings. Appellant desires to present the evidence of actual operations which will show that gas being a necessity in the household, the impression of this Honorable Court, as well as the master 14
herein, is erroneous and in truth and in fact under the actual operating conditions the same is not the case, and there is not such increase. Appellant desires to take additional testimony in the Court below for the purpose of showing to the Court below and to this Honorable Court the actual operations under the rate fixed by the ordinance, in order that the Court below may consider the same, and this Honorable Court may have the same before it when considering the matters of value and return embraced in the record now on file in this appeal.

That since the order in the Court below, and 15
the perfecting of the appeal herein, and upon the first day of July, 1916, the Supreme Court of the State of Nebraska, rendered an opinion in an action commenced by the appellees herein, against the appellant in the State Court for the recovery of the above mentioned occupation tax, and in said decision the Supreme Court of Nebraska (referring to said 3% gross receipts tax) said, "An action in the State Courts to recover an

16 occupation tax against such corporation, begun while an action is pending in the Courts of the United States, to determine whether another ordinance regulating the rates of service of such corporation is confiscatory, should be abated until the action in the Federal Court is finally determined."

That by reason of the failure of the Court below to make an order upon the validity of the said occupation tax ordinance, the appellant herein is unable to present to this Honorable Court for its review the decision upon the question of the legality of said occupation tax or the authoritative determination of the Court below thereon.

17 That the Court below dismissed the complainant's bill of complaint without giving the complainant the right to, on motion, reinstate the said cause with all of the pleadings and evidence then on file, and without giving the appellant the right to file such additional pleadings and take and file such additional evidence as in the light of a practical experience and actual application of the rates would demonstrate whether or not said rates would prove so unremunerative as to be confiscatory and cause irreparable loss, damage and injury to the appellant.

That since the putting into effect of the rate,
18 as above mentioned, on May 1, 1915, the controversy in this cause and as embraced in this record, is now narrowed in practical effect to the question as to the return to the consumers of gas of the amount collected in excess of the ordinance rate during the pendency of the litigation hereunder, and by reason thereof, this Honorable Court should have before it all facts bearing upon the rate of return before entering an order,

the effect of which would cause the return to the consumers of money which could not be subsequently acquired by appellant in the event that after practical operations a new action should be commenced and the ordinance held confiscatory. That the appellant, since the taking of said testimony in the Court below, has, in all things, handled its property in a proper, customary and economical manner, and has paid out no dividends whatsoever, but that by reason of said decreased rate and its necessary operating expenses, has been unable to accumulate sufficient funds to repay said amounts if the same should be ordered by this Honorable Court, and in such event insolvency and bankruptcy stare appellant in the face. That appellant was entirely unable, on its own resources, to furnish the surety bond above mentioned, now in force, but that arrangements by others were made with the surety company furnishing the said bond, whereby, through the pledging of their credit and collateral by such outside parties, appellant was enabled to furnish said surety bond, thereby assuring to the consumers such returns, but the appellant will be unable to repay to its sureties the amounts they will be so called upon to repay on appellant's behalf. That its books of account and records are complete and up to date, and the taking of the additional testimony required will involve no complicated problems or questions of fact for determination, but consists practically entirely of a mere compilation of accounts and checking of the accuracy of the same. The new matter, in the nature of newly discovered evidence, is presented to this Court, and this petition covering the same at the earliest date at

22 which a comprehensive showing covering all seasons and the operations for a reasonable time under the said ordinance rate could be made.

The appellant's bill of review presented herewith is based upon new matter which has arisen since the decree in the Court below in the nature of newly developed or newly discovered evidence which was not in existence and could not have been found and produced by the use of reasonable diligence before the decree was rendered below, and that said evidence is material and necessary to a proper, just and equitable decree in the Court below, and decision on the appeal of said
23 cause pending in this Honorable Court, and would materially affect the decree and would induce a different result than the decree heretofore entered herein, and that the failure to rule upon said occupation tax ordinance, and the said failure to permit the reinstatement of said cause, constitute errors of law apparent upon the face of the decree and the pleadings and proceedings upon which the same is based, and constitute violations of the rules of law and equity and of equity practice in cases involving confiscatory rates.

That no mischief, inconvenience, injury, damage or injustice can be done to the appellees,
24 or to the consumers by bringing upon the records of this cause, the result of the trial and test of said rate, but that great and irreparable injury, loss and damage will be suffered by this appellant unless such facts shall be before this Honorable Court for its consideration.

*Wherefore*, by reason of said subsequent happenings in the nature of newly discovered evidence, and by reason of said errors of law ap-

parent upon the face of the decree, pleadings and proceedings upon which it is based, *appellant prays*: that

1.—It be permitted to file in the United States District Court for the District of Nebraska, its bill of review in substiantially the form herewith presented to this Honorable Court, or such other and further supplemental bill, in the nature of a bill of review, as may be proper to bring to the attention of the Court below and to this honorable Court, the result of the trial and test of said gas rate of $1.00 net per thousand cubic feet, and that it be permitted to take testimony bringing its earnings and the other matters involved, down to the latest practicable date.

2.—This cause be continued on the docket of this Honorable Court until the proofs below are taken and brought upon the record of this cause in this Honorable Court.

3.—This Honorable Court may order the Court below to make or cause to be made such definite decisions and findings as will correct, upon the record, the said above alleged errors of law apparent upon the face of the record.

And the *appellant prays* for such other and further and appropriate relief as to this Honorable Court may seem proper.

CHAS. A. FRUEAUFF,
E. C. STRODE,
Solicitors for Appellant.

State of New York, }
County of New York, } ss.:

Frank W. Frueauff, being first duly sworn, deposes and says, that he is President of the Lincoln Gas & Electric Light Company; that he has read and knows the contents of the foregoing pleading and petition for leave to file bill of review; that he has personal knowledge of the facts referred to therein relating to the trial and test of the said gas rate; that he had no knowledge of said facts at the time of the hearing of the cause below, or when the original decree was entered upon the 15th day of June, 1915; that such facts have come to his personal knowledge since the original decree was entered in this case upon the 15th day of June, 1915, and that said facts could not have been discovered in the exercise of reasonable diligence, and could not have been produced nor possibly have been used at the time when the decree was passed, and that the statements, allegations and averments of fact in the foregoing pleading, and the bill of review therein mentioned, are true. And further affiant sayeth not.

FRANK W. FRUEAUFF.

Subscribed and sworn to before me, }
this 24th day of March, 1917. }

Harriet C. Thirkield,
[NOTARIAL SEAL.] Notary Public,
New York County No. 97.
New York Register No. 7053.

IN THE

SUPREME COURT OF THE UNITED STATES.

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant, *v.* THE CITY OF LINCOLN *et al.*, Appellees. | Affidavit. |

State of New York, }
County of New York, } ss.:

V. L. Board, being first duly sworn, deposes and says: That he has examined the books of Lincoln Gas & Electric Light Company, and familiarized himself with them for the purpose of securing the figures for this affidavit; that he has carefully checked the same, and states as follows:

That beginning approximately from May 1, 1915, the company has billed customers for gas consumed at the rate of $1.00 net per thousand cubic feet; and that the rate for gas consumed prior thereto and for the period of about eight years or more, had been $1.20 net per thousand cubic feet. Affiant states that for the twenty months' period beginning with September 1, 1913, and ending April 30th, 1915, during which period the rate for gas was $1.20 net per thousand cubic feet, the average amount of gas consumed was 45,400 cubic feet per customer, and that during the twenty months' period immediately following, to wit, May 1st, 1915, to December 31st,

34 1916, during which time the rate for gas was $1.00 net per thousand cubic feet, the average amount of gas consumed per customer was 45,014 cubic feet, a decrease, from the date of such reduction, of 386 cubic feet per customer. That the average revenue per customer received by the company during the twenty months' period ending April 30th, 1915, under the $1.20 net rate per thousand cubic feet, was $55.53, and under the $1.00 net rate, for the twenty months' period ending December 31st, 1916, was $46.03, a decrease of $9.50 per customer, which is greater than the decrease caused by the difference in rate alone. That the annual average amount of gas
35 consumed per customer, and the annual revenue received therefrom, from January 1st, 1907, to December 31st, 1916, are as follows:

| Year. | Average Consumption per Customer. | Average Gross Receipts per Customer. |
|---|---|---|
| 1907 | 28,620 | $34.43 |
| 1908 | 29,290 | 35.13 |
| 1909 | 28,850 | 34.62 |
| 1910 | 27,890 | 33.37 |
| 1911 | 30,297 | 36.54 |
| 1912 | 30,230 | 36.33 |
| 1913 | 27,020 | 32.69 |
| 1914 | 27,300 | 32.95 |
| 36 1915 | 26,670 | 28.76 |
| 1916 | 25,580 | 25.64 |

That on December 31st, 1914, being the nearest all-season calendar year prior to the time when the $1.00 rate was put into effect, there were 8,209 customers, and on December 31st, 1916, the nearest all-season calendar year after the reduced rate was put into effect, there were 9,032

customers, or 823 additional, which increase in 37
customers, in the opinion of affiant, is about the equivalent of the growth caused by the increase in population for the intervening twenty-four months' period. The total increase in sales of gas in cubic feet during the year 1916 over the year 1914 was approximately 6,894,500 cubic feet, or, distributing such total additional sales over the total additional customers, would be approximately 8,377 cubic feet as a total for each additional customer, as compared with the prior average of approximately 25,000 to 30,000 cubic feet per customer, as above mentioned, and the total gross receipts from such additional customers 38
on the above basis, amounting to less than 70c. each per month, would be less than the amount required to pay the fixed charges in the investment in meters, distributing lines, etc., required to supply said customers, the upkeep thereof and the cost of the gas consumed.

During the year 1915, one-third thereof was at the rate of $1.20 net per thousand cubic feet, and the balance at $1.00 net per thousand cubic feet; and during the whole of the year 1916, at the rate of $1.00 net per thousand cubic feet. Therefore, the calendar years 1914 and 1916 are compared.

That the gross revenue from sales of gas dur- 39
ing the calendar year 1914, during which year the net rate was $1.20, was $270,473.78, and for the calendar year 1916, during which year the net rate was $1.00, was $231,597.26, or a decrease in gross revenue of $38,876.42. The operating expenses of the company, under either above mentioned rates, would be approximately the same (except for the steady increase in expenses as

hereinafter mentioned, and except for the occupation tax of 3 per cent. of gross revenue), so that the decrease in the company's net revenue would be at least equal to the above-mentioned decrease in gross revenue.

Affiant further states that the said actual experience of the company for such period of twenty months, has shown a less amount of gas sold per customer, and a revenue per customer less than that caused by the reduction in rate, and a decrease in receipts for such period of $56,342.95.

Affiant further states that since the organization of this company, no dividends whatever have been paid to its stockholders, or unusual or extraordinary expenses of any kind or character. That since the passage of the rate-fixing ordinance, the business of the company has been carried on in its usual, customary and ordinary manner, and that the company has not been able to accumulate the funds sufficient to refund to the consumers of gas the amount which may be ordered by the Court. That while the sales per consumer are decreasing, as above shown, affiant states that the operating expenses are increasing steadily and very materially. That the labor employed in and about the plant of the company has, during the years 1915, 1916 and 1917, been steadily increasing in cost. That the labor, coke, iron, metal and merchandise have all increased in price to from 10% to 50% above the prices at the time of the master's report in this cause. That the company uses, in the manufacture of its gas, large quantities of oil, for the manufacture and enrichment thereof, and that the said oil is almost impossible to secure, and at the present time will cost the company approximately 100% more than

previously, and the company is entirely unable to make contracts for any considerable supply thereof in advance. That the tendency of all labor, material and supplies at the present time is to largely increase in cost, thereby tending to reduce the net earnings of the company in addition to the above mentioned reduction in rate. 43

V. L. BOARD.

Sworn to before me this 24th day of March, 1917.

Harriet C. Thirkield,
[NOTARIAL SEAL.] Notary Public,
New York County No. 97.
New York Register No. 7053. 44

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**Bill of Review.**

DISTRICT COURT OF THE UNITED STATES,

FOR THE DISTRICT OF NEBRASKA.

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
Plaintiff,

*against*

THE CITY OF LINCOLN, and others,
Defendants.

No.
In Equity. 45

Now comes the plaintiff and with leave of the Supreme Court of the United States, first had and obtained, files this, its bill of review, or supplemental bill in the nature of a bill of review, and avers and states and shows to the Court the following facts and proceedings, to wit:

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46

I.

That this bill is filed and presented, first by reason of new matter that has arisen since the decree herein, material and necessary to a proper determination of this cause, second, by reason of newly developed facts and evidence in the nature of newly discovered evidence material to a consideration and decision herein which was not in existence and could not have been found and produced by the use of reasonable diligence before the decree herein was rendered; third, by reason of errors of law apparent upon the face of the decree and the pleadings and proceedings upon
47 which it is based, consisting of the violation of rules of law and equity and the settled practice of the Court in such cases.

II.

That on the 16th day of June, 1915, it was decreed by this Court that plaintiff's bill for an injunction against the rates fixed by ordinance of the City of Lincoln, be dismissed; that the report of the special master theretofore appointed be and the same was confirmed; that the restraining order against the enforcement of said ordinance be dissolved and that the plaintiff pay the costs of this action.

48

III.

The plaintiff duly perfected an appeal from said decree to the Supreme Court of the United States within the time prescribed therefor, and that said appeal has been pending in said Court since the 22nd day of November, 1915.

That the injunction heretofore granted by this Court was restored and held in effect during

the pendency of the appeal upon the condition that 49
plaintiff enter into a bond in the sum of five hundred and seventy-five thousand dollars ($575,000), conditioned upon its paying all overcharges to consumers in the event that the ordinance should be sustained fixing a rate of one dollar ($1) net per thousand feet of gas, which said bond was filed and approved in the sum of five hundred and seventy-five thousand dollars ($575,000) upon the 22nd day of November, 1915, and is now in full force and effect.

IV.

That plaintiff has duly done and performed each 50
and all and every of the orders, directions and commands of the said decree, and further avers that on or about the 1st day of May, 1915, the said plaintiff placed into effect a rate of one dollar ($1) net per thousand cubic feet of gas, being a rate per thousand cubic feet equivalent to the rate provided in the ordinance herein questioned, and since that date said rate of one dollar ($1) has been in full force and effect.

V.

That on or about the day of 1917,
it duly petitioned the Supreme Court of the
United States for leave to file its bill of review 51
or supplemental bill in the nature of a bill of review, or other appropriate pleading and proceeding in this Court for the purpose of bringing upon the record in this cause and Court the facts showing the result of the trial and test of the one dollar ($1) rate from the taking effect of said rate, to wit, May 1st, 1915, to the latest practicable date, and that upon due consideration

52 thereof the same was by the said Supreme Court of the United States duly allowed, a true and correct copy of said order being hereto attached, marked "Exhibit A" and made a part hereof.

VI.

1.—That in December, 1906, the City Council of the City of Lincoln passed an ordinance to be effective January 1st, 1907, imposing an occupation tax of two and one-half per cent. (2 1/2%) of its gross earnings upon all gas companies furnishing gas to inhabitants in the City of Lincoln. Thereafter, upon the 6th day of April, 1909,
53 the Circuit Court of the United States, sitting in and for the District of Nebraska, enjoined the enforcement of the said occupation tax upon the grounds of its being unconstitutional in that it was not uniform upon persons, and consequently violated the Constitution of the State of Nebraska.

2.—The master in his report in this cause, filed upon the 8th day of September, 1914, held the said occupation tax ordinance to be valid and binding. The Court, however, in approving the report of the master in a memorandum to his decree stated: "I do not agree with the special
54 master as to the constitutionality of the occupation tax ordinance of the City of Lincoln." But, however, the said Court did not directly rule or enter an order as to the validity of said occupation tax ordinance nor enjoin the enforcement of the collection of the said tax by the City of Lincoln.

3.—In December, 1909, the City Council of the City of Lincoln passed an ordinance impos-

ing an occupation tax of three per cent. (3%) upon the gross receipts of all companies manufacturing and furnishing gas and electricity to inhabitants of the City of Lincoln, to become effective in January, 1910, and repealing the two and one-half per cent. (2 1/2%) occupation tax ordinance of 1906. Later, in an action instituted in the State Court of the State of Nebraska, to enjoin the enforcement of said tax ordinances, which said action went upon appeal to the Supreme Court of the State of Nebraska, and said Supreme Court of Nebraska holding invalid the occupation tax ordinance of 1906, but declining to rule upon the three per cent. (3%) occupation tax ordinance of 1909, saying in the syllabus by the Court: 55 56

> "An action in the State Courts to recover an occupation tax against such corporation begun while an action is pending in the Courts of the United States to determine whether another ordinance regulating the rates of service of such corporation is confiscatory, should be abated until the action in the Federal Court is finally determined."

4.—That by reason of failure of this Court and by reason of the failure of the Supreme Court of Nebraska to rule upon the said occupation tax ordinance, the plaintiff herein is without relief against said tax and the penalties thereunder are piling up against the complainant and this Honorable Court has made no ruling thereon. 57

5.—That unless the validity of the occupation tax ordinance passed by the City Council in December, 1906, and in December, 1909, imposing the tax of two and one-half per cent. (2 1/2%) and three per cent. (3%) respectively, upon its

58 gross earnings be determined and taken into consideration in the fixing of the rate to be charged by the company to consumers of gas in the City of Lincoln, great and irreparable damage, loss and injury to the plaintiff will result thereby.

VII.

1.—Plaintiff further avers that while the master found from the evidence that capital invested in business in the City of Lincoln sought and generally obtained not less than eight per cent. (8%) return per annum, that a rate not lower than six per cent. (6%) per annum upon the in-
59 vested capital of this plaintiff could not be regarded as confiscatory, notwithstanding which the master found that the plaintiff would actually receive a return of only five and twelve one-hundredths per cent. (5.12%) per annum upon its investment as found by him, but that:

> "All human experience has shown that increased consumption follows quickly a reduction in the price of commodities, and the evidence in this case satisfactorily shows that gas is no exception to the rule. I find that with gas selling at one dollar ($1) per M cubic feet, plaintiff would have received since December 1st, 1906, when the rate ordinance
60 was to be effective, not less than six per cent. (6%) per annum upon the value of the property employed by it in serving the people of Lincoln."

2.—Whereas, plaintiff avers and alleges:

(a) That beginning approximately from May 1st, 1915, the company has billed customers for gas consumed at the rate of $1.00 net per thou-

sand cubic feet; and that the rate for gas consumed prior thereto and for the period of about eight years or more, had been $1.20 net per thousand cubic feet. 61

(b) That for the twenty months' period beginning with September 1st, 1913, and ending April 30th, 1915, during which period the rate for gas was $1.20 net per thousand cubic feet, the average amount of gas consumed was 45,400 cubic feet per customer, and that during the twenty months' period immediately following, to wit, May 1st, 1915, to December 31st, 1916, during which time the rate for gas was $1.00 net per thousand cubic feet, the average amount of gas consumed per customer was 45,014 cubic feet, a decrease, from the date of such reduction, of 386 cubic feet per customer. That the average revenue per customer received by the company during the twenty months' period, ending April 30th, 1915, under the $1.20 net rate per thousand cubic feet, was $55.53, and under the $1.00 net rate, for the twenty months' period ending December 31st, 1916, was $46.03, a decrease of $9.50 per customer, which is greater than the decrease caused by the difference in rate alone. That the annual average amount of gas consumed per customer, and the annual revenue received therefrom from January 1st, 1907, to December 31st, 1916, are as follows: 62 63

64

| Year. | Average Consumption per Customer. | Average Gross Receipts per Customer. |
|---|---|---|
| 1907 | 28,620 | $34.43 |
| 1908 | 29,290 | 35.13 |
| 1909 | 28,850 | 34.62 |
| 1910 | 27,890 | 33.37 |
| 1911 | 30,297 | 36.54 |
| 1912 | 30,230 | 36.33 |
| 1913 | 27,020 | 32.69 |
| 1914 | 27,300 | 32.95 |
| 1915 | 26,670 | 28.76 |
| 1916 | 25,580 | 25.64 |

(c) That on December 31st, 1914, being the
65 nearest all-season calendar year prior to the time when the $1.00 rate was put into effect, there were 8,209 customers, and on December 31st, 1916, the nearest all-season calendar year after the reduced rate was put into effect, there were 9,032 customers, or 823 additional, which increase in customers is about the equivalent of the growth caused by the increase in population for the intervening twenty-four months' period. The total increase in sales of gas in cubic feet during the year 1916 over the year 1914 was approximately 6,894,500 cubic feet, or distributing such total additional sales over the total additional customers would be
66 approximately 8,377 cubic feet as a total for each additional customer as compared with the prior average of approximately 25,000 to 30,000 cubic feet per customer as above mentioned, and the total gross receipts from such additional customers on the above basis amounting to less than 70c. each per month, would be less than the amount required to pay the fixed charges in the investment in meters, distributing lines, etc., required

to supply said customers, the upkeep thereof and the cost of the gas consumed. 67

During the year 1915, one-third thereof was at the rate of $1.20 net per thousand cubic feet, and the balance at $1.00 net per thousand cubic feet; and during the whole of the year 1916, at the rate of $1.00 per thousand cubic feet. Therefore, the calendar years 1914 and 1916 are compared.

(d) That the gross revenue sales of gas during the calendar year 1914, during which year the net rate was $1.20, was $270,473.78, and for the calendar year 1916, during which year the net rate was $1.00, was $231,597.26, or a decrease in gross revenue of $38,876.42. The operating expenses of the company under either above mentioned rates would be approximately the same (except for the steady increase in expenses as hereinafter mentioned, and except for the occupation tax of 3% of gross revenue) so that the decrease in the company's net revenue would be at least equal to the above mentioned decrease in gross revenue. 68

(e) That the said actual experience of the company for such period of twenty months, has shown a less amount of gas sold per customer, and a revenue per customer less than that caused by the reduction in rate, and decrease in receipts for such period of $56,342.95. 69

Therefore, plaintiff alleges that notwithstanding the fact that the period since May 1st, 1915, to the present date has been one of unusual financial prosperity in the City of Lincoln, yet the results of the actual trial and test of the said $1

rate for the period beginning May 1st, 1915, and ending December 31st, 1916, instead of resulting in increased consumption and increased revenue, as the master found would result, actual experience has shown a less number of sales per customer, less revenue per customer, and a decrease in revenue to the plaintiff during such period of $56,342.95.

VIII.

That since its organization no dividends have ever been paid to the stockholders of plaintiff and that its entire receipts other than that necessary to pay operating expenses and bond interest has been used in extensions and additions to its property and is a portion of the property involved in this litigation.

IX.

That for a long time past the actual cost of labor has been advancing, and the cost of coal, oil, pipe and all other materials necessary for the operations and maintenance of plaintiff's property and plant has greatly increased and plaintiff believes will continue to advance in cost and not be reduced, and such conditions were not taken into consideration when the decree of this Court was entered, finding that the rate of return was five and twelve one-hundredths per cent. (5.12%) and that no dividends had ever been paid.

X.

Plaintiff further avers, and alleges, that there are errors of law apparent upon the face of the decree, pleadings and proceedings upon which it is based, which errors consist in the violation of the rules of law and equity and the settled prac-

tice of courts of equity in confiscatory rate cases 73
in this, to wit:

1.—The Court below dismissed the plaintiff's bill of complaint without giving the plaintiff the right to on motion reinstate the said cause with all the pleadings and evidence now on file and without giving the plaintiff the right to file such additional pleadings and take and file such additional evidence as in the light of practical experience and actual application of the rates would demonstrate whether or not said rate would prove to have been or to be so unremunerative as to be confiscatory; even though the master found in his report: 74

(a) That the plaintiff would actually receive only five and twelve one-hundredths per cent. (5.12%) return upon its investment;

(b) That no dividends had ever been paid to the stockholders of the plaintiff;

(c) That "All human experience has shown that increased consumption follows quickly a reduction in the price of commodities, and the evidence in this case satisfactorily shows that gas is no exception to the rule;" and "That with gas selling at one dollar ($1) per thousand cubic feet, plaintiff would have received since December 75
1st, 1907, when the rate ordinance was to be effective, not less than six per cent. (6%) per annum upon the value of the propery employed by it in serving the people of Lincoln."

In view of such finding, the Court, if it dismissed the bill, should have dismissed it without prejudice to reinstate the case for subsequent hearing after the one dollar ($1) rate had been put to actual trial and test.

2.—In not remanding the case as petitioned by

the plaintiff to the master, to report and find as instructed by the Supreme Court of the United States in its opinion and order as shown in 223 U. S., 349-365, where the Court says:

> "There should be a full report upon past depreciation, past expense for reconstruction or replacement and past operating expenses, including current repairs. We should be advised as to the gross receipts for recent years and just how these receipts have been expended. Then the amount to be set aside for future depreciation will depend upon the character and probable life of the property and the method adopted in the past to preserve the property. It can readily be seen that the amount to be annually set aside may be such as to forbid rate reductions because of the requirement of such a fund. The matter is one for a skilled master who should make a full report upon the value of the property, the receipts and the expenses of operation and the sum paid out for reconstruction and replacement and in dividends in recent years."

Said error apparent upon the face of the decree, pleadings and proceedings upon which it is based being in this, to wit:

That the master failed to:

(a) Make a full report upon past depreciation, past expense for reconstruction or replacement and past operating expenses, including current repairs;

(b) Ascertain the amount to be set aside for future depreciation in that no method or rate is found by the Master, but merely a certain amount of money without stating his method of calculation or reasons for so finding;

(c) To make a complete summary of the evidence, his deductions and reasons therefor, so as to fully advise the plaintiff and the Court;

(d) To make a full report upon the value of the property.

## XI.

That the plaintiff is now and has been since May 1st, 1915, collecting the rate of one dollar ($1) per thousand feet of gas furnished to consumers in the City of Lincoln.

That the said rate of one dollar ($1) is now and was from the beginning wholly inadequate, noncompensatory, confiscatory, illegal and void, and that plaintiff has sustained and is now and will hereafter sustain great and irreparable loss and injury and damage by reason of the enforcement of said one dollar ($1) rate ordinance of said City.

Plaintiff has no other plain, complete or adequate remedy at law; that the decree dismissing plaintiff's bill of complaint is contrary to the rules of law and equity practice in rate cases, in that said bill was not dismissed without prejudice and granting plaintiff the right to reopen and reinstate said cause after an actual application and trial of the one dollar ($1) rate for a reasonable period of time, and it therefore comes again into this Court where alone due and proper relief can be had.

Wherefore, the premises considered, the plaintiff prays this Honorable Court:

I.—To review its former findings, judgment and decrees in this cause;

II.—To accept and receive the proof of the facts showing the results of the actual trial and test of the said one dollar ($1) rate from May 1st, 1915, to date;

III.—To modify and set aside the decree entered herein on the 16th day of June, 1915;

IV.—To upon further proofs and hearing and determination of this cause grant to the plaintiff

82 a permanent injunction enjoining the enforcement of the said occupation tax ordinance of the City of Lincoln, passed December , 1909;

V.—To upon further proofs and final hearing and determination of this cause grant to the plaintiff the right to make the same a part of the record or amended record in this cause.

VI.—And that the plaintiff may have such other and further relief in the premises as to the Court may seem equitable and just.

CHARLES A. FRUEAUFF,
E. C. STRODE,
Solicitors for Plaintiff.

83 State of ,
County of , } ss.:

, being duly sworn, deposes and say, that he is of the Lincoln Gas & Electric Light Company; that he has read and knows the contents of the foregoing petition for leave to file a bill of review; that he has personal knowledge of the facts referred to therein relating to the trial and test of said one dollar ($1) rate, and the facts set forth in said bill of review thereto attached; that he had no actual knowledge of the said facts at the time of the hearing or when the original decree
84 was entered upon the 15th day of June, 1915, and the said facts could not have been discovered before that time in the exercise of reasonable diligence and could not have been produced nor possibly have been used at the time when the decree was passed; that all the statements, allegations and averments of fact in the foregoing petition and bill of review thereto attached are true. And further affiant sayeth not.

Subscribed and sworn to before me this day of , 1917.

Notary Public.

General No. 2674

Term No. [redacted] 52

October Term, 1916.

IN THE

# Supreme Court of the United States

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
APPELLANT,

VS.

THE CITY OF LINCOLN, NEBRASKA ET AL.,
APPELLEES.

MOTION TO ADVANCE CAUSE.

C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Appellees.*

E. C. STRODE,
CHAS. A. FRUEAUFF,
*Attorneys for Appellant.*

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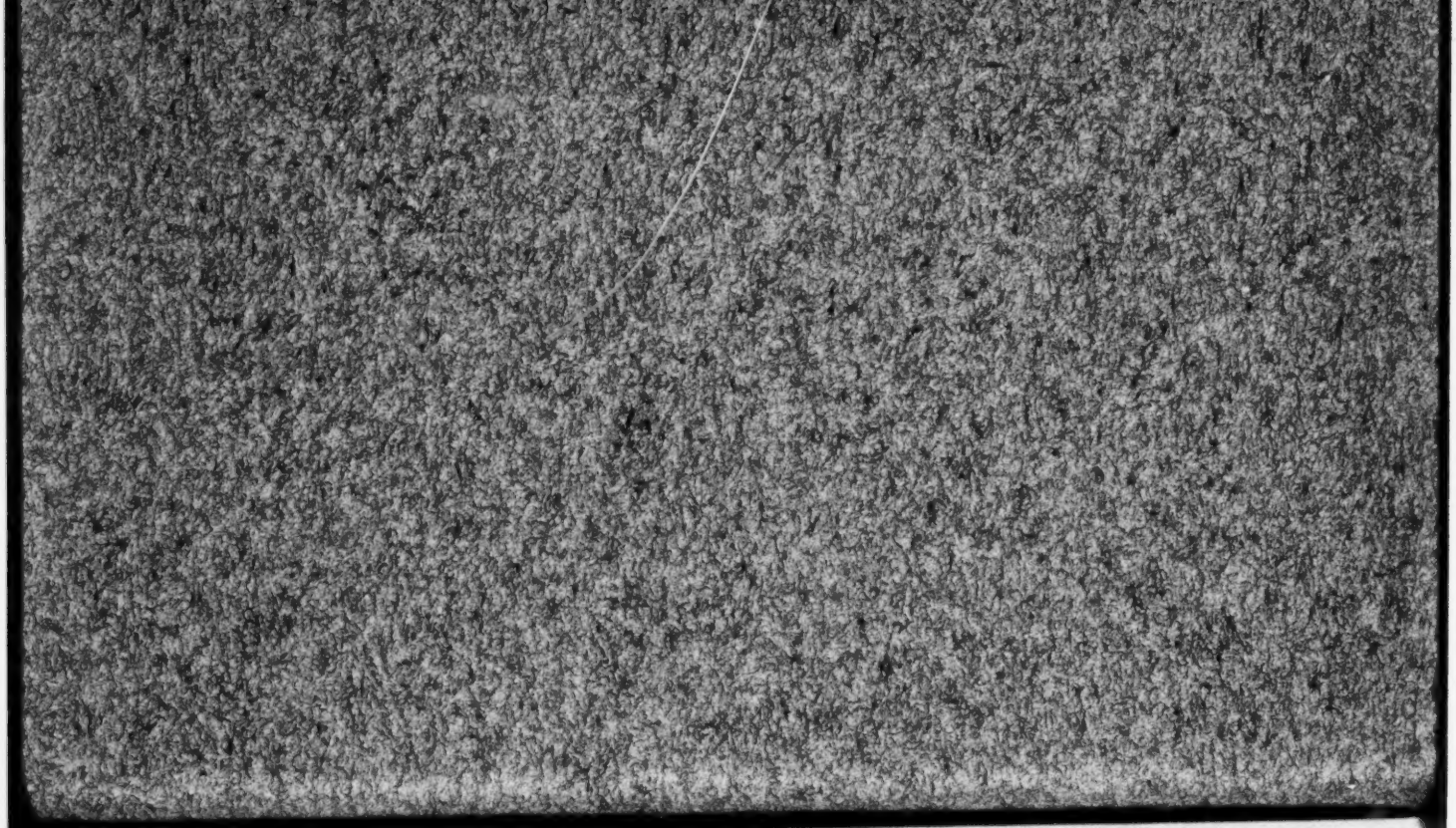

General No. 25574.

Term No. 744.

October Term, 1916.

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IN THE

# Supreme Court of the United States

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LINCOLN GAS & ELECTRIC LIGHT COMPANY,
APPELLANT,

VS.

THE CITY OF LINCOLN, NEBRASKA ET AL.,
APPELLEES.

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## MOTION TO ADVANCE CAUSE.

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C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Appellees.*

E. C. STRODE,
CHAS. A. FRUEAUFF,
*Attorneys for Appellant.*

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Now come the appellees in the above entitled cause and move the court to advance said cause for the reasons set forth in the following:

## BRIEF STATEMENT OF THE MATTER INVOLVED.

On November 19, 1906, the City Council of the City of Lincoln passed an ordinance reducing the net price to be charged for gas sold in said City from $1.20 to $1.00, and allowing a ten per cent penalty to be added for non-payment within six days after the rendition of bill, and a minimum charge of twenty-five cents for each service. Said ordinance was to take effect December 1, 1906. On December 27, 1906, the appellant Lincoln Gas & Electric Light Company, a corporation engaged in selling artificial gas in said City, filed its bill in the Circuit Court of the United States for the District of Nebraska, attacking said ordinance on the ground that the rate established was confiscatory and deprived the complainant of the equal protection of the law, and deprived it of its property without due process of law, and was in violation of the Fourteenth Amendment of the Constitution of the United States, and prayed an injunction restraining the City of Lincoln and the Mayor and City Attorney from enforcing or attempting to enforce said ordinance. A temporary restraining order was allowed. On April 6, 1909, a decree was entered in said cause finding no equity in complainant's bill, so far as it related to said gas rate ordinance, and said bill was dismissed and the restraining order was dissolved. On May 5, 1909, on application of complainant, the court allowed an appeal to this court, restoring the restraining order upon the complainant filing a bond with the clerk of the court in the sum of $150,000.00, for the benefit of gas consumers, conditioned that in the event the decree of the court theretofore entered should be affirmed by this court, the complainant would, on demand, pay to the parties entitled thereto, all overcharges for gas which it may have exacted in violation of said ordinance, since the date when it would have gone into effect but for said restraining order. Said bond was given and the appeal to this court was thereafter perfected.

On December 6 and 7, 1911, said cause was argued and submitted to this court on its merits, and on February 19, 1912, this court decided it on its merits, the opinion of this court being reported in 223 U. S. at page 349.

This court reversed the decree of the court below in said cause, and remanded said cause for further proceedings ordering that the same be referred to a skilled master to hear such additional evidence as the respective parties might wish to take, and to report fully his findings upon all the questions raised by either party and that upon such report the court should proceed as equity may require. It was further ordered by this court that the injunction granted in the court below continue in force until final decree upon condition that complainant enter into a new bond with satisfactory sureties to account for all overcharges in the event the ordinance shall be sustained. The required bond was thereafter given and the restraining order has been continued and is still in force.

The court below, in harmony with the mandate of this court, referred said cause to a skilled master, who took such additional evidence as was offered by the respective parties, and made his report to the district court. Exceptions to said report were filed by complainant and these were overruled by the court below and the report of said special master was in all things affirmed and approved, and a decree entered finding that there was no equity in complainant's bill so far as it related to said gas rate ordinance and dismissing said bill. Upon application of complainant an appeal to this court was allowed and the restraining order restored upon the giving of a new bond by complainant in the sum of $575,000.00, conditioned for the repayment to gas consumers of all overcharges in case said ordinance shall be finally upheld. Said bond was given and the record on appeal has been filed in this court, and is now being printed.

This cause having been once adjudicated by this court upon the merits, and having been again brought up by appeal, the appellees move the court that the same be advanced under section 4 of rule 26 of this court.

Respectfully submitted,

C. PETRUS PETERSON,

W. M. MORNING,

*Attorneys for Appellees.*

[redacted]

IN THE

# SUPREME COURT OF THE UNITED STATES.

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
*Appellant,*

vs.

THE CITY OF LINCOLN, NEBRASKA et al.,
*Appellees.*

[redacted]

CHARLES A. FERGUSON,
*Counsel for Appellees.*

General No. 25574.
Term No. 744.
October Term, 1916.

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IN THE

# Supreme Court of the United States.

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
Appellant,

*v.*

THE CITY OF LINCOLN, NEBRASKA *et al.*,
Appellees.

## MEMORANDUM OF APPELLANT IN OPPOSITION TO MOTION TO ADVANCE.

The appellant herein respectfully opposes the motion to advance the hearing of this appeal (at least, at the present time) for the following reasons:

This is not, we submit, a case "once adjudicated by this Court upon the merits."

This action was commenced in December, 1906, for an injunction restraining the City of Lincoln from enforcing a certain ordinance of said City

adopted in November, 1906, providing in substance that no gas company in said City should charge more than $1.00 net per M feet of gas sold. The appellant was at that time charging $1.20 per M feet of gas sold. A temporary restraining order was obtained and the Company put up a bond to reimburse the gas users of the City of Lincoln for the difference between the $1.00 rate and the $1.20 rate, in the event that the case went against the Company.

A decision was rendered by the lower Court adverse to the Company, but the restraining order was continued. An appeal was taken in the Supreme Court of the United States and the decision of the Court below was reversed by a unanimous Court, with an opinion by Mr. Justice Lurton (reported 223 U. S., 349).

This decision of the Supreme Court was not, we submit, an "adjudication upon the merits," as a consideration of said opinion will immediately reveal, for the Supreme Court decided that the record in said appeal did not contain facts sufficient to enable the Supreme Court to pass upon the questions involved. This is clearly shown by the opinion of Mr. Justice Lurton. He said (page 361):

> "This case is full of difficult and grave questions. Such conclusions as to facts as are found in the court's opinion are not helpful when, as here, errors are assigned which open up substantially the whole case. The cause should have gone at the beginning to a skilled master, upon whose report specific errors could have been assigned and a ruling from the court obtained."

And again, on pages 364-5:

> "The facts found are not full enough to at

all justify this court in dealing with this problem of a replacement fund.

"There should be a full report upon past depreciation, past expense for reconstruction or replacement, and past operating expenses, including current repairs. We should be advised as to the gross receipts for recent years, and just how these receipts have been expended. Then the amount to be set aside for future depreciation will depend upon the character and probable life of the property and the method adopted in the past to preserve the property. It can be readily seen that the amount to be annually set aside may be such as to forbid rate reductions, because of the requirement of such a fund. The matter is one first for a skilled master, who should make a full report upon the value of the property, the receipts and the expenses of operation and the sums paid out on reconstruction and replacements, and in dividends in recent years.

"For the reasons indicated, we direct that the decree be

"REVERSED, and the cause remanded to the district court to refer the case to a competent and skilled master, to report fully his findings upon all of the questions raised by either party, separately, and with leave to both parties to take any additional evidence they may wish within a time to be fixed by the court, and that that court upon such report proceed as equity shall require."

It appears, therefore, that the prior appeal in this case was not adjudicated on the merits, but, on the contrary, the Supreme Court determined that it was unable to decide the case upon the merits because the facts found were not full enough to justify the Court in dealing with the problems involved; so the case was sent back to the lower Court to be referred to a skilled master with leave

to take additional testimony, with directions to the lower Court to proceed "as equity shall require." Pursuant to this order the case went to a Master, and new and additional evidence was taken amounting to several thousand pages of testimony and a multitude of exhibits. The record on this appeal, therefore, is an entirely different one from the record in the prior appeal so that all the matters involved in this appeal will have to be taken up *de novo* by this Court. We submit, therefore, that this case has not been "once adjudicated by this Court upon the merits."

Furthermore, although this case was originally brought in order to obtain an injunction against the enforcement of an ordinance, and a temporary restraining order was granted and the enforcement of the ordinance was thus held in obeyance for a period of years upon the Company's giving a bond to reimburse the gas users of the City of Lincoln, the fact now is that the Company, on May 1st, 1915, voluntarily put into effect the $1.00 rate (although with an understanding that this should not prejudice their rights in this action). So, therefore, the question of the validity of the ordinance is now material only insofar as it relates to the reimbursement of the users of gas in the City of Lincoln for the difference between the $1.00 and the $1.20 rate during the period when the restraining order was in effect; in other words, the case now resolves itself into a simple action for a money judgment, and the only practical effect of this appeal is whether the users of gas in the City of Lincoln between December, 1906 and May, 1915, are entitled to reimbursement to the extent of 20 cents per M feet of gas used. To cover this situation the Company has filed a bond in the sum of $575,000, which

amply protects the parties in interest in the event this appeal should be determined against the Company.

So that there would appear to be no urgent necessity of an immediate disposition of this case by reason of the fact that a Municipal ordinance is being held in abeyance, but, on the contrary, the only result of the decision of this appeal is the question of the liability of the Company to make refunds to gas users who are protected both as to principal and interest by the bond filed in respect thereof.

But we submit that the most important reason why this cause should not be advanced is the following:

The $1.00 gas rate which the Company voluntarily adopted in May, 1915, has now been in effect for practically one year and a half, so that the result of the $1.00 rate is no longer a question of speculation or prophecy, but can now be determined as a question of concrete fact. This is of the utmost importance for the reason that the Special Master in making his findings, although he determined that an earning rate of 6% constituted a reasonable return upon the investment of the property, found, according to his own figures, that the Company actually earned in the year 1907 (the first year when the rate ordinance would have been in effect) only 5.12% upon its investment as he found it. But he justifies sustaining the validity of the rate ordinance on the ground that if the $1.00 rate had been put into effect an increased consumption of gas and an increase in earnings would quickly follow the reduction in price, and he concludes that with gas selling at $1.00 per M. cubic

feet the plaintiff would have received not less than 6% upon the value of its investment.

This, it will be seen, is a mere speculation or estimate as to what would have been the fact if certain conditions had been in existence. But now that the $1.00 rate has actually been in force for approximately a year and a half, there is no further necessity of speculating or estimating about the increased gas consumption, or earnings under the reduced rate, and it can now be determined beyond any question of doubt by existing facts whether the result is in accordance with the Master's conjecture.

For this reason it is the purpose of the appellant in this case to file with this Court a motion for leave to file a bill of review in order that evidence may be taken showing the exact result as regards increase or decrease in gas consumption during the last year and a half when the $1.00 rate was in effect. It is our contention that such evidence should be before the Supreme Court in order to enable it to properly pass upon the questions upon this appeal, and we believe that it will conclusively show practically no increased earnings from said reduction.

The appeal in this case was perfected October 24th, 1916, and the appellant was waiting January 1st, 1917, in order to compile figures showing the result of a year and a half's operation under the $1.00 rate. Upon the compilation of such figures the appellant intended to present its motion for leave to file a bill of review to this Court. The figures for the month of December, 1916, are not now available, but will be available in the course of a few days when the appellant will be in a position

to prepare its data for said motion for leave to file a bill of review.

In this connection we beg to point out that this Court has always deemed it of the utmost importance in determining the validity of a rate ordinance to see the effect of the actual working of said ordinance rather than to make its decision upon estimates as to what would happen if the ordinance were in effect. In the recent case of Des Moines Gas Company against Des Moines, 238 U. S., 153, this Court, although it decided in favor of the rate ordinance, concluded as follows:

> "While we agree with the court below that it was right to confirm the Master's report and dismiss the bill, we think, in view of the fact that the attack upon the rates was made before the ordinance went into effect, and before actual application of the rates could demonstrate whether they were remunerative or not, that the court should have followed the recommendation of the Master and dismissed the bill without prejudice. We think this is particularly so, in view of the fact that ordinarily time alone can satisfactorily demonstrate in a case like this whether or not the rates established will prove so unremunerative as to be confiscatory in the sense in which that term has been defined in rate-making cases. The Master's suggestion has the support of the judgment of this court in *Knoxville* v. *Water Co.*, 212 U. S., 1, and *Willcox* v. *Consolidated Gas Co.*, 212 U. S., 19.
>
> "With the modification that the bill be dismissed without prejudice, instead of, as the court below directed, with prejudice, the decree is affirmed, with costs."

So also in the Consolidated Gas Company case,

212 U. S., 19, this Court, although it decided against the Company and in favor of the rate ordinance, concluded its opinion as follows:

> "It may possibly be, however, that a practical experience of the effect of the acts by actual operation under them might prevent the complainant from obtaining a fair return, as already described, and in that event complainant ought to have the opportunity of again presenting its case to the court. To that end we reverse the decree, with directions to dismiss the bill without prejudice, and
>
> "IT IS SO ORDERED."

In the present case, therefore, inasmuch as the $1.00 rate fixed by the ordinance has been tried out by practical experience for a year and a half, it should not be necessary for the Company to bring another action to test the validity of the rate ordinance, or its liability for refunds, because all the questions which might be involved in a subsequent proceeding can now be determined as matters of fact, and we submit that it would be most expeditious and also quite in harmony with the spirit of the decisions of this Court heretofore made, to ascertain the facts presented by the actual operation of the ordinance prior to or at the time of the hearing of this appeal, and it was for this purpose that the Company intended to present its appeal to review in order that those facts might be placed before the Court.

If this case is advanced upon this motion there will be no opportunity to bring out the facts in connection with actual operation of the ordinance, and, therefore, we submit that this motion should be denied, or, in any event, it should be held in

abeyance until the appellant had an opportunity to present its motion for leave to file a bill of review, in respect to the matters above set forth, which motion the appellant hereby agrees to present with all diligence, if given opportunity so to do, just as soon as the earnings for the month of December, 1916, are available.

Respectfully submitted,

CHARLES A. FRUEAUFF,

Counsel for Appellant.

# Supreme Court of the United States

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant. *v.* THE CITY OF LINCOLN, *et al.*, Appellees. | October Term, 1917. No. 300. |

**PETITION FOR LEAVE TO FILE BILL OF REVIEW IN COURT BELOW OR TO TAKE FURTHER PROOF.**

To the Honorable the Justices of the Supreme Court of the United States:

Now comes Lincoln Gas & Electric Light Company, a corporation, appellant, and respectfully renews its motion for leave to file a bill of review in the Court below in this case, heretofore made to this Honorable Court on or about the 26th day of March, 1917, and prays for leave to take further proof upon all the grounds and for all the reasons set forth in the motion papers heretofore filed in said motion to this Court, made on or about March 26th, 1917, and for further reason in support of said motion appellant avers and shows that the figures showing the result of the actual operation of the $1.00 gas rate in the City of Lincoln, since January 1st, 1917, and up to September 1st, 1917, are now available, and appellant desires to present

the evidence of the actual operation during said months, in order that this Honorable Court may have the same before it when considering the matters of value and return embraced in the record now on file in this appeal, and in considering its decree to be entered herein.

That the bill of review which appellant now petitions leave to file is in substantially the form presented in the motion papers on or about March 26th, 1917, with such modifications as will permit the taking of testimony showing the actual operation of the $1.00 gas rate between January 1st, 1917, and September 1st, 1917.

That appellant files herewith the affidavit of Edgar E. McWhiney, Assistant Secretary of appellant, showing the earnings of appellant since January 1st, 1917, up to which date the same were set before this Honorable Court in said previously filed bill of review, and that said affidavit shows the operating expenses of appellant to have reached a point so that the same are in excess of the price charged for gas, that is, without allowing for any depreciation whatsoever or for any allowance whatever for return upon invested capital, or without any allowance whatever for the Occupation Tax in issue in said proceedings, the $1.00 rate for gas is insufficient to pay appellant's actual operating expenses.

That the appellant, since the taking of the testimony in the Court below, and up to the present time, has in all things handled its property in a proper, customary and economical manner, and has paid out no dividends, and has kept its books and records of account according to the same manner and system as heretofore, and as during the period when the evidence was taken in the Court below.

That in view of the established practice in this Honorable Court, in respect of cases involving rate

litigation, and in which it shall have been determined by this Honorable Court to dismiss a bill to enjoin rate legislation, that the same be dismissed without prejudice, until the application of the rates can be demonstrated by an actual trial and test, appellant begs leave to point out to this Honorable Court that the rate in litigation in this case has been in effect for approximately two years and five months, that it has had an actual trial and test, and the results of its application can now be successfully demonstrated. So that there is now available to place in the record of this case before this Honorable Court the facts shown by an actual trial of this rate, and that it is unnecessary, therefore, for the Court to wait further for any demonstration of the actual application of the rate. In view of this situation, appellant submits to this Honorable Court that it is most expedient, in view of the established practice of this Court, to have placed the facts shown by the actual trial and test of the rate before this Court, rather than to consider the record as it now stands, without a complete report of the actual facts which result from the application of the rate, or to make any disposition of this case which would require the presentation of a new petition or a reinstitution of the action in order to prove the facts shown by the actual trial of the rate. The actual showing of the complete confiscation of appellant's property should be before this Honorable Court for its information in determining the many matters involved on this appeal.

Wherefore, by reason of said subsequent happenings in the nature of newly discovered evidence and happenings subsequent to the entry of the decree in the Court below, and for all the reasons hereinbefore stated, and as set forth in said prior motion of March 26th, 1917, appellant prays that:

1. Further proof be ordered to be taken by this

Court, by depositions to be taken by a Commission to be issued either from this Court or the Court below, pursuant to Subdivision 1 of Rule XII of the rules of this Honorable Court.

2. In the alternative, that it be permitted to file in the United States District Court for the District of Nebraska, Lincoln Division, its bill of review in substantially the form presented to this Honorable Court on or about March 26th, 1917, with such modifications as are necessary to include the evidence which has developed between January 1st, 1917, and September 1st, 1917, or such other and further supplemental bill in the nature of a bill of review as may be proper to bring to the attention of the Court below and to this Honorable Court the result of the trial and test of said gas rate of $1.00 net per thousand cubic feet, and that it be permitted to take testimony bringing its earnings and other matters involved down to the latest practicable date.

3. This cause be continued on the docket of this Honorable Court until the proofs are taken in either of the manners aforesaid and brought upon the record of this cause in this Honorable Court.

4. This Honorable Court may order the Court below to make, or cause to be made, such definite decisions and findings as will correct upon the record the alleged errors of law apparent upon the face of the record, as set forth in the motion papers of March 26th, 1917.

And the appellant prays for such other and further and appropriate relief as to this Honorable Court may seem proper.

EDMUND C. STRODE,
CHARLES A. FRUEAUFF,
Solicitors for Appellant.

ROBERT BURNS,
Of Counsel.

State of New York,
County of New York, } ss.:

Frank W. Frueauff, being first duly sworn, deposes and says that he is President of Lincoln Gas & Electric Light Company; that he has read and knows the contents of the foregoing pleading and petition for leave to file bill of review; that he has personal knowledge of the facts referred to therein relating to the trial and test of the said gas rate; that he had no knowledge of said facts at the time of the hearing of the cause below, or when the original decree was entered upon the 15th day of June, 1915; that such facts have come to his personal knowledge since the original decree was entered in this case upon the 15th day of June, 1915, and that said facts could not have been discovered in the exercise of reasonable diligence, and could not have been produced nor possibly have been used at the time when the decree was passed, and that the statements, allegations and averments of fact in the foregoing pleading, and the bill of review therein mentioned, are true. And further affiant sayeth not.

FRANK W. FRUEAUFF.

Subscribed and sworn to before me this
25th day of September, 1917.

George C. Blankner,
[NOTARIAL SEAL.] Notary Public,
New York County No. 405.
New York Register's No. 9344.
My commission expires March 30, 1919.

SUPREME COURT OF THE UNITED STATES.

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant. *v.* THE CITY OF LINCOLN, *et al.*, Appellees. | Affidavit. |

State of New York, County of New York, } ss.:

Edgar E. McWhiney, being first duly sworn, deposes and says that he is Assistant Secretary of Lincoln Gas & Electric Light Company, and has examined the records and reports of the Lincoln Gas & Electric Light Company, and has familiarized himself with them, for the purpose of securing the figures for this affidavit, and has examined the affidavit of V. L. Board, submitted with the papers on the motion made to the Supreme Court of the United States on March 26th, 1917, in this cause; that he has carefully checked over the same and states as follows:

That beginning approximately from May 1st, 1915, Lincoln Gas & Electric Light Company has billed customers for gas consumed at the rate of $1.00 net per thousand cubic feet; that the rate of gas consumed prior thereto and for the period of about eight years or more had been $1.20 net per thousand cubic feet.

Affiant states that the expenses of the Company have been steadily increasing in almost all items; that the costs of labor, coal, gas, oil and all materials involved in gas making and distribution have largely increased in cost since January 1, 1917, the date of the last figures included in the said affidavit

of said V. L. Board, and that the last complete month of operation is the month of August, which shows that the total sales of gas in the City of Lincoln were 18,975,400 cubic feet, that the operating expenses for such month (not including the 3% Occupation Tax, nor any amount for depreciation whatsoever) were $19,090.88. If said Occupation Tax and a sum for depreciation, at the rate allowed by the Master for 1912, were calculated and added to said expenses, the operating expenses for said month would be $20,667.18. In said sums, as expenses, there is not included any sum whatsoever for any allowance for return on invested capital, and any return to which appellant is entitled on invested capital would be a loss in addition to the amount by which the operation expenses exceed revenue.

That the operating expenses for the month of August per thousand cubic feet of gas sold (without calculating the 3% Occupation Tax or depreciation, or any return on invested capital) were $1.0061; that said operating expenses per thousand cubic feet of gas sold, including depreciation (but not including the 3% Occupation Tax for said month, or any return on invested capital) were $1.0588; that said operating expenses per thousand cubic feet of gas sold for said month, including depreciation and the 3% Occupation Tax (but not including any return on invested capital) were $1.0892.

That the above figures show that gas is now being sold in Lincoln for a price actually less than operating cost, with no allowance whatsoever for return on invested capital, and this fact is true even if depreciation and the 3% Occupation Tax are not included as operating charges.

That the cost of operation is steadily increasing, is shown by the operating expense per thousand cubic feet of gas sold since January 1st, 1917, in-

cluding Occupation Tax and depreciation, a tabulation of which is as follows:

| 1917 | Operating Cost per M Cu. Ft. |
|---|---|
| January | $.8516 |
| February | .7724 |
| March | .8655 |
| April | .8230 |
| May | .8844 |
| June | .9044 |
| July | 1.0046 |
| August | 1.0892 |

The above operating expenses include no allowance whatsoever for return on invested capital.

Affiant further states that since the organization of this Company no dividends whatever have been paid to its stockholders, nor have any unusual or extraordinary expenses of any kind or character whatsoever been made; that since the passage of the rate-fixing Ordinance, and since the taking of the testimony before the Master, and since the perfection of the appeal in this case, the business of the Company has been carried on in its usual, customary and ordinary manner, and that its books and records of account have been kept according to the same method and system as at the time the evidence was taken in this case.

EDGAR E. McWHINEY.

Sworn to before me this 25th day of September, 1917.

George C. Blankner,
Notary Public,
New York County No. 405.
New York Register's No. 9344.
My commission expires March 30, 1919.

[NOTARIAL SEAL.]

5

MAR 26 1917
JAMES D. MAHER
CLERK

General Number 25574.

IN THE

# SUPREME COURT

OF THE

# UNITED STATES

Term Number [redacted] 3[redacted]52

October Term, 1916.

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
APPELLANT,

VS.

THE CITY OF LINCOLN, NEBRASKA, ET AL.,
APPELLEES.

## MEMORANDUM BRIEF OF APPELLEES IN SUPPORT OF MOTION TO ADVANCE,

AND

## IN OPPOSITION TO APPELLANT'S APPLICATION TO FILE A BILL OF REVIEW.

GEORGE W. BERGE, and
WILLIAM M. MORNING,
*Counsel for Appellees.*

WEKESSER, The Brief Man, Lincoln, Nebraska

General Number 25574.

IN THE

# SUPREME COURT

OF THE

# UNITED STATES

Term Number 744.

October Term, 1916.

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
APPELLANT,

VS.

THE CITY OF LINCOLN, NEBRASKA, ET AL.,
APPELLEES.

## MEMORANDUM BRIEF OF APPELLEES IN SUPPORT OF MOTION TO ADVANCE,

## AND

## IN OPPOSITION TO APPELLANT'S APPLICATION TO FILE A BILL OF REVIEW.

GEORGE W. BERGE, and
WILLIAM M. MORNING,
*Counsel for Appellees.*

### ON THE MOTION TO ADVANCE.

It is the contention of appellees that this case comes within Section 4 of Rule 26 of this court, which reads :

> "Cases once adjudicated by this court upon the merits, and again brought up by writ of error or appeal, may be advanced by leave of the court on motion of either party."

The first appeal was from a final decree of the court below. The case was briefed, argued, and submitted to this court on its merits. The only thing before the court for adjudication was the case upon its merits. The opinion of this court by Mr. Justice Lurton (223 U. S. 349) shows that the court went into the merits of the case, and reversed the decree of the lower court and remanded the cause with specific directions to refer it to a special master to report fully his findings upon all questions raised by either party with leave to both parties to take such additional evidence as they might desire.

This was not a final disposition of the case, it is true, but it was an adjudication or judgment on its merits. The word "merits" is used in law to distinguish matters of substance from technical or collateral matters raised in the course of the suit.

*Wolfe* v. *Georgia, etc., Co.*, 65 S. E. 62.

*Smoot* v. *Judd*, 184 Mo. 508, 83 S. W. 481.

*Taylor* v. *Carr*, 125 Tenn. 235, Ann. Cas. 1913 C. 155, 141 S. W. 745.

*N. P. R. Co.* v. *Barlow*, 126 N. W. 233, 20 N. D. 197, Ann. Cas. 1912 C. 763.

*People* v. *Lyman*, 65 N. Y. S. 1062.

In *Ayres* v. *Polsdorfer*, 187 U. S. 585, 47 L. Ed. 314, this court in determining a question of jurisdiction had occasion to pass upon the meaning of the expression "upon its merits," as used in an earlier opinion of this court. Interpreting the expression, Mr. Justice McKenna said:

> "The expression 'upon the merits' was used in distinction to the review of a question of jurisdiction strictly so called—the right of the circuit court to entertain the case at all."

The term "merits" was similarly explained in *Russell* v. *Whitcomb*, 14 S. D. 426, 85 N. W. 860, where it was said:

> "Under Comp. Laws, Sec. 5236 Subd. 4, providing that an order involving the *merits* of an action, or some part

thereof, is appealable, an order appointing a referee to hear and determine all issues is appealable."

See also:

*St. Paul, etc. R. Co.* v. *Gardner,* 19 Minn. 132.

A cause is submitted to a court "on the merits" when the submission involves matters of substance as distinguished from matters of form; when the substantive rights of the parties are presented as distinguished from technical or collateral matters.

27 *Cyc.,* 483.
3 *C. J.,* 451.
*Ordway* v. *Boston, etc., R. Co.,* 69 N. H. 429, 45 Atl. 243.
*Clanson* v. *Gunnison,* 12 Wis. 528 (529).
*Plano Mfg. Co.* v. *Kaufert,* 86 Minn. 13, 89 N. W. 1124.
*Hirschbach* v. *Kitchum,* 80 N. Y. S. 143.

The word "adjudicated" as used in the rule under consideration, is synonymous with "judicially determined" or "adjudged."

1 *C. J.,* 1236.
*Western Assur. Co.* v. *Klein,* 48 Neb. 904 (908).

In short the cause was submitted to this court on its merits and a judgment of reversal was entered. It was not necessary for the judgment of this court to be a final disposition of the case to bring it within the rule. To hold otherwise would be to abrogate the rule itself because, if finally disposed of, it would not come here the second time.

## AS TO THE APPLICATION FOR A BILL OF REVIEW.

The only reason assigned by appellant as a ground for such a bill is that on May 1st, 1915, it voluntarily put the one dollar gas rate into effect; that it has operated under that rate ever since and now has figures based upon actual experience to show that the rate is not compensatory. This does not entitle appellant to a bill of review for the following reasons:

1. The new rate referred to was put into effect May 1, 1915, under a written stipulation between the parties which expressly provided that the action of appellant in installing said rate should not be used in any way by either party to influence the action of the court in the disposition of this case. The stipulation was as follows:

"IN THE UNITED STATES DISTRICT COURT IN AND FOR THE DISTRICT OF NEBRASKA, LINCOLN DIVISION

STIPULATION

Lincoln Gas & Electric Light Company, a corporation, Complainant,

vs

City of Lincoln, et al., Defendants.

It is stipulated and agreed between the parties hereto that the action of the Lincoln Gas & Electric Light Company in inaugurating a new gas rate as of May 1st, 1915, of $1.15 gross with a net rate of $1.00 per 1,000 cubic feet for gas if paid within the discount period, shall not be considered or construed as an acceptance of or compliance with the gas ordinance of 1906, the validity of which is involved in the above entitled cause; and the action of the Gas Company in establishing such a new rate shall not be shown in evidence or presented to the court in the above entitled cause, or used in any way by either party to influence the action of the court in the disposition of the case involving the validity of said 1906 gas ordinance.

(Signed) FRED C. FOSTER,
W. M. MORNING,
*Attorneys for City of Lincoln.*

E. C. STRODE,
*Attorney for Lincoln Gas & Electric Light Company.*

2. The appellant could and should have tried out this new rate at the start so as to base its action upon actual experience rather than upon theory, speculation and prophecy. That is what this court has always indicated should be done.

See:

*Wilcox* v. *Consolidated Gas Co.*, 212 U. S. 19, 53 L. Ed. 382.

*Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 53 L. Ed. 371.

But appellant attacked the rate before it was put to a practical test, and litigated it from December 1906 to May 1, 1915, almost nine years, before giving the rate a trial. Having thus chosen its own time and mode of attack, and having, from the start, elected to rest its case upon theory and speculation, it cannot now call to its aid a practical test of the rate which should have preceded its attack.

In the language of Mr. Justice Moody, in *Knoxville* v. *Knoxville Water Co., supra:*

> "If a Company of this kind choses to decline to observe an ordinance of this nature and prefers rather to go into Court with the claim that the ordinance is unconstitutional, *it must be prepared to show to the satisfaction of the Court that the ordinance would necessarily be so confiscatory in its effect as to violate the constitution of the United States.*"

3. A bill of review will not be granted for newly discovered evidence unless it be shown that the evidence was not known *and could not with reasonable diligence have been known before the decree complained of was entered.*

*Beard* v. *Burts,* 95 U. S. 434, 24 L. Ed. 485.
*Nickle* v. *Stewart,* 111 U. S. 776, 28 L. Ed. 599.
*Pool* v. *Nixon,* 9 Pet. 770, 9 L. Ed. 305.
*Hill* v. *Phelps,* 101 Fed. 650.
*Camp Mfg. Co.* v. *Parker,* 121 Fed. 195.
*Kelly Bros.* v. *Diamond Drill & Match Co.,* 142 Fed. 868.

When complainant attacked this rate it did so with full knowledge of the importance attached by this and other courts to a practical test of an established rate. It was well aware of the heavy burden it assumed in attempting to strike down this rate in advance of a practical test. It is not now in a position to appeal to a court of equity for leave to do what it could and should have done in advance. It should not be permitted now to "amend its hold" by calling to its aid that which was within its easy reach at the beginning.

See:

*Scotten* v. *Littlefield*, 235 U. S. 407, 59 L. Ed. 289.

Leave to file a bill of review can only be obtained from the court in which the decree was rendered.

*Camp Mfg. Co.* v. *Parker*, 121 Fed. 195.

4. By appellant's own confession it will be seen that nothing is now involved in this litigation aside from the question of whether the appellant shall refund to gas consumers the amount collected from them in excess of the $1.00 rate during the time the same was suspended by the injunction herein. The $1.00 rate has been in force only since May 1, 1915. All of the experience of appellant as to the practical application of that rate has been acquired since that date, whereas, the refunds to gas consumers here involved all accrued prior to that date. It could have little if any bearing upon the validity of the rate in December, 1906.

We understand the rule to be that all rates established by rate-making bodies are subject to revision to meet the exigencies of changing conditions. A rate may be too low when adopted, and, if satisfied of that fact, this court will enjoin its enforcement until such time as it can be shown that conditions have so changed as to render the rate compensatory, and will permit the public to make such showing, as was done in *Smyth* v. *Ames*, 169 U. S. 819, 42 L. Ed. 819.

On the other hand, in cases where injunctions against established rates have been denied, this court has uniformly adhered to the practice of dismissing the bill without prejudice so as not to preclude the complaining party from again attacking the rate if future conditions or experience shall justify such attack.

*Des Moines Gas Co.* v. *Des Moines*, 238 U. S. 153, 59 L. Ed. 1244.

*Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 53 L. Ed. 371.

Any experience gained by the Company through its belated practical test of the $1.00 rate since May 1, 1915, is so remote in time as to have little, if any, evidential value as to the validity of the rate between 1906 and May, 1915, and would not be sufficiently pertinent and controlling to justify a bill of review.

See:

*Society of Shokes* v. *Watson*, 77 Fed. 512.
*Jourhnond* v. *Ewing*, 85 Fed. 103.
*Keith* v. *Alger*, 124 Fed. 35.

5. If complainant wishes to attack the present $1.00 rate because changing conditions have rendered that rate inadequate, it can call to its aid the practical result of the operation of that rate since May 1, 1915, but its attack would be either by a new bill or a supplemental bill filed in the court below. Evidence of how the rate is now operating would serve no purpose in an inquiry as to how it would have operated ten years ago. It would not tend to shed light upon the same controversy.

Newly discovered evidence as a basis for a bill of review must relate to the matter controverted on the original hearing.

*Poole* v. *Nixon*, 9 Pet. 770, 9 L. Ed. 305.
*Thompson* v. *Wooster*, 114 U. S. 104, 29 L. Ed. 105.
*Shelton* v. *VanKleeck*, 106 U. S. 532, 27 L. Ed. 269.
*Accord* v. *Western Pocahontas*, 174 Fed. 1019.

6. Under no circumstances should the experience of the appellant with the $1.00 rate be permitted in any manner to influence the disposition of the present appeal. Under every rule and principle of appellate procedure the appeal must be determined upon the record as brought from the court below. We do not know what figures appellant is prepared to produce as the result of its experience with this new rate since May 1, 1915, but we do know that such figures were not before the court below; that they have all arisen since the Master's report was filed; that no opportunity has been given the City

of Lincoln to investigate and analyze these figures, and that they would be very misleading without a thorough and painstaking analysis.

As we understand it, permission to appellant to file a bill of review would be equivalent to the granting of a new trial of the case, and this, under all the circumstances, and in view of the long years of tedious and expensive litigation to which the City has been subjected is unthinkable, especially since appellant could and should have made its practical test of the rate at the start.

Respectfully submitted,

GEORGE W. BERGE,
WILLIAM M. MORNING,
*Counsel for Appellees.*

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# Supreme Court of the United States.

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|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant, *v.* THE CITY OF LINCOLN *et al.*, Appellees. | October Term, 1917. No. 300. |

## BRIEF OF APPELLANT.

### Statement.

This is an appeal from the judgment of the United States District Court for the District of Nebraska, Lincoln Division, which confirmed a report of a Special Master to whom this case was referred.

This action was instituted in December, 1906, by appellant against The City of Lincoln, and others, praying for the following relief:

(1) For an injunction restraining the City of Lincoln from enforcing a certain ordinance, No. 432, of said City, adopted on or about November 19th, 1906, providing, in substance, that no gas company in said City shall charge more than $1.00 net per M cubic feet of gas sold;

(2) For an injunction restraining the City from enforcing a certain ordinance of said City, adopted on or about December 10th, 1906, which purports to pro-

vide for and assess an occupation tax upon all gas companies in the City of Lincoln.

The action also necessitates the determination of the construction and validity of the company's franchise rights in the City of Lincoln, and a decision as to whether or not said franchise is a perpetual one.

At the outset, we beg to call the attention of this Court to the fact that the decision in this case is a matter of the gravest concern to the appellant. We state, without fear of contradiction, that it is a veritable struggle on behalf of the company for its continued existence, and in the event that the judgment of the Court below is affirmed, it is a serious question as to whether or not the company can successfully maintain its operations and the service in which it is engaged. That we are not exaggerating the situation can be illustrated by a mere glance at the conclusion which is reached by the Master and confirmed by the Court below:

1913 VALUATION.

| As fixed by Master | As fixed by Company |
|---|---|
| $676,565. | $1,090,913. |

Net Earnings for 1912 at One Dollar Rate.

| As fixed by Master | As fixed by Company |
|---|---|
| $46,658. | $21,817. |

1907 VALUATION.

| As fixed by Master | As fixed by Company |
|---|---|
| $436,565. | $784,682. |

Net Earnings for 1907 at One Dollar Rate.

| As fixed by Master | As fixed by Company |
|---|---|
| $22,349. | $17,663. |

The Master fixed the value of the properties of the appellant devoted to the service of the public in the City of Lincoln, in 1912, at $676,565. During the pendency of this litigation, a preliminary injunction was in force against the operation of the Rate Ordinance, dur-

ing a great part of which time the company has been collecting $1.20 per M cubic feet of gas sold, and the company has given a bond fixed and approved by the Court for the return of the extra 20c. per M cubic feet, in the event this case is decided against the company. This amount which the company will, in such event, be obligated to repay to gas consumers, and for which it has given its bond, is now $525,000. The difference between the total value of the plant, in 1912, as fixed by the Master and confirmed by the Court below, and the amount necessary to reimburse consumers in the event of an affirmance, is $151,565, which is all that would be left the company in the event of an adverse decision of this Court. And this is true in spite of the Master's findings that the company has never paid any dividends on its stock, and that its entire earnings have been utilized in paying operating expenses, bond interest, and in making improvements and additions to its properties (which are included in the Master's valuation).

This result is so astounding that it must, we submit, challenge the attention of this Court to the grave injustice which the company has borne by reason of the decision of the Master and the confirmation of his report by the Court below.

The institution of this action was forced upon the company by a campaign of aggression on the part of the City toward the company, beginning about the year 1904. In the early part of the year 1906, the City passed a Gas Quality and Pressure Ordinance, which materially increased the cost of manufacture of gas, and correspondingly reduced revenue. This was followed, in November of that year, by the ordinance attempting to reduce the rate for the sale of gas above referred to, and in December, 1906, by the Occupation Tax Ordinance. The company then commenced this action to

prevent the confiscation of its properties. As expressed by Mr. Justice Holmes, on the argument before this Court at the prior appeal, "The City was putting the screws on the company."

**History of this Case.**

The trial of this action was commenced in 1908, before Munger, D. J., whose decision on the question of the validity of the ordinance (which involved a valuation of the company's properties and a determination of its return upon its investment) was adverse to the company, and the bill as to the Rate Ordinance was dismissed.

An appeal was thereupon taken to the Supreme Court of the United States, and the decision of the Court below was reversed by a unanimous Court, with an opinion by Mr. Justice Lurton (reported 223 U. S., 349). The decision of the Supreme Court in this action is exceptional, in that it is one of the few cases in history where a judgment sustaining a rate ordinance has been reversed. It is important, also, because the reasons for reversal are so pertinent to the questions now before the Court.

Mr. Justice Lurton first presents a concrete statement of the issues presented by such a case. He said (p. 357):

> "In this, as in every other legislative rate case, there are presented three questions of prime importance: First, the present reasonable value of the company's plant engaged in the regulated business; second, what will be the probable effect of the reduced rate upon the future net income from the property engaged in serving the public; and, third, in ascertaining the probable net income under the reduced rates prescribed, what deduction, if any, should be made from the gross re-

ceipts as a fund to preserve the property from future depreciation."

He then discussed the estimated value as found by the Court below, which was stated in the form of itemized conclusions, setting forth fixed amounts with practically no discussion of the evidence upon which the conclusions were based. This method of merely stating conclusions lead Mr. Justice Lurton to remark (p. 361):

> "This case is full of difficult and grave questions. Such conclusions as to facts as are found in the Court's opinion are not helpful when, as here, errors are assigned which open up substantially the whole case. The cause should have gone at the beginning to a skilled master, upon whose report specific errors could have been assigned and a ruling from the Court obtained."

And again, on pages 364-5:

> "The facts found are not full enough to at all justify this Court in dealing with this problem of a replacement fund.
>
> "There should be a full report upon past depreciation, past expense for reconstruction or replacement, and past operating expenses, including current repairs. We should be advised as to the gross receipts for recent years, and just how these receipts have been expended. Then the amount to be set aside for future depreciation will depend upon the character and probable life of the property and the method adopted in the past to preserve the property. It can be readily seen that the amount to be annually set aside may be such as to forbid rate reductions because of the requirement of such a fund. The matter is one first for a skilled master, who should make a full report upon the value of the property, the receipts and the expenses of operation and the sums paid out on reconstruction and replacements, and in dividends in recent years.
>
> "For the reasons indicated, we direct that the decree be

> "*Reversed*, and the cause remanded to the District Court to refer the case to a competent and skilled master, to report fully his findings upon all of the questions raised by either party, separately, and with leave to both parties to take any additional evidence they may wish within a time to be fixed by the Court, and that that Court upon such report proceed as equity shall require."

It is obvious, therefore, that what the Supreme Court wanted was a careful consideration by a skilled master, whose report should be *full* and *complete*, and should show not only his *conclusions*, but his *reasons;* not only his *final results* in *dollars*, but his *method* of *calculation* and his justification for adopting the same.

**Report Should Be Recommitted to Master.**

The reason for our discussion of this matter at the outset of this brief is, that it is our contention that the instructions of this Court in its former decision have not been carried out, in spite of all the efforts of the Company in respect thereof. We now maintain that in spite of the mass of testimony which the Company took pains to introduce, as well as the testimony introduced by the City's witnesses, that still "the facts found are not full enough to at all justify this Court" in dealing with the various problems which this appeal presents; that there is not "a full report upon past depreciation, past expense for reconstruction or replacement, and past operating expenses, including current repairs;" nor is there a report upon "the character and probable life of the property," and in no sense is the report which the Master has made a "full report upon the value of the property." It has been the Company's position, and still is its contention, ever since the report of the Master was filed, that the report should be recommitted to the Master for further findings of fact, in order that he

be compelled "to report fully his findings upon all of the questions raised by either party separately," which he has obviously failed to do. A motion to this effect was made by the Company, but was denied (Transcript, pp. 74 and 75).

We maintain that it is clear from the Master's report that he has completely misunderstood the purpose for which he was appointed, as his report clearly indicates. He said at the outset of his report, under the heading, Preliminary Observations: "A summarization of this evidence is quite impossible, and would, as far as I can see, aid neither Court nor counsel in testing the correctness of the conclusions which I have reached" (Transcript, p. 36). It is quite obvious that such a summary is not "impossible," because it has been done by the various special Masters who have been appointed in rate cases which have heretofore come before this Court; and it is equally clear that it would materially aid both Court and counsel, and, in fact, this case was sent back by this Court for the very purpose of adopting a course which the master states he has determined not to pursue. He states further, "to give the names of witnesses, together with what I might conceive to be a fair condensation of their testimony upon any controverted point, would, as I view it, be altogether valueless" (Transcript, p. 36). We think this statement is particularly significant, in view of the testimony introduced by the various witnesses in this case. A great part of the City's testimony on valuation was introduced through a witness, whom the City made its principal witness. He was one Alton D. Adams, whom the City put forward as an expert in valuation of properties of this class. Not only was Mr. Adams' right to speak as an expert on these matters constantly challenged throughout the course of the hearings before the Master, but his good faith and veracity were continually assailed

by counsel for the Company, and it was maintained by them that his testimony was worthless and should have been completely disregarded by the master. In view of this issue which was thus so sharply raised, we submit that we were entitled to an expression of opinion from the Master as to just what value he placed on the testimony of the City's witness, Mr. Alton D. Adams, and just how far the master's conclusions were affected by that testimony. The Master does not give us this information; instead, throughout his report he merely mentions the two figures of valuations for the various items of property and equipment, one given by the City's witness, Mr. Alton D. Adams, and the other by the company's witness, Mr. Henry I. Lea, and in the great majority of instances, the master, without discussion or without giving reasons, strikes somewhere between the two figures in reaching his conclusions.

This method of reporting findings is, we insist, not in accordance with the instructions of this Court, especially in view of the questions raised as to the particular witness's competency and reliability.

The Master further says: "The evidence, which is for the most part, opinion evidence, and generally unreconcilable, makes my conclusions in regard to values, at best, nothing more than fair approximations" (Transcript, p. 36).

We repeat, that in view of the fact that the testimony of the opposing experts was "unreconcilable," and the right of one of those experts to speak as such was directly challenged, it was especially incumbent upon the Master to give his views as to the weight which should be attached to the testimony of the opposing witnesses, and how much he was influenced by the opinions of each. Otherwise, it is impossible to test the correctness of his conclusions.

Similarly, in arriving at his conclusions as to the proper percentage for overhead charges, he says:

> "Just what it should be is a question about which there is much difference of opinion among engineers, courts and commissions. In this case Mr. Lea puts it at sixteen per cent., and Mr. A. D. Adams at seven per cent. The matter is not governed by any inflexible rule, but is to be determined in every case by the exercise of good sense and sound discretion. * * * * My judgment upon the matter is that an allowance of twelve and one-half per cent. on the total net construction cost of the physical property, excepting real estate and working capital, is sufficient to cover all overhead expenses, including engineering, superintence, legal expenses, taxes, interest during construction, ommissions and contingencies, casualty liability, and whatever else is usually classified under this caption. This is necessarily an estimate based almost entirely upon expert testimony." (Transcript, pp. 37 and 38.)

The difference between seven per cent. and sixteen per cent. for overhead charges constitutes a great divergence of opinion. One or the other of the experts before the Master must have given testimony which was wide of the mark; but the Master gives no intimation as to whose testimony he relied upon, nor does he segregate his total percentage so that we can scrutinize and analyze the various items which together make up the aggregate and determine how much should be apportioned to each element of overhead. These were matters which were gone into exhaustively in the testimony, and each witness was examined and cross-examined at great length upon the subject. Again, in his findings on the value of Works Equipment the Master says:

> "The evidence of values comes principally from the experts, Lea and Adams, and clashes irreconcilably

> at almost every point. In considering the evidence of these experts, I have been aided, of course, by the testimony of other witnesses, and by reports, letters, bills, contracts, vouchers, and other documentary proofs. Upon every disputed item all the evidence, oral or written, which I have been able to find in the record, has been examined, considered and given in the decision reached, its proper weight of influence. After ascertaining the reproduction cost, which is in the aggregate $198,868, and making proper deductions for depreciation, I present here, without discussion of the evidence, my conclusion that the present value of the 73 units which compose this division of the Company's property is $179,310." (Transcript, p. 40.)

The values which the Master finds are, in almost every case, somewhere between the value of Mr. Lea and Mr. Adams. If the evidence of these two witnesses "clashes irreconcilably at almost every point," it is, we submit, the duty of the Master to give some inkling in his report as to what evidence he relied upon, and to summarize the various unit costs which he used in arriving at his conclusions (that is, if he used any unit costs), rather than merely to assure us that all the evidence has been "given * * * its proper weight of influence."

In concluding these remarks as to the Master's method of reporting his findings in the form of general conclusions, we beg to reiterate that such a method was not in accordance with the Court's instructions, and that, furthermore, this method puts the party who is objecting to the Master's findings in an unfavorable situation, because that party is unable to fully analyze the Master's conclusions and point out where they are in error. We hesitate to say that the Master's report was couched in general terms deliberately in order to hinder analysis, but we will state, and we will stand ready to prove affirmatively, that in those instances in

the Master's report where he gives us enough figures for a basis of comparison and analysis, it clearly appears that his findings were not based upon the evidence at all, but were mere figures picked at random somewhere between the estimates of Mr. Lea and Mr. Adams, the result of which is a conclusion which is not supported by any testimony whatsoever. These instances will be given later in this brief. But we wish to here renew our former demand that the Master's report should be recommitted to him for complete findings, in accordance with the instructions of this Court.

**Findings of the Master Are Not Conclusive Upon This Court.**

This Court is not concluded by the findings of the Master, even though the same are confirmed by the Court below, where specific assignments of error raise questions involving the correctness of the findings, as shown by the evidence.

This principle was recognized in the case of Knoxville v. Knoxville Water Company, 212 U. S., 1, in which action the validity of a rate-making Ordinance was challenged, and the case came to the Supreme Court after having been referred to a Master whose findings were confirmed by the Court below. In that case Mr. Justice Moody said, that in view of the character of the judicial power invoked in such cases, it was not tolerable that its exercise should rest securely upon the findings of a Master, even though they be confirmed by the Trial Court; that this power was best safeguarded against abuse my preserving to the Supreme Court of the United States complete freedom in dealing with the facts of each case; that nothing less than that was demanded by the respect due from the judicial to the legislative authority. The Court made it clear, however, that the findings of a Master, confirmed by the

Trial Court, were not without weight, or that, as a practical question, they would not sometimes be regarded as conclusive, but it was definitely decided that in cases of this character the United States Supreme Court would not fetter its discretion or judgment by any artificial rules as to the weight of a Master's findings, however useful and well settled those rules may be in ordinary litigation.

**Assignment of Errors.**

The assignment of errors relied upon in this appeal are as follows:

I.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in dismissing plaintiff's complaint in so far as it relates to the ordinance of the City of Lincoln establishing a rate of charges for gas in said city.

II.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in dissolving the restraining order theretofore granted by said court against the enforcement of the ordinance of the City of Lincoln establishing a rate for charges for gas in such city.

III.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in approving the special master's report and overruling the plaintiff's exceptions thereto.

IV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not

finding and decreeing that the ordinance set out in plaintiff's bill, establishing the rate to be charged for gas in the City of Lincoln would be a violation of Article V of Amendments to the Constitution of the United States, in that by the enforcement of said ordinance, the plaintiff would be deprived of its property without due process of law.

V.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing that the ordinance set out in the complaint establishing the rate to be charged for gas in the City of Lincoln, to be a violation of Article V of the Amendments to the Constitution of the United States, in that by the enforcement of said ordinance, the private property of the plaintiff would be taken for public use without just compensation.

VI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing that the ordinance set out in plaintiff's bill establishing the rate to be charged for gas in the City of Lincoln, would be a violation of Section 1 of Article XIV of Amendments to the Constitution of the United States, in that by its enforcement the plaintiff would be denied the equal protection of the laws.

VII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing that the ordinance set out in the complaint establishing the rate to be charged for gas in the City of Lincoln to be a violation of Section 1

of Article XIV of the Amendments to the Constitution of the United States in that by the enforcement of said ordinance the plaintiff would be denied the equal protection of the laws.

VII A.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing the present value of plaintiff's property, used and useful in the manufacture and sale of gas in the City of Lincoln as of January 1, 1907, to be $784,682.00.

VII B.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the present value of the property of the plaintiff, used and useful in the manufacture and sale of gas in the City of Lincoln as of January 1, 1913, to be $1,090,913.00.

VIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in excluding the cost of reopening and replacing pavements over gas mains and services on paved streets as a necessary part of the reproduction cost of the property.

IX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in refusing to find and determine that the plaintiff was entitled to a fair return from the actual investment, not improvidently made in the property, or to a fair return upon the reproduction cost new less depreciation, and the court was not warranted in adopting the reproduc-

tion cost, less depreciation, in those instances only where it would secure a lower valuation than the investment cost, and use the investment cost as a basis of present value in those instances only where it could secure a lower valuation than the reproduction cost new, less depreciation.

X.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling the Plaintiff's Exception Number 7 to the report of the special master as follows:

> "That the Master in said report stated and certified that the reproduction cost of Works Equipment in controversy is the sum of $198,868.00, whereas the Master ought to have found, stated and certified the reproduction cost of said Works Equipment to be not less than $253,298.00."

XI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the reproduction cost of Works Equipment of the plaintiff, used and useful, in the manufacture and sale of gas in the City of Lincoln, as of January 1, 1913, to be the sum of $253,298.00.

XII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 8 to the Master's report as follows:

> "That the Master in said report stated and certified that the value of the Works Equipment in controversy is the sum of $179,310.00, whereas the Master ought to have found, stated and certified the value of said Works Equipment not less than $196,759.00."

XIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and decreeing the present value of Works Equipment of plaintiff used and useful in the manufacture and sale of gas in the City of Lincoln, as of January 1, 1913, to be $196,759.00.

XIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 62 as to the Master's report as follows:

> "That the Master in said report stated and certified that the net construction cost of the mains in controversy, laid in unpaved street, is the sum of $173,700, whereas the Master ought to have found, stated and certified the net construction cost of said mains to be not less than $179,814.00."

XV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the net construction cost of mains laid in unpaved streets in the City of Lincoln to be as of January 1, 1913, $179,814.00.

XVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 63 to the Master's report as follows:

> "That the Master in said report stated and certified that the net construction cost of the services is the sum of $76,116.00, whereas the Master ought to have found, stated and certified the value of said services is not less than $111,689.00."

XVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the value of services used and useful, and a part of the distribution system of the plaintiff in the City of Lincoln as of January 1, 1913, to be the sum of $111,689.00.

XVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 69 to the Master's report, as follows:

> "That the Master in said report stated and certified that he made no allowance for reproduction cost of paving over Mains and Services, where as the Master ought to have found, stated and certified and made an allowance for present value of Paving Over Mains and Services in the sum of not less than $142,291.00."

XIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the present value of plaintiff's property on the basis of the reproduction cost, new, less depreciation, and including therein as a part thereof, the additional cost incident to and necessarily incurred in the reopening of paved streets for the purpose of laying gas mains therein.

XX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 70 to the Master's report, as follows:

"That the Master in said report stated and certified that the Net Construction Cost of the Distribution System is the sum of $352,192.00, whereas the Master ought to have found, stated and certified the Net Construction Cost of the Distribution System is not less than $529,736.00."

XXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the net construction cost of the distribution system of the plaintiff as of January 1, 1913, to be $529,736.00.

XXII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 71 to the Master's report as follows:

"That the Master in said report stated and certified that the Reproduction Cost of the Distribution System is the sum of $396,216.00, whereas the Master ought to have found, stated and certified the Reproduction Cost of the Distribution System is not less than $614,493.00."

XXIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the reproduction cost of the distribution system to be as of January 1, 1913, the sum of $614,493.00.

XXIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 72 to the Master's report as follows:

"That the Master in said report stated and certified that the Depreciated Value or Present Worth of the Distribution System is the sum of $351,-624.00, whereas the Master ought to have found, stated and certified that the Depreciated Value or Present Worth of the Distribution System is not less than $513,829.00."

XXV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the present value of the distribution system of the plaintiff to be as of January 1, 1913, the sum of $513,829.00.

XXVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 74 to the Master's report as follows:

"That the Master in said report stated and certified that the Going Value is the sum of $140,000.00, whereas the Master ought to have found, stated and certified the Going Value is not less than $225,-000.00."

XXVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining the going value of the property of the plaintiff as of January 1, 1913, to be the sum of $225,000.00.

XXVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 76 to the Master's report as follows:

"That the Master in said report stated and certified that the company should not have expended for the promotion of new business in the year 1912 more than $12,000, whereas the Master ought to have found, stated and certified that the company, as shown by the record, did expend $19,692, and that said expenditure was fully justified and a proper charge to operating expenses."

XXIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 77 to the Master's report, as follows:

"That the Master in said report stated and certified that an allowance of $12,000 ought to be made for depreciation in addition to what appears on the company's records, as operating expenses, whereas the Master ought to have found, stated and certified that such allowance ought to be made in a sum not less than $20,865.00."

XXX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 78 to the Master's report, as follows:

"That the Master in said report stated and certified that the salary of $3,000, paid to the president of the Board of Directors, should be dissolved and deducted from the operating expenses of the company, whereas the Master ought to have found, stated and certified that the amount of said salary charged to the operating expenses in controversy was $2,400, and that such salary was justified and reasonable, as shown by the record, and a proper charge to the operating expenses of the company."

XXXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 79 to the Master's report, as follows:

> "That the Master in said report stated and certified that the salary of $600 paid to the company's legal representative in New York was not a necessary or prudent expenditure and ought not to be allowed, whereas the Master ought to have found, stated and certified that the amount of said salary charged to the operating expenses, in controversy, as shown by the record, was in fact $480; that it was a necessary and reasonable expenditure and a proper charge against the operating expenses of the company."

XXXII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 80 to the Master's report, as follows:

> "That the Master in said report stated and certified that in 1912, 73% of all plaintiff's customers were in the gas department and 27% in the electric department, whereas the Master ought to have found, stated and certified that as shown by the record, 1902 to 1912 inclusive, the average of all customers was 79% in the gas department and 21% in the electric department."

XXXIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 81 to the Master's report, as follows:

> "That the Master in said report stated and certified that a division of common expenses for the

year 1912 on the basis of 73% and 27%, requires a deduction from the operating expenses chargeable to the gas department of $3,3000, whereas the Master ought to have found, stated and certified that such readjustment, if it ought to be made, would require a deduction of not more than $460.71."

XXXIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 82 to the Master's report, as follows:

"That the Master in said report stated and certified that the legitimate operating expenses for the year 1912, taking into account $8,195.00 occupation tax, were $182,015.00, whereas the Master ought to have found, stated and certified that the legitimate operating expenses, including the assumed occupation tax, would in fact be $205,472.13, as shown by the record."

XXXV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception 83 to the Master's report as follows:

"That the Master in said report stated and certified that the net income for 1912, with gas at $1.20 per M cubic feet, to be $91,161, whereas the Master ought to have found, stated and certified the net income, considering assumed occupation tax, to be $67,703.80, as shown by the record."

XXXVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling Plaintiff's Exception Number 84 to the Master's report, as follows:

"That the Master in said report stated and certified the expense for 1912, with gas at $1.00 per M cubic feet, and including occupation tax, would have been $180,639, and the net income $46,658, whereas the Master ought to have found, stated and certified that with gas at $1.00 per thousand cubic feet and including occupation tax as shown by the record, the operating expenses would have been $204,078.97, and the net income $23,637.56."

XXXVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining that the net income for 1912 with gas at $1.00 M cubic feet in the City of Lincoln would have been $23,637.56.

XXXVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 85 to the Master's report, as follows:

"That the Master in said report stated and certified that the net income with gas at $1.00 per M cubic feet would be 66.9% on $676,565, whereas the Master ought to have found, stated and certified that the net income for the year 1912 would be 3.5% on $676,565.00 and only 2.17% on the actual value of the company's property used or useful in the gas business in the City of Lincoln, January 1, 1913."

XXXIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining and so decreeing that the net income for the year 1912 with gas at $1.00 per M. cubic feet in the City of Lincoln would have been 3.5% on the valuation assumed by the Special Master, and 2.17%

on the actual or present value of the plaintiff's property, used and useful in the gas business in the City of Lincoln, January 1, 1913.

XL.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 86 to the Master's report, as follows:

> "That the Master in said report stated and certified the total value of the company's property used or useful in the gas business in the City of Lincoln, January 1st, 1913, to be $676,565.00, whereas the Master ought to have found, stated and certified such value to be not less than $1,090,913.00 as shown by the record."

XLI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining that the total present value of the plaintiff's property used and useful in the gas business in the City of Lincoln, January 1st, 1913, to be the sum of $1,090,913.00.

XLII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exceptions number 88 to the Master's report, as follows:

> "That the Master in said report stated and certified that $10,000.00 is a sufficient allowance for depreciation for the year 1907, whereas the Master ought to have found, stated and certified that $14,955.00 was the necessary and reasonable allowance to charge for depreciation, as shown by the records."

XLIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not finding and determining that the necessary and reasonable allowance for depreciation for the year 1907 of the plaintiff's property was the sum of $14,955.00.

XLIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 90 to the Master's report, as follows:

> "That the Master in said report stated and certified that with gas at $1.00 for the year 1907 the net income would have been $22,349.00, whereas the Master ought to have found, stated and certified that under the conditions named the net income for the year 1907—have been $18,129.24."

XLV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 91 to the Master, report, as follows:

> "That the Master in said report stated and certified that on his assumption of net income and on his erroneous assumption of value for the year 1907 the net income was 5.12% on the value of the plaintiff's investment in 1907. Whereas the Master ought to have found, stated and certified that the net income for the year 1907 was in fact as shown by the records only 2.31% on the value of the plaintiff's investment in 1907."

XLVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 95 to the Master's report, as follows:

"That the Master in said report stated and certified that the question of whether the franchise is perpetual or temporary is not material in this case and that the said franchise, however valuable it might be, could in no way affect the rate, which the public service corporations may charge its customers, whereas the Master ought to have found, stated and certified that the question did materially affect the case and the rate of return, as well as its value and the rates, which the corporation might charge, as shown by the record."

XLVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 96 to the Master's report, as follows:

"That the Master in said report stated and certified that the bonded debt of the company far exceeds the value of its assets, whereas the Master ought to have found, stated and certified that the value of the company's assets is much greater than its bonded indebtedness."

XLVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 100 to the Master's report, as follows:

"That the Master in said report stated and certified that he cannot believe that a rate not lower than 6% upon their invested capital could be regarded as confiscatory, whereas the Master ought to have found, stated and certified that any rate under 8% was less than usually expected in business of this character in this locality, that any rate less than 8% is considered as being non-compensatory, and therefore to the extent that it is short of said 8% it is confiscatory."

XLVIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 101 to the Master's report, as follows:

> "That the Master in said report stated and certified that there is evidence in the record indicating that plaintiff regards investments in the stock of these corporations as especially desirable, whereas the Master ought to have found, stated and certified that the record shows that the plaintiff company, on the contrary, regards its investment in this locality, as being an extremely hazardous one under the existing conditions and that its stock is considered of little value in the market."

L.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 102 to the Master's report, as follows:

> "That the Master in said report stated and certified that all human experience has shown that increased consumption follows quickly a reduction in the price of commodities, whereas the Master ought to have found, stated and certified, as shown by the record, that because of strenuous competition of electric and other companies the demand for gas is gradually decreasing and it has only been possible for the company to make increases in the sales of gas by the expenditure of extraordinary efforts in the establishment of a new business department at large expense during the last twelve years, and that notwithstanding these extraordinary efforts, the company's output for the year 1913, shows an appreciable decrease, as compared for the year 1912."

LI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 103 to the Master's report, as follows:

> "That the Master in said report stated and certified that with gas selling at $1.00 per M cubic feet, the plaintiff would have received since December 1, 1907, not less than 6% per annum upon the value of the property employed by it in serving the people of Lincoln, whereas the Master ought to have found, stated and certified that with gas selling at $1.00 per M. cubic feet and with the tax ordinance enforced, the company would have received on the value of its property employed in serving the people of Lincoln for the year 1907, only 2.31% for the year 1908, only 4.44%; for the year 1909, only 4.96%; for the year 1910, only 3.95%; for the year 1911, only 3.51%; for the year 1912, not more than 2.17%; and for the year 1913, not more than 1.04%."

LII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exceptions 104, 105, and 106, wherein plaintiff excepted to the failure of the Special Master to find the reproduction cost, the assumed life and age, and the amount and rate of depreciation on each of the 73 items of Works Equipment.

LIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exceptions numbers 107, 108 and 109, and each thereof, wherein plaintiff excepted to the failure of the Special Master to find and certify the present value of each of the groups of items of property in the

Distribution System, and find and certify the age and assumed life for each of said groups of property, and find and certify the amount and rate of depreciation on each of said groups of property.

LIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 110 to the Special Master's report, wherein plaintiff excepted to the failure of the Special Master to find and certify the operating expenses, revenues and net incomes for the year 1913.

LV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 111 to the Special Master's report, wherein plaintiff excepted to the Special Master's failure to find and certify the reproduction cost and present value of the property of the company for 1913.

LVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 112 to the Special Master's report, wherein plaintiff excepted to the failure of the Special Master to find and certify the reproduction cost and present value of the property of the company for the years 1908, 1909, 1910 and 1911.

LVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 113 to the Special Master's report, wherein plaintiff excepted to the falure of the Special Master to find and certify the rate and

amount of depreciation for each of the years 1908, 1909, 1910, 1911 and 1913.

LVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 114 to the Special Master's report, as follow:

> "That the Master failed to find and certify the amount of organization and legal expenses and other costs preliminary to construction shown in the evidence in the amount of $33,000.00."

LIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 115 to the Special Master's report, as follows:

> "That the Master failed to find and certify the reproduction cost and present value of paving over mains and services."

LX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 116 to the Special Master's report, as follows:

> "That the Master failed to find and certify a summary of the evidence on the values of the company's property, its operating expenses, net income and rate of return."

LXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 117 to the Special Master's report, as follows:

"That the Master failed to find and certify the incompetency of the testimony of A. D. Adams offered on behalf of the City on questions of value of the company's property and on operating expenses and results."

LXII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 118 to the Special Master's report, as follows:

"That the Master failed to find and certify as to the franchise rights of the company involved in the issues necessary to be determined in valuing the company's property and in determining the operating expenses of the company and in determining the amount of depreciation, and failed to find and certify that the company had a perpetual franchise."

LXIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's exception number 119 to the Master's report as follows:

"That the Master in said report stated and certified that he had reached the conclusion that the ordinance in controversy has been at all times enforecable according to its terms and that the injunction heretofore granted restraining its enforcement should be vacated and complainant's bill dismissed, whereas the Master ought to have found, stated and certified that said ordinance was not enforceable and its enforcement would have denied to the company just compensation and would have resulted in confiscation of the property of the company if enforced in the years 1907, 1908, 1909, 1910, 1911, 1912 and 1913, and for each of said years, and that the injunction heretofore granted restraining the enforcement of said ordinance should be continued in force and made permanent."

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LXIV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 1 to the report of the Special Master, as follows:

> "That the Master failed to find and certify to the extent of the application of the revenue of the years 1907, '8, '9, '10, '11, '12 and '13, each separately, to reconstruction or replacements as distinguished from current repairs and operating expenses, and that the Master failed to find and certify the amount of past expenditures for reconstruction or replacement and past operating expenses, including current repairs for each of the years 1907, '8, '9, '10, '11, '12 and '13, and failed to find and certify how the gross receipts for the company for 1907-'13, inclusive, for each of the said years had been expended, and failed to find and certify the amount to be set aside for the year 1913 and thereafter for depreciation, and failed to find and certify the character and probable life of the property of the company and the methods adopted in the past to preserve the properties, and failed to find and certify on questions of value, operating expense, net returns, rate of return, depreciation and franchise rights of the company, being questions raised by the complainant, supported by proofs, all of which the Master was directed by the Supreme Court of the United States to fully report upon by order of the said Court in the case."

LXV.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 7 to the report of the Special Master, as follows:

> "The complainant excepts to the conclusions of the Master that deductions should be made from the value of the services in the distribution system.

on account of advancement made by consumers, and excepts to the failure of the Master to find and certify the reproduction cost and present value of the paving over mains and services for each of the years 1907 to 1913, inclusive."

LXVI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 5 to the report of the Special Master, as follows:

"That the Master failed to find and certify as to the competency, materiality and relevancy of the testimony offered as to the Massachusetts and other companies offered on behalf of the complainant and failed to indicate whether such testimony bearing on the results of such companies was taken into account and given due consideration on the part of the Master in reaching the conclusions submitted; and failed to find and certify whether the increased cost and the amount thereof in the manufacture of gas by complainant, on account of the pressure ordinance and quality ordinance was taken into account and given consideration on the part of the Master in reaching conclusions submitted."

LXVII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's additional exception number 6 to the report of the Special Master as follows:

"Complainant excepts to the conclusions submitted without a summary of the evidence being submitted therewith, and excepts to the final conclusions submitted by the Master, in view of the finding of the Master to the effect that (summarization of this evidence is quite impossible and would so far as I can see aid neither court nor counsel in testing the correctness of the conclusions I have reached) and as a result thereof the complainant

is denied the benefit of the testimony offered and means of testing the correctness of the Master's conclusions, by the evidence considered by the Master."

LXVIII.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling plaintiff's application to recommit the case to the Special Master for additional findings.

LXIX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not decreeing that the ordinance set out in the complaint imposing an occupation tax on gas companies in the city of Lincoln to be a violation of Section 1 of Article XIV of Amendments to the Constitution of the United States in that by its enforcement the plaintiff would be denied the equal protection of the laws.

LXX.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in not permanently enjoining the enforcement of the ordinance of the City of Lincoln, imposing an occupation tax on gas companies in the City of Lincoln.

LXXI.

That the District Court of the United States for the District of Nebraska, Lincoln Division, erred in overruling exception No. 94 to the Master's report as follows:

"That the Master in said report stated and certified that the occupation tax ordinance is valid, whereas the Master ought to have stated, found and certified that said ordinance, if enforced, would operate to confiscate the plaintiff's property, as shown by the records and should therefore and for other reasons be declared invalid and discriminatory."

## I.

**The repeated and persistent attacks of the City on the company, reducing and depleting its revenues, running through a course of years, is to be considered in determining when, if ever, the company will be able to recoup losses already sustained in its revenues.**

The evidence shows that in 1904 the Company became the scapegoat of political strife in Lincoln, and the city authorities instituted a campaign of aggression against the Company, which ultimately compelled the Company to resort to the Courts in order to preserve its properties and franchises.

As a result of the agitation and threatened action on the part of the City, in 1904 the Company reduced its gas rate to $1.20 per M cubic feet (Transcript, p. 187). The condition of the company at that time is shown by the testimony of its manager, Mr. Homer Honeywell, who testified as follows (Transcript, p. 149):

> "We were behind about $40,000 on our bills and taxes at that time (1904) and for some time prior we had been unable to maintain the plant and meet the interest on the bonded indebtedness and that was the emergency that required the contribution of $100,000 from stockholders. We were in dire distress for money and we couldn't borrow it."

In order to recover the losses sustained in its revenues by that 1904 reduction, the Company established a new-business department and made a thorough and energetic canvass of the city for the purpose of holding present and getting additional business, and from that time on down to the time the evidence closed in this case before the Master, a new-business department was maintained at a great expense to the Company, for the purpose of holding and pushing the Company's business

and extending it as rapidly and as far as possible. Mr. Honeywell, the manager of the Company, testified in 1907 as follows (Transcript, p. 154):

> "In 1904 we started out with a new-business department with six solicitors and with a man at the head and a clerk. They made a house to house canvass to ascertain what the consumers had on the premises, what they used, why they didn't use something else, and trying to get in additional equipment. They went to every house in the town and kept a card record of it. The town was divided into territory or districts and each man knew how many people used only a range or light or both. We maintained a school and educated our solicitors and got reports from them daily and there was considerable expense involved in that."

That this campaign for new business was as successful as could have been expected, is shown by Exhibit 425, Subdivision S (Transcript, p. 1388), which indicates that the Lincoln Gas Company had 78.1 consumers per mile of main in 1912, and sold 5,095 M cubic feet of gas per capita; and in comparison with twenty cities in the State of Massachusetts this record of gas sales shows the highest number, with the exception of one, of consumers per mile of main (Transcript, p. 1388). The extent to which the work of the new-business department had been pushed in comparison with other cities, showed that there was no further development possible to be expected, beyond the increase which would come from the natural growth of the city; and the natural growth of the City of Lincoln, as shown by the Federal census (Transcript, p. 1617) was only an increase from 40,000 in 1900 to 44,000 in 1910; in other words, 4,000 in ten years. This work of the new-business department was a determined effort on the part of the Company to recoup its losses resulting from the reduction of rate in 1904.

Before the Company had recovered from these losses due to the 1904 reduction, the City, in April, 1906, some months prior to the passage of the Rate Ordinance, passed what was known as a Quality and Pressure Ordinance, which called for a high quality of gas, both in heating and lighting power, to wit, 18 candle power and 625 B. T. U.'s (Transcript, pp. 1746, 128). The record shows that this quality requirement is an exceptionally high standard, both for light and heat (Transcript, p. 128). The Wisconsin Commission has said (In Re Standard for Gas and Electric Service, 2 W. R. C. C., 648), "to require companies to maintain a double standard which shall insure both the high heating value and a high candle-power, would surround them with such restrictions that economy in manufacturing might not be attained." The cost of manufacturing gas in 1906 discloses the fact that the cost of gas in the holder was materially increased, to wit, approximately 10c. per M cubic feet of gas (Exhibit 425, Subdivision L; Transcript, p. 1382).

In November, 1906, the City passed the Rate Ordinance in controversy, reducing the price of gas 20c. per M cubic feet, to be effective December 1, 1906. The evidence shows that prior to the passage of this Rate Ordinance, the company made a determined effort to have the City Council investigate its books, records and the details of its business, in order to demonstrate the cost of manufacture and distribution of gas in the City of Lincoln. Mr. Honeywell, on this point, testified (Transcript, p. 136):

> "Previous to the final passage and taking effect of the ordinance in controversy in this suit, the Lincoln Gas & Electric Light Company offered to exhibit its books of account to a committee appointed by the City Council, in order to prove to them that we could not supply dollar gas. That was done in

open Council meeting in my presence. We also asked them to suspend the rate until we could complete our investigation. They refused to do that, and they acted on it abruptly. I do not remember that any motion was made in the City Council. The suggestion of the company, as I recall, was received by silence. The City did not, before the passage of this ordinance, examine into, or have examined into, the details of the company's business to ascertain what was the cost of manufacture and distribution of gas in the City of Lincoln, and they did not go over the properties of the company or its books to ascertain what the cost of manufacture and distribution of gas was, and they did not ascertain the capital necessarily employed in the conduct of the business. I was present, I think, at all the meetings at which the ordinance in controversy here was introduced, read and considered. I was a pretty regular attendant those days, and I heard the expressions made by the Councilmen on the floor of the council chamber in respect to the gas company's inability to reduce the rate to a dollar, and I heard the expressions of the members of the Council of the effect of the adoption of such a rate on the solvency of the company. Mr. John S. Bishop said the only way that they would ever get the water out of the stock or bonds of the company was to put it into the hands of a Receiver, and he in his humble way would do all he could to bring that about."

On December 10, 1906, the City passed an ordinance levying an occupation tax of two and one-half per cent. on the gross receipts of the gas company (Transcript, p. 1751), which would result in a further reduction of the company's revenues, and at the dollar rate would, in fact, require the company to furnish gas for 97½c. per M cubic feet.

During the progress of all these acts of aggression, the City had taken the position that the Company's franchise, which the Company claimed was a perpetual

one, had expired, and that the Company had no further right or license to use the streets of the City of Lincoln for the purpose of distributing gas, and that its pipes and equipment were there solely at the sufferance of the City, and were subject to ejectment at any time by the City. A claim to a perpetual franchise was set forth in the Company's petition in this case (Transcript, p. 3), but it is expressly denied in the City's answer, which states that the Company's franchise was terminated, that the right to use the streets of the City is by sufferance only, and subject at any time to cancellation by the City (Transcript, pp. 21, 22). This answer of the City was filed May 13, 1907.

Furthermore, the City of Lincoln actually instituted a suit, in April, 1908, in the State Courts of Nebraska, asking for a writ of ouster ejecting the Company from the streets of the City (Exhibit 56; Transcript, p. 1758), which suit is now pending, and is being pressed for trial by the City (Transcript, p. 793). As to the City's attitude in this franchise suit, Mr. Morning, who was an influential member of the Municipal Ownership League, and special counsel for the City in this case, testified with respect to the franchise suit as follows (Transcript, pp. 824-5):

> "I do not think the suit to forfeit the franchise right is being prosecuted to compel the company to submit to a reduction of its rates. It was an effort to clear the books and *put the City in a position to negotiate with the company.*"

In addition to the foregoing, a league was formed in the City of Lincoln, called the "Municipal Ownership League," which was openly advocating municipal ownership of public utilities, including gas works, and was in this connection advocating the building of a gas plant by the City, to be operated in competition with the Company (Transcript, p. 825).

The City had actually established a municipal electric plant, which was competing with the Company in the lighting business (Transcript, pp. 825, 788), and this competition was further aggravated by the fact that the Lincoln Traction Company was also generating and selling electricity in competition with the company in the lighting business (Transcript, p. 788).

This Municipal Ownership League caused a bill to be presented to the Legislature of the State of Nebraska, authorizing the City of Lincoln to construct, maintain and operate a gas plant. An amendment to this bill, which was introduced to the effect that before the City should construct a new plant it would buy any existing plant by condemnation, at a fair valuation, was decisively defeated through the efforts of the Municipal Ownership League (Transcript, p. 824). The real meaning of this legislation is clear, in spite of Mr. Morning's denial that he "did not undertake to get this bill through for the purpose of compelling the Company to make a settlement with the City regardless of the justice of its terms" (Transcript, p. 824).

On March 16, 1908, the City passed an Occupation Tax Ordinance, assessing and levying an occupation tax of two per cent. on the gross receipts resulting from the sale of electricity for light, heat or power purposes in the City of Lincoln (Transcript, p. 1773). In this connection, the testimony of Mr. Frank W. Frueauff, to the effect that the electric department of the company was only earning one per cent. at that time, shows the drastic character of this Tax Ordinance (Transcript, p. 788).

On December 13, 1909, the City passed another ordinance levying an occupation tax of three per cent. on the gross receipts resulting from the sale of gas or electricity for light, heat or power purposes in the City of

Lincoln (Transcript, p. 1767), which repealed the two previous Tax Ordinances, but increased the burdens of taxation.

While all these things were going on, the company's general taxes were increased from $2,112 in 1905, to $6,690 in 1906, and to $15,260 in 1912 (Exhibit 425, Subdivision P; Transcript, p. 1386). The valuation of its properties was increased from $663,400 in 1906 to $1,184,250 in 1910 (Transcript, pp. 1861 and 1889).

We submit that it is perfectly evident from this series of acts of hostility and oppression on behalf of the City, that the City was engaged in a deliberate attempt to push the Lincoln Gas Company to the wall, for the purpose of compelling it to surrender its franchise and properties, in the interest of a municipal plant.

In this conection, we beg to call the attention of this Court to the pertinent language used by Mr. Justice Moody, in the case of Knoxville Water Company, 212 U. S., 1, where he said:

> "Our social system rests largely upon the sanctity of private property, and that state or community which seeks to invade it will soon discover the error in the disaster which follows. A slight gain to the consumer which he would obtain from a reduction in the rates charged by a public service corporation is as nothing compared with his share in the ruin which would be brought about by denying the private property its just reward, thus in settling values and destroying confidence."

Some of the conditions described above existed at the time of the former hearing of the appeal in this case, which called forth the remark from Mr. Justice Holmes that "the City was putting the screws on the Company."

We have set forth all these facts and conditions at

the outset of this brief, in order that the Court may understand the atmosphere surrounding the Company's operation and business in the City of Lincoln, and also because we submit that they bear directly upon the attitude of the City in the issues in this case.

## II.

### Rate of Return.

In respect of the rate of return, which the Master decided was a reasonable return on an investment of this class in the City of Lincoln, the Master said:

> "A considerable number of witnesses testified with respect to the return upon capital invested in banking, merchandising and other businesses in the City of Lincoln, and from their testimony, I find that 8 per cent. is the lowest rate sought and generally obtained in such businesses. There is, however, in all these lines free competition and hazards from which a utility corporation is exempt. Banks fail; merchants go to the wall, but if any honestly capitalized and conducted gas, water or electric company having a monopoly of the business in the community which it serves has become bankrupt, the fact has escaped my notice. The profits of such corporation may not be large, but they are virtually guaranteed profits, and I cannot believe that a rate not lower than 6 per cent. upon their invested capital could be regarded as confiscatory. There is evidence in the record indicating that plaintiff regards investments in the stock of these corporations as especially desirable." (Transcript, pp. 54 and 55.)

What is a fair rate of return upon a certain class of investment in a given locality is to be determined by all of the circumstances surrounding each particular case. It is obvious that such should be the rule, and the principle was clearly stated by Mr. Justice Peckham

in Willcox *v.* Consolidated Gas Co., 212 U. S., 19, where he said, in part:

> "There is no particular rate of compensation which must in all cases and in all parts of the country be regarded as sufficient for capital invested in business enterprises. Such compensation must depend greatly upon circumstances and localities; among other things, the amount of risk in the business is a most important factor, as well as the locality where the business is conducted and the rate expected and usually realized there upon investments of a somewhat similar nature with regard to the risk attending them. There may be other matters which in some cases might also be properly taken into account in determining the rate which an investor might properly expect or hope to receive and which he would be entitled to without legislative interference. The less risk, the less right to any unusual returns upon the investments. One who invests his money in a business of a somewhat hazardous character is very properly held to have the right to a larger return without legislative interference, than can be obtained from an investment in Government bonds or other perfectly safe security" * * * (48-49).

Referring to an investment in a gas company in New York City, he said:

> "In an investment in a gas company, such as complainant's, the risk is reduced almost to a minimum. It is a corporation, which in fact, as the Court below remarks, monopolizes the gas service of the largest city in America, and is secure against competition under the circumstances in which it is placed, because it is a proposition almost unthinkable that the City of New York would, for purposes of making competition, permit the streets of the City to be again torn up in order to allow the mains of another company to be laid all through them to supply gas which the present company can adequately supply. * * * An interest in

such a business is as near a safe and secure investment as can be imagined with regard to any private manufacturing business, although it is recognized at the same time that there is a possible element of risk, even in such a business." (49)

*In Re* Queens Borough Gas & Electric Company, 2 P. S. C., 1st D., N. Y., decided June 23, 1911, it was said:

> "Various standards have been suggested for determining the fair rate of return. The one which in our opinion is properly applicable to this case is that the rate should be such that investors would be induced to provide the funds with which to construct and extend a gas and an electric plant within the area in question. If the state were to fix a rate below this standard, capital could not be secured. If investments were made before the state acted, the original capital might be forced to remain, but additional capital could not be secured unless necessary to protect the first outlay."

In conformity with this doctrine, it will be necessary, in order to determine the proper rate of return on the Company's investment, to look to the locality in which the company is operating, and the risks which there occur.

From an examination of these facts, we submit that the finding of the Master that a return of six per cent. would not be confiscatory, is absolutely without justification.

The City of Lincoln, the capital of the State of Nebraska, is strictly a residential city, with no field for industrial gas sales (Transcript, pp. 469-70, 1357). The market for gas in Lincoln is, therefore, limited to sales for domestic lighting and cooking purposes (Transcript, p. 1375). Furthermore, within the past 11 years electricity for lighting purposes has begun to replace gas (Transcript, p. 668, 469), and, in fact, it ap-

pears from the record (Transcript, p. 667) that many of the newer houses being built in Lincoln are not even being piped for gas lighting purposes. This fact narrows even more closely the field for the sale of gas to cooking ranges. As it was very aptly expressed in one of the prior arguments of this case, gas in Lincoln "was being driven from the parlor to the kitchen."

The population of the City of Lincoln, according to the 1900 Federal Census, was approximately 40,000 (Transcript, p. 1617), and in 1910, according to the Federal Census, it was approximately 44,000, an increase of but 4,000 over a period of ten years.

As far as this Company's operations in Lincoln are concerned, we have already shown in Point I hereof how the Company was actually beset on all sides by influences which tended to hamper its business, reduce its earnings, and increase the hazard of its investment.

It could hardly be said, in view of all the above circumstances, that the position of the Company's investment, even in the City of Lincoln, was a favorable one.

The Company in this case introduced the testimony of ten witnesses, in respect of the rate of return which investments in general, and this investment in particular, should command in the City of Lincoln. Against this proof the city introduced not a single witness. All the Company's witnesses were men of high standing and prominence in the business life of the City of Lincoln, and most of them were familiar with investments of this class. Not one of them would say that a return which was lower than eight per cent. was a fair return, and yet, in view of all this testimony, which was quite unchallenged, the Master determined that a six per cent. rate of return was fair and not confiscatory.

We deem this subject of sufficient importance to set

forth precisely what the various witnesses said in respect of this matter.

Mr. Frank W. Frueauff, a member of the operating firm of Henry L. Doherty & Company of New York, the President of complainant, who has spent his active life in the operation of gas utilities, testified that such utility at Lincoln could not possibly be financed on a more favorable basis under normal conditions than 8 per cent. return on invested capital, and in order to float 8 per cent. securities it was necessary that the company show a net return on invested capital of at least 10 per cent. per annum, in order to maintain the stability of the investments (Transcript, pp. 169, 781-2).

Mr. E. B. Sawyer was a witness for the Company and testified that he was President of the Cushman Motor Works, located at Lincoln, and which manufactures gasoline engines which are sold practically all over the world (Transcript, 580). That the minimum rates required to attract investments in manufacturing lines and enterprises involving risks incident to business in Lincoln is from 15 to 20 per cent. (Transcript, p. 580); testified that he was a member of the City Council in charge of the gas ordinances in 1906, and that he was willing to recede from the dollar rate, but the council was influenced by legal advice that there was an opportunity to maintain the rate upon a contest; "there was a general tendency with the committee to accept some compromise sliding scale agreement, and our legal advice at that time was that the opportunity was open for fighting the case from a legal standpoint" (Transcript, p. 580).

Mr. J. E. Miller, the head of Miller & Paine Company, engaged in the general merchandise business, formerly a director in the City National Bank and now a director in the First National Bank, also a director in the Lincoln Traction Company and interested in the Lincoln Tele-

phone Company, who has resided 34 years in Lincoln, testified that an 8 per cent. average would be a necessary return on investments in gas utilities in Lincoln under normal conditions to attract capital investments and testified that under present conditions of the disputed franchise rights from a refusal to extend franchise and pendency of suit to eject the Company from the streets, there would be presented simply a gambler's proposition which would require a rate of return accordingly (Transcript, p. 585). Mr. Miller testified:

> "I large amount of capital would not be invested under those conditions, under any terms. People having money to invest would not invest. Small amounts might be secured on a speculative proposition. Gamblers might be interested, but investors would not put any money into it at all" (Transcript, p. 585).

Mr. Frank H. Woods, President of the Lincoln Telephone & Telegraph Company with assets of $6,000,000, part owner of a Silo Manufacturing Company located at Lincoln, with a capital of one-half million dollars, and a stockholder in many industrial corporations, as well as a director of the First National Bank of Lincoln and a stockholder in other Lincoln banks, testified that a fair rate of return for investments in gas utilities in Lincoln is from 8 to 10 per cent. under normal conditions and that existing difficulties would probably prevent obtaining funds for that utility upon any basis (Transcript, p. 579). Mr. Woods testified:

> "I think the hazard would be prohibitive. I do not think you could get any money for investments under those circumstances, except from people who were already in and who would have to put in more to save their investments" (Transcript, p. 579).

Mr. P. L. Hall, President of the Central National Bank

of Lincoln, and prior thereto cashier of the Columbia National Bank, and for 29 years engaged in the banking business in Lincoln, testified that bank stock ought to be earning at least 8 per cent. (Transcript, p. 581) and that general manufacturing and commercial enterprises should pay 8 per cent. in order to attract capital investment, and testified that he could not state a rate necessary to attract capital as an investment in the gas property with its franchise rights involved in litigation by the City; that it would be a speculation and not an investment (Transcript, pp. 581-2).

Mr. J. D. Lau, wholesale grocer in Lincoln and general manager of the H. P. Lau Company, one of the large distributing houses, supplying western teritory, testified that jobbers in that line would expect from 10 to 12 per cent. on their money in Lincoln (Transcript, p. 581.

Mr. Silas H. Burnham, the well-known president of the First National Bank of Lincoln, whose average deposits are four million dollars and who has a banking experience in Lincoln extending over twenty years, testified that for an investment in property such as the Lincoln Gas Company, under normal conditions, and during the period following 1906, to the present time he would require a rate of return of from 10 to 15 per cent. in order to induce him to invest, and would prefer farm mortgages at 6 or 7 per cent. to gas investments at the high rate named. In the present attitude of the City toward the company, he knew of no rate that would be adequate to induce investments in the Lincoln Gas property (Transcript, pp. 587-8).

Mr. C. B. Towle, for ten years an active officer in the Curtis, Towle & Paine Company at Lincoln, doing a business of about a million dollars a year in the manufacture and sale of sash and doors and other millwork, testified that the fair return on investments involving

risk of the business in the City of Lincoln is in the neighborhood of 15 per cent. and that an actual rate of return of from 10 to 12 per cent. in an old established business was necessary to attract capital to enterprises like those in which he was engaged (Transcript, p. 580).

Mr. C. H. Beaumont, cashier of the Nebraska State Bank of Lincoln, and an officer in other banks in the State, and who was for six years State Bank Examiner, testified that it required a rate of return of from 10 to 15 per cent. to attract capital fo investments in manufacturing or other business enterprises in Lincoln and that for the gas company under normal conditions it would be about 10 per cent. (Transcript, p. 584). Mr. Beaumont testified with respect to the matter of getting capital under present conditions:

> "The fact that the City is prosecuting a suit to put the gas company out of the streets, and there is a question as to its franchise, and that the Legislature has authorized the City to establish and operate a gas plant without any provision for taking over the property of the company, I think would make it hard to interest capital at all in this enterprise. It would make it practically prohibitive" (Transcript, p. 584).

Mr. M. W. Folsom, president of the Nebraska State Bank of Lincoln and secretary of Nebraska Central Building & Loan Association of Lincoln, testified that it would be necessary to show a rate of return of at least 8 per cent. for capital for gas utilities in Lincoln under normal conditions (Transcript, p. 576), and testified that under present conditions money could not be attracted for the enterprise at any rate of interest. Mr. Folsom testified:

> "Where the question of the right of the company to be on the streets and the right to use the property is involved in a law-suit brought by the City and where the people have voted to refuse to quiet the

> right of the company in the streets, and where the Legislature has authorized the City to engage in the manufacture and selling of gas—under those conditions you could not attract capital at all. Anyone looking for an investment would look elsewhere. You might be able to find those who like to speculate and they might pay something, but an investor looking for an investment would not be attracted" (Transcript, p. 576).

Homer Honeywell, the manager of the Company, in speaking of the market value of the Company's securities, which is an exact estimate of the attitude of investors toward the business and affairs of the Lincoln Company, said (Transcript, p. 133):

> "There has been no time in the past three years when the 7% notes of the company would command par at the market, and there has been no time during my administration when the 5% bonds of the company would command par, or any figure within 20% of par. That is the reason that we issued the notes at the present time. We thought the notes would go better than the bonds. Nobody wanted the bonds. We are offering a collateral, par value of $200,000, in order to get a $100,000 loan, and our 7% notes with 2% commission are going begging at that offer."

In addition to all this testimony, it appears from the record (Transcript, p. 1711) that the Nebraska State Railway Commission, on application of the Company, in July, 1911, issued an order authorizing the Company to issue and sell $500,000 principal amount of its three-year six per cent. notes, at a price equal to 96% of the principal thereof, plus accrued interest. The rate of interest to the investor upon said notes was, therefore, equivalent to 7.6%. The statutes of Nebraska vest the Railway Commission with power to pass upon applications of public utility companies to issue stocks, bonds and obligations running for a period longer than one

year, and in the exercise of that power the Commission is vested with authority and is required to examine into the affairs of the company to fix and determine the extent of the securities prescribed, the rate of interest, and the conditions and terms under which such securities may be issued. The public utility companies are required to proceed in these matters under the direction of the Commission. The orders of the Commission are binding upon the public utility company, and are alike binding upon the Courts. In this case the minimum rate of return on the $500,000 principal amount of the Company's notes has been fixed and determined by the Commission, acting pursuant to the power vested in it by law, and the rate of return so fixed on said notes was 7.6%.

The legal rate of interest in the State of Nebraska is seven per cent.

In view of this overwhelming weight of evidence, opposed to which was not one word of testimony, we confess we are at a loss to understand the justification for the Master's finding that a six per cent. rate of return was fair and not confiscatory, nor the reason for his finding being confirmed by the court below. This Company, involved as it was in a bitter political struggle in the City of Lincoln, beset on all sides by competition, and threatened with expulsion from the streets of the City of Lincoln, is put by the Master and the court below upon the same basis as the Consolidated Gas Company, which does business under a perpetual franchise in New York City, about which Mr. Justice Peckham said:

> "It is a corporation, which in fact, as the court below remarks, monopolizes the gas service of the largest city in America, and is secure against competition under the circumstances in which it is placed, because it is a proposition almost unthink-

able that the City of New York would, for purposes of making competition, permit the streets of the City to be again torn up in order to allow the mains of another company to be laid all through them to supply gas which the present company can adequately supply" (p. 49).

Without discussing the authorities on rate of return at any length, we think it advisable to briefly state some of the rates which were approved in cases involving public utilities in various parts of the country:

Mayhew *v.* Kings Co. Lighting Co., 2 P. S. C., First D. N. Y., decided October 30, 1911....7½%
Des Moines Water Co. *v.* City of Des Moines, 192 Fed., 193.....8 %
City of Havlock *v.* The Lincoln Traction Co., Nebraska State Ry. Comm. Annual Report, 1911, p. 91.....8 %
Public Service Gas Co. *v.* Board of Public Utility Commissioners, 84 N. J. L., 463.....8 %
Central of Georgia Ry. Co. v. R. R. Comm., 161 Fed., 925 .....8 %
*In re* application Public Service Gas Co., Vol. 2, B. T. U. C. (N. J.), Dec. 30, 1913.....8 %
State Journal Printing Co. *v.* Madison Gas & Electric Co., 4 U. R. C. R., 501....7½%—8 %
Application of Lincoln Telephone & Telegraph Co. for permission to establish temporary rates of service, Nebraska State Ry. Comm. Annual Report, 1913.....8 %

See also:

Missouri K. & T. Ry Co. *v.* Love, 177 Fed., 493;
Brunswick & T. Water District *v.* Maine Water Co., 99 Me., 371;
City of Knoxville *v.* Knoxville Water Co., 212 U. S., 1;
Hill *v.* Antigo Water Co., 3 U. R. C. R., 533;
City of Ashland *v.* Ashland Water Co., 4 U. R. C. R., 277;

City of Ripon *v.* Ripon L. & W. Co., 5 U. R. C. R., 1;

City of Racine *v.* Racine Gas Light Co., 6 U. R. C. R., 288.

There is one of the Master's remarks in his findings on rate of return which we wish to comment on. He says (Transcript, pp. 54-5):

> "There is. however, in all these lines free competition and hazard from which a utility corporation is exempt. Banks fail, merchants go to the wall, but if any honestly capitalized and conducted gas, water or electric company having a monopoly of the business in the community which it serves, has become bankrupt, *the fact has escaped my notice.*"

In view of this remark, we beg to call attention to the experience of the old Lincoln Street Railway Company, whose first mortgage to New York Security & Trust Company, securing $600,000 of that Company's bonds, was foreclosed in 1903. In connection with that foreclosure, the case of City of Lincoln against Lincoln Street Railway Company, 67 Neb., 469, came before the Supreme Court of the State of Nebraska, in the January term, 1903, while the Master in this case was sitting upon the Supreme Court bench as Chief Justice of said Court. In that case the history of the Street Railway Company in Lincoln was reviewed. The plaintiff in that case (the City of Lincoln) raised the contention "that the mortgage (which had been foreclosed in this Federal Court) was given to secure a fictitious indebtedness." But the Supreme Court of Nebraska held, page 483:

> "It appears, however, that the money borrowed upon the mortgage in question was used to pay for some of the constituent properties purchased by the defendant, which became parts of the property

of the consolidated company; that some of it was used for the construction and extension of the several lines of street railway so purchased, and a large part of it was used to electrically equip the whole system; that the amount of money expended for these purposes was about $900,000, so that no fictitious indebtedness was created by the mortgage in question; and it appears that the Company, in effect, received property, money, or labor for the amount, and to the extent of a much greater sum than the total amount of bonds secured by the mortgage."

And, yet, in the face of this decision rendered by the Court of which the Master himself was Chief Justice, the Master states that a utility company is exempt from hazards, and the fact that any honestly capitalized gas, water or electric company has become bankrupt, has escaped his notice.

## III.

**The City of Lincoln, after the passage of the gas rate ordinance in question and the institution of this suit to enjoin its enforcement by the Company, caused to be instituted an action in the State Court to eject the Company from the streets and prevent it from further continuing in business in Lincoln, claiming that the Company's franchise, under which it manufactured and distributed gas in the City, had expired, and that its right to continue in the business had ceased and terminated.**

The suit above referred to was instituted on April 11, 1908 (Transcript, p. 1758), and the city, as shown by the record, is insisting upon the trial of the case immediately upon the conclusion of the hearing in

this case. The record shows the following stipulation, with respect to the ejectment suit of the city, entered into during the course of the taking of the testimony before the Master:

> "It is stipulated by and between the parties that the City of Lincoln through the City Attorney and his associates has secured an order from the District Court of Lancaster County, Nebraska, setting the case of the State of Nebraska *ex rel.*, Frank M. Tyrrel *v.* The Lincoln Gas & Electric Light Company for trial over the objection of the company immediately after the conclusion of the taking of the evidence before the Master in this hearing and the city is demanding an immediate trial and judgment in that case according to the prayer of its petition" (Transcript, p. 793).

The pendency and prosecution of this suit by the city to eject the Company from the streets and public grounds, is a serious menace, and puts in jeopardy all of the Company's business and property. If the city should be successful, the Company would not be permitted, instead of required, to furnish gas service in the city.

In the petition the Company pleads the Ordinance of 1872, granting its franchise rights, and alleges that the city is now challenging the Company's right to manufacture and distribute gas in the city, claiming that the franchise had expired in 1893. The Company set out its construction of the franchise Ordinance of 1872, and asked in this case that the case that the Court adjudicate and determine whether the franchise had or had not expired. The City answering contends that the Company's franchise rights expired in 1893, and that the Company is now operating its plant in Lincoln at the sufferance only of the city. The answer was filed on May 13, 1907. The suit to eject the Company from

the streets and public grounds, as already indicated, was started on April 11, 1908.

This action on the part of the city is inconsistent with the requirements of the Gas Rate Ordinance in controversy. The position of the City, on the one hand, is that the Company shall be required to furnish gas in the City of Lincoln at a stated rate fixed by the city; and, on the other hand, and at the same time, that the company has no right to furnish gas in the City of Lincoln at all. It is self-evident that if the city forbids the Company to render the service, that it cannot at the same time require the service to be rendered at a given rate. We feel that this situation, with the necessary conclusions which follow from it, call for a reversal of the case sustaining the Ordinance fixing the rate to be charged for the service. The two positions assumed by the city in this respect are so inconsistent that they cannot exist at the same time, and the city, having instituted the ouster suit subsequen to the attempted rate regulation, will be deemed to have elected to pursue that remedy against the Company and to have abandoned its contention that the company should be required to render the service at the rate fixed by the Ordinance in question. If we are correct in this conclusion, it will not be necessary to go further into the case, but should the Court feel that the position of city in this respect is not so inconsistent as to preclude it from pursuing both remedies against the Company at the same time, then we submit that the Court in considering the adequacy of the rate, must take into account the fact that the city is attempting to terminate the rights of the company to use its property further for the manufacture and sale of gas. That fact must necessarily be considered as one of the conditions affecting a fair rate of return, from which there can be no escape.

The evidence shows that subsequent to the passage of the Rate Ordinance in question, the company invested in extensions and betterments to its properties more than $210,000. The rate of return upon the value of that investment must be sufficient to preserve intact the investment during the time it may be employed in the public service. In all rate cases where this Court has commented upon the adequacy of the rate to yield a fair rate of return, the Court has stated that all the facts and circumstances tending to show what would be an adequate rate under the conditions and in the community where the property was employed, must be considered; in other words, the Court has considered all those facts and circumstances which would influence an investor in considering a proposed investment in the company. The city, by its act, says to the investor: "You are not entitled to earn anything upon this property. The company has no right to use this property in the gas business in the City of Lincoln, and the city proposes to secure the judgment of the Court ousting this company from the streets." In that situation in a controversy with the city as to the adequacy of the rate, what would be a fair rate of return upon the investment? This Court has settled the rule that the rate must be adequate, and that if it is less than adequate it is confiscatory, and to be adequate it must be sufficient to preserve the value of the investment and give to the investor a fair rate of interest on that value, and provide a sufficient fund in addition to take care of all depreciation, resulting from whatever cause, to the property while employed in public service. If the depreciation in the property is caused by an act of the City, it must, nevertheless, be compensated for in the rates to be charged. All elements going to depreciate the property are alike considered in determining the total depreciation, and it is the total deprecia-

tion, plus a fair rate of return upon the value of the investment that is to be preserved to the investor.

The evidence submitted by the Company in this case on the question of what would be a fair rate of return under these conditions, was not controverted by the City, and stands unchallenged to the effect that practically there is no rate sufficient under existing conditions to induce the further investment of capital in the Company's properties. The principal witness for the City testified (Transcript, p. 847):

> "To my mind, the value of an engineering structure, like that of most physical things, is made up of two main elements, its utility and its usefulness for some purpose, and the time during which that usefulness can be enjoyed or had. The usefulness is an absolute element in measuring value and the time; one is just as necessary as the other."

The Company on this question called a number of prominent citizens of Lincoln, whose testimony will be found in this record between pages 576 and 588.

Mr. N. W. Folsom, president of the Nebraska State Bank, and secretary of the Nebraska State Building & Loan Association of Lincoln, testified (Transcript, p. 576):

> "Under those conditions you could not attract capital at all. Anyone looking for an investment would look elsewhere. You might be able to find those who like to speculate and they might pay something, but an investor looking for an investment would not be attracted."

Mr. Frank H. Woods, president of the Lincoln Telephone & Telegraph Company, testified (Transcript, p. 579):

> "I think the hazard would be prohibitive. I do not think you could get any money for investments under those circumstances, except from people who

were already in and who would have to put in more to save their investment."

Mr. C. H. Beaumont, cashier of the Nebraska State Bank, testified (Transcript, p. 584):

> "It would make it practically prohibitive. The attack upon the company, both through its franchise and the regulation of rates, jeopardizes the investment and would effect the ability of the company to get money for extensions and betterments."

Mr. J. E. Miller, director of the First National Bank of Lincoln, and the leading merchant of that City, testified (Transcript, p. 585):

> "A large amount of capital would not be invested under those conditions under any terms. People having money to invest would not invest. Small amounts might be secured on a speculative proposition. Gamblers might be interested, but investors would not put any money into it at all."

Mr. S. H. Burnham, president of the First National Bank of Lincoln, testified (Transcript, p. 588):

> "I do not know of any rate that would be sufficient to induce capital to invest under those conditions."

The Master, in his report and findings, says (Transcript, p. 54) that the question as to whether the Company had a perpetual or temporary franchise is immaterial for the purposes of this case; that the value of the franchise whether perpetual or temporary could not be taken into account.

The Master's reference to the franchise questions in the case were not directed to the point involved. The Company was not asking the Court to determine that it had a perpetual franchise, for the purpose of having

the value of the franchise included in the valuation of its properties. The Company was calling the Master's attention to the fact that the City was contending that the Company had no franchise at all, and that it had no right to occupy the streets or render the service, on the one hand, and, on the other, was contending that the Company should be required to render the service at the rate prescribed by the ordinance in question. The Company was calling the Master's attention to the fact that the City by attacking the right of the Company to occupy the streets and use its property in the manufacture and distribution of gas, imperiled the investments in that property, and made it difficult, if not impossible, for the Company to secure new capital for extensions and betterments, and that if such capital were secured, it would necessarily involve a rate of return commensurate with the hazard involved. The undisputed evidence shows that because of this condition created by the City, the Company is deprived of the ability to get money on an investment basis for extensions and betterments, and as stated by one of the witnesses, this condition rendered it a gambler's chance.

In the Consolidated Gas case, 212 U. S., 19, this Court referred to the security of the investment in that property, and referred to the fact that it was "unthinkable' that the City would permit its streets to be torn up again for a competitor in that business. In this case it is not unthinkable. The City has prepared the way and is attempting to force the result. In New York City, where the Company was secure in its franchise rights, and had for all practical purposes a monopoly in its business, and where the Court could see no possibility of the company being disturbed by a competitor, the Court felt that a six per cent. return on the investment was not confiscatory, noting the fact, however, that the company had made a considerably larger rate

of return for a number of years prior. The City in this case asks that the investment in this Company's properties be considered secure and safe, and as a result asks for a low rate of return, but at the same time is exercising its power to completely destroy the investment and thereby rendering the property practically valueless. The City is in no position to complain of a rate of return sufficient to cover risks and hazards which it has created. If the risk is so great that the property must yield a sufficient return to replace the investment within the short time between the day of judgment of the Court in the case and the day for the return of the execution, the City cannot complain. It is very certain that the City cannot expect cheap gas on a low rate of return in the face of such conditions.

It is the Company's contention, however, that its franchise is perpetual, as set forth in its petition in this suit. The franchise in question was granted by an ordinance passed in March, 1872. Section 1 of the ordinance states that license and permission are hereby given and granted to the company to erect, construct and complete gas works in Lincoln, with authority and permission to use and occupy the streets for the purpose of laying down and repairing pipes and other fixtures. Section 2 of said ordinance states that the Company shall have the exclusive right and privilege of furnishing illuminating gas in the City of Lincoln, for a period of twenty-one years, from March, 1872. It is the company's contention that the grant contained in Section 1 is a perpetual grant to use the streets of Lincoln for the purpose of laying and distributing gas, and that it has been so construed by subsequent acts of both the City and the Company; that Section 2 merely makes that perpetual right an exclusive one for a period of twenty-one years, which period expired in 1893, and was simply an inducement to secure a gas plant

in Lincoln at a time when it was a village of not over a thousand people.

The construction of this franchise by the City and the Company is conclusively shown by the following facts:

First, that in 1890, when the Company was preparing to establish an electric light department in connection with its gas works, the City amended Section 1, extending the franchise right, to include the generation and distribution of electric current (Transcript, pp. 3, 21). This was within three years of the expiration of the exclusive feature of the franchise embodied in Section 2. The amendment was not to Section 2, but to the franchise right granted in Section 1.

Second, that in 1900, seven years after the exclusive feature of the Franchise Ordinance had expired, and at a time when the Company was selling its properties and franchise rights to the Lincoln Gas & Electric Company, the City further amended Section 1 to enable the Company to transfer its properties and franchise, by inserting the words "its successors and assigns" (Transcript, pp. 4, 21). This amendment of the franchise enabled the Company to sell its properties and franchise rights, and that was the purpose of the amendment.

Third, that subsequent to the sale above referred to, the Company put out a bond issue, secured by a mortgage upon all of its properties and franchises, which continues in the original form or in subsequent issues down to this time (Transcript, pp. 146, 208, 210).

Fourth, that the City has continually assessed, for the purpose of taxation, the franchise of this Company, at a valuation of $60,000 (Transcript, p. 144).

Fifth, that the City has passed numerous ordinances since the expiration of the exclusive feature of the fran-

chise grant, regulating the rate to be charged for the service, and fixing the quality of gas to be furnished, and imposing tax burdens upon the gross receipts resulting from such service.

These acts show the construction placed upon this franchise ordinance by the City, down to the time the City deemed it advisable to use it as a weapon on this Company in this rate litigation.

The practical interpretation of an agreement by a party to it is always a consideration of great weight; and there is no surer way to find out what parties meant than to see what they have done.

> Brooklyn Ins. Co. *v.* Dutcher, 95 U. S., 269;
> Philadelphia W. & B. R. Co. *v.* Trimball, 10 Wall., 367.

Contemporaneous construction long acquiesced and practical action will be followed in the construction of statutes which are ambiguous or doubtful.

> Prigg *v.* Pa., 16 Pet., 539.

In all cases of ambiguity, the contemporaenous construction of statutes is controlling.

> Schell *v.* Fauche, 138 U. S., 562.

Furthermore, we deem the franchise rights of the Company are settled by the case of Old Colony Trust Company *v.* Omaha, 230 U. S., 100, in which a similar Ordinance of the City of Omaha was passed upon by this Court.

See also:

> New Orleans *v.* Clark, 95 U. S., 644;
> The Binghamton Bridge, 3 Wall., 51;
> New Orleans Gas Co. *v.* Louisiana Light Co., 115 U. S., 650.

New Orleans Water Works Co. *v.* Rivers, 115 U. S., 674;

Louisville Gas Co. *v.* Citizens Gas Co., 115 U. S., 683;

Seattle *v.* Columbia & P. S. R. Co., 6 Wash., 379; 1052;

Suburban E. L. & P. Co. *v.* East Orange, 41 Atlantic (N. J.), 865;

Des Moines City Ry. Co. *v.* City of Des Moines, 151 Fed., 854;

Detroit *v.* Detroit Citizens Street R. Co., 184 U. S., 368;

Miner *v.* R. Co., 123 N. Y., 242;

Nebraska Telephone Co. *v.* Freemont, 72 Neb., 25;

Sharp *v.* South Omaha, 53 Nebraska, 700;

State *ex rel.* Caldwell *v.* Lincoln Street R. Co., 80 Neb., 333;

Plattsmouth *v.* Nebraska Telephone Co., 80 Neb., 460;

State *v.* Citizens S. R. Co., 80 Neb., 357;

City R. Co. *v.* Citizens Street R. Co., 166 U. S., 557.

## IV.

### Going Value.

We submit that the principle is well settled that in valuing the property of a public utility, whether for rate making purposes or otherwise, it is proper to add to the estimated value of the physical elements of said property, a certain value which really and actually inheres in the utility by reason of its being a going concern. This doctrine has been universally recognized, for the reason that it is obvious that even after the mere

physical elements of the untility have been completely acquired and constructed, a still further and substantial sum of money must be invested to get business before the utility begins to earn a fair return. So that a utility which has already acquired business, represents more value than the utility which has no business. It is a more valuable than the utility without cutomers, as it actually would cost to get the amount of business the older utility now has.

The rule has been announced so often that we will not attempt to discuss the authorities, but will merely cite them:

Macon Gas Light & Water Company, appraisal cited and discussed in Floy on Valuation of Public Utilities Properties, pages 349 to 369;

*In re* Gately and Hurley, *et al. v.* Delaware & Atlantic Tel. & Tel. Co., *et al.*, Board of Public Utility Commissioners of New Jersey, vol. 1, page 519;

National Waterworks Co. *v.* Kansas City, 62 Fed., 853;

Omaha *v.* Omaha Water Co., 218 U. S., 180;

Bonbright *v.* Geary, 210 Fed., 44;

Pioneer Tel. & Tel. Co. *v.* Westenhaver, 29 Okla., 429;

*In re* Application Public Service Gas Co., Report of Public Utility Commissioners of New Jersey, vol. 1, page 433;

Public Service Gas Company *v.* Board of Public Utility Commissioners, 84 N. J. L., 463;

People *ex rel.*, Kings Co. Lighting Co. *v.* Willcox, 210 N. Y., 479.

Newburyport Water Co. *v.* City of Newburyport, 168 Mass., 541.

Gloucester Water-Supply Co. *v.* City of Gloucester, 179 Mass., 365;

Des Moines Water Co. *v.* City of Des Moines, 192 Fed., 193;

Des Moines Gas Co. *v.* City of Des Moines, 238 U. S., 153;

Kennebec Water District *v.* City of Waterville, 97 Me., 185;

*In re* Appelton Waterworks Co., 6 W. R. C. R., 97;

Mo. K. & T. R. Co. *v.* Love, 177 Fed., 493;

Galena Water Co. *v.* City of Galena, 74 Kan., 644;

Norwich Gas & Electric Company *v.* Norwich, 76 Conn., 565;

Brunswick & T. Water District *v.* Maine Water Co., 99 Me., 371;

Metropolitan Trust Co. *v.* Houston, etc., Co., 90 Fed., 683;

Bristol *v.* Bristol and Warren Water Works, 23 R. I., 274;

*In re* Monongahela Water Co., 79 Atl. (Pa.), 625.

The necessity of considering "going value" was recognized by the Master in his report. He said:

> "The term 'going value,' as used here, is intended, while excluding franchise and good will, to include another intangible element, which should, I think, be taken into account in the valuation of the property used by the company in the public service, and upon which it is entitled to claim a fair return. * * * The physical property, with all its parts articulated and ready to engage in the business for which it was created, is, of course, a valuable structure, but it is obviously far more valuable when commercially quickened by the outflow of gas and the inflow of revenue. This added value, though hard to estimate, is obvious enough, and cannot in justice and equity be disregarded for whatever purpose the valuation is made. It cost the company

through the years a good deal of money to get the consumers that it has; and even now, with the wide knowledge possessed by the public, of the convenience and economy of gas for light and fuel, it would require much time and expense for a new plant in exclusive possession of the field to build up a like business" (Transcript, pp. 46-7).

The Master is correct when he says that the "going value" of a property is difficult to estimate with precise accuracy. However, it is equally well settled that as long as this element actually inheres in the property, the difficulty of determining its amount should not deter legislative or judicial bodies in making allowance of same, especially where the matter of confiscation of a public utility's property is at stake.

THE MASTER'S ALLOWANCE OF GOING VALUE IS INADEQUATE AND NOT IN THE AMOUNT ESTABLISHED BY THE EVIDENCE.

The reproduction theory of valuation is recognized and applied by Mr. Lea in his estimate of going value of the company's properties in this case and his determination is that the going value of this property is $225,000. He has worked out an accurate table (Transcript, p. 1355), showing precisely how he arived at his conclusion and how long it would take a utility, newly created, to acquire the business of the present Company. His statement is clear and definite and all his figures or estimates were open during the hearings to any objection which the City wished to specify. Yet at no time did the City, during the taking of evidence, offer any method which it deemed proper to measure going value. It refused to measure or take it into account other than by claiming that it was reflected in the physical values given by Mr. A. D. Adams.

So that at the close of the testimony the only estimates of going value were those of the Company's witnesses. Mr. Wettling, the expert for the Nebraska Railway

Commission, approved the method employed by Mr. Lea in determining the going value, and testified from his personal knowledge of the business of this Company, acquired through his directorship since 1901, that the cost of acquiring and retaining business was approximately $30 per consumer (Transcript, p. 798) and which would amount to $240,000 in round numbers for going value (Transcript, p. 799). Mr. Wettling testified in reference to the method employed by Mr. Lea in determining the going value as follows:

> "I have examined Mr. Lea's calculation of the going value, shown in his report and offered in evidence, and I know that it is the method that has been approved by a great many engineers. I have heard it brought forward a great many times and it is a much more specific method than the one most ordinarily used of lumping the matter together by taking the foregone dividends for the whole period and calculating them and sometimes even computing interest up to the time or of taking the cost of acquiring patrons and consumers with a certain unit of cost and applying that to the number of consumers for the number of years. There are a great many methods used, but I think the most approved method, while in a way it is theoretical, it accords thoroughly with the practice, and that is the plan which Mr. Lea has applied. It is as scientific and accurate as any that can be projected" (Transcript, pp. 810-811).

Mr. E. C. Hurd, the engineer for the Nebraska Railway Commission, also testified with respect to going value and approved the method employed by Mr. Lea in determining the going value. Mr. Hurd testified in part, as follows:

> "I have examined and understand the method presented by the tabulation of Mr. Lea to ascertain the going value of the Lincoln plant. Assuming that the figures of costs in Section K of Exhibit 7 are

correct and from my knowledge of this property here and its being in a sucessful situation, my opinion is that he has used an approved method and one that is used and accepted in estimating going value. That is what the going worth in a plant is over and above its physical factors of cost and shows what a man might pay for a property in addition to its physically shown investment because of it being a going concern" (Transcript, p. 819).

In confirmation of Mr. Lea's estimates, if we take three of the other methods of measuring going value, which have been adopted and approved in the cases above cited, and compare them with Mr. Lea's figures, we will have the results as set forth in the following table:

| | | |
|---|---|---|
| Calculated on basis of 20 per cent of: | | |
| Reproduction Value | $1,258,461.00 | |
| Less Going Value | 225,000.00 | |
| Less Working Capital | 72,038.00 | |
| Net Structural Reproduction Value | $ 961,423.00 | $192,285.00 |
| Calculated on basis of 30 per cent of: | | |
| Present Value | $1,090,913.00 | |
| Less Going Value and Working Capital | 297,038.00 | |
| Net Structural Present Value | $ 793,875.00 | $238,162.00 |
| Calculated on basis of cost to acquire patronage at $30 per consumer—8,068 in Lincoln | | 242,040.00 |
| Average of above three methods | | 224,162.00 |
| Mr. Lea's estimate | | 225,000.00 |
| Difference between Mr. Lea's estimate and average of other methods | | 1,000.00 |

Now let us turn to the comments of the Master upon Mr. Lea's method of measuring going value, which was *expressly approved* by the Court of Appeals of New York. The Master says:

> "The expert witnesses who testified in this case are not in agreement as to the method by which going value should be ascertained." * * * (Transcript, p. 47.)

(The City put forward no calculation whatsoever.)

THE MASTER FOUND $140,000 OF GOING VALUE, BUT ERRED IN ELIMINATING $100,000 THEREOF.

The Master says:

> "Whether this element of plant value was purchased entirely by earnings below or above a fair return on capital invested is not, as to a portion of the time at least, disclosed by the company's record. In other words, it does not satisfactorily appear to just what extent the company's business was acquired at its own expense, and to what extent it was acquired at the expense of the public. The company was, at all times, entitled to a fair return upon its investment, and whatever was received by it in excess of a fair return should go, in some form, to the credit of the public. If employed in the promotion of new business, the value of such business has manifestly no place in the valuation made as a basis for fixing reasonable rates. The record shows that between 1906 and 1913, the company paid out of its earnings and charged to operating expenses about one hundred thousand dollars ($100,000.00) for the promotion of new business. In view of this fact, I conclude that an allowance of $40,000.00 for going value is sufficient" (Transcript, p. 47-48).

The Master's conclusion involves the following propositions:

1. That, in the absence of proof, it will be assumed that there were excess earnings prior to the passage of the ordinance in question.

2. That, in the absence of proof, it will be assumed that some portion, or all, of the company's properties were acquired out of such excess earnings.

3. That, in the absence of proof in this case, he assumes that $100,000 of plant value was acquired through past excess earnings.

4. That all past earnings which, upon such assump-

tion, were in excess of a fair return, were unlawfully acquired by the company, and should be "credited to the public."

5. That such "credit" should take the form of a *pro tanto* reduction of the present value of the company's property.

6. That if any portion of the company's property was purchased from such assumed excess earnings, that the company has no interest therein, and the same should thereafter be devoted to public use, without compensation.

These propositions of the Master would establish the following doctrines:

1. That the value of the property of a company, and the net result of its operation, for each of the years of the properties' existence, prior to the passage of the ordinance in question, can, in the absence of proof, be determined upon the basis of an assumption, since the question of excess rates must necessarily depend upon the value of the property at any given time employed in the public use, and the net earnings resulting from such use.

2. Further, if the earnings upon the property, prior to the passage of the ordinance in question, are to be considered in determining the validity of the ordinance, then the losses prior to the passage of the odinance would, likewise, have to be considered, and the present value of the property and the present rate of earnings would be more or less depending upon the amount of such losses.

3. That a rate ordinance is not only effective from and after the date of its adoption, but is given a retroactive effect, and requires the company to give a

complete accounting for all of its earnings and expenditures on its property and operation, from the beginning of its business, involving a presentation of a valuation of its properties during all of such time.

4. That the long established rule that, in determining the validity of rate regulation, the present value of all property employed in the service should be considered, irrespective of the manner of its acquisition, should be abrogated.

5. That the long established rule that, the earnings of a company, prior to rate regulation, belong to the company, whether distributed by the company or reinvested in its properties, and that the same are private property and cannot be taken or required to be employed for public use without just compensation, should be abolished.

The Master's deduction of $100,000 from the going value of the Company's properties compel a consideration of the following:

1. Are rates charged prior to rate regulation unlawful if it should subsequently develop that such rates yielded more than a fair return on a fair value of the property employed?

2. The company's earnings in excess of rates fixed by law may be regarded as excess earnings, but in the absence of rate regulation, can any part of the company's earnings be said to be excess earnings?

3. The company's property devoted to public use immediately becomes subject to public control and regulation, but until the public authorities regulate the rate, the company is free to fix its own rate of charges, and such charges are not unlawful, and the earnings resulting belong to the company.

4. In the absence of rate regulation, it must be assumed that the rates established by the company are satisfactory to the public, since the public has the right at any time to step in and fix a reasonable rate.

The Evidence Shows no Excess Earnings in the Past.

This statement of the Master's is so important, and announces a doctrine which is, we submit, so completely unsound, and is so repugnant to the fundamental principles of law governing rate regulation, that we deem it not out of place to give time, at this point, to its complete discussion and analysis.

In the first place, the Master is in error when he says, "The record does not disclose whether this element of plant value was purchased entirely by earnings below or above a fair return on capital invested." We insist that the record does make such a showing, and, if examined, will reveal the fact that the Company, throughout the greater part of its existence, must have been in rather dire straits and could not have had excess earnings. To be sure, inasmuch as the property was built in 1873, it was impossible to produce and put in this record a complete accounting of the properties' financial history from its inception down to the end of the last century. But the testimony of witnesses who were familiar with the facts, shows that from 1900 on, the financial condition of the Company was such that to charge it with having acquired excess earnings is little short of ridiculous. Mr. Honeywell, the Company's manager, testified (Transcript, p. 149) that in 1904, the Company was about $40,000 behind in its bills and taxes and was unable to maintain its plant and meet the interest on its bonded debt, and that the emergency thus existing required a contribution of $100,000 from stockholders. It goes without saying that this situation did not arise immediately, but must have been

growing for a period of three or four years at least. This gives us a general statement of the Company's financial position from 1900 to 1907. The record in this case shows what has transpired since that latter date. The only period during which no precise figures of earnings or valuation were produced was the period between 1873 and 1900; but from an examination of the Company's gas sales and other statistics which are in the record, any suggestion of excess earnings between the period of 1873 and 1900, can be eliminated from further discussion. For instance, the gas sales of the Company increased from nothing in 1873, to only 20,000 M. cubic feet of gas per annum in 1889, and had only increased to 42,000 M. cubic feet of gas by 1899; whereas, in 1912, the gas sold was 227,000 M. cubic feet per annum (Transcript, p. 1359). Thus, it will be seen at a glance that the greater part of the Company's gas sales were procured between 1900 and 1912, as represented by the difference between 42,000 M. cubic feet and 227,00 M. cubic feet. It is rather absurd to suppose that there could be any excess earnings resulting from gas sales which had developed in 27 years only to 42,000 M. cubic feet per annum. Furthermore, we can see that the Company's investment in the years mentioned prior to 1900, must have been considerable in comparison with the amount of gas sold. The construction account in 1890, showed an investment of $160,149.55, and in 1900, an investment of $407,620.46 (Exhibit 158; Transcript, p. 8196). By 1899 the Company had 75,000 feet of mains, 850 house services, and 1,100 meters. By 1900, its mains had increased to 159,000 feet, its house services to 2,000, and its meters to 3,500 (Transcript, p. 1360, 1361, 1362).

In view of these facts, although the record does not show the precise earnings and the exact valuation in each of the years prior to 1900 (and that is impossible to procure), it may be fairly gathered from the record

that such a thing as past excess earnings were an impossibility.

Furthermore, the testimony of Mr. Wiggins (Transcript, p. 210) shows, that since 1890 at least, neither the Company nor its predecessors ever paid any divdends upon its capital stock, and prior to that time the record is silent as to divdends.

If we view the statement of the Master from another standpoint, it will be seen at once what far-reaching consequences there are to the doctrine which he announces, where legislative enactment seeks to control the rates of property devoted to public use. If it is claimed by a utility that such enactment is confiscatory, the burden of proof is upon the utility to establish such fact. The error which the Master has fallen into is, that he applies this doctrine to periods prior to the enactment of the rate ordinance which is being attacked. Now, if it is incumbent upon the utility to show that during no year or month of its existence it earned a rate of return in excess of a fair return upon the value of its property, as it existed at any particular period, upon the assumption that any such excess should be "credited to the public," and, therefore, deducted from the plant value of the utility, a burden would be placed upon the utility attacking such legislation which it would be quite impossible for it to sustain. It would be, in most cases, an impossible thing to prove, and the result of such a doctrine would mean that there would be no such thing as a limitation upon the power of rate regulation.

Mr. Justice Harlan, in Smyth *v.* Ames, *supra*, placed a clear limitation upon a rate-regulating power when he announced the doctrine that rate regulation must not be such that it would deprive a utility of a fair return upon the *present value* of its property, and in the prior appeal in this case, Mr. Justice Lurton (p. 458) said:

> "The valuation fixed by the Court is the main point of attack. That the company is entitled to a fair return upon the value of the property at the time of the inquiry is the rule."

If, however, the Master's doctrine is to be sustained, the limitation originally announced by Mr. Justice Harlan, would be, in effect, nullified by the expedient of placing a burden of proof upon a utility to show that at no time in its history, prior to the regulating ordinance, it earned a return in excess of a fair rate.

But if the Master, lacking proof upon past earnings, is to make any assumption that a certain amount of plant value might have been created through excess earnings, where is this assumption to stop? Why does he limit it to $100,000, and why limit it to going value? What reason is there, according to his theory, for stopping at any figure, and why would he not be justified, if his theory is to apply, in assuming that the entire plant of the company was purchased by past profits in excess of a fair rate of return, so that the utility could be then devoted to public use without any compensation whatsoever. There is, we submit, no possible justification for the Master's assumption, for if the assumption is allowed to stand, there can be no limitation to the values of which the utilities can be stripped by this process. The Master's theory is, we maintain, absolutely specious and unsound, and has no justification either in law or reason.

In this connection, however, we beg to bring to the attention of the Court the fact that this utility has been regulated by constituted authority from the moment of its existence. In the ordinance which granted its franchise, in 1873, a maximum rate for gas was fixed (Transcript, p. 3). Furthermore, in 1899, a further rate regulating ordinance was enacted, which prescribed maximum rates which the company could charge for

gas which fixed a sliding scale of gas rate until October 1, 1905 (Transcript, p. 271). This situation, of a utility actually being regulated from the moment of its existence, creates, we submit, a presumption (if any presumption is to be made), that at no time was the return of the company in excess of a fair rate upon the value of its property devoted to public use.

THE MASTER IS IN ERROR IN RESPECT OF THE UNDERLYING DOCTRINE OF RATE REGULATION REFERRED TO IN THE PROPOSITIONS HERETOFORE SUMMARIZED.

We submit that the Master has fallen into an error (which is not infrequent), due to a misconception of the terms and phrases which are very often used in cases involving rate regulation.

Where property is devoted to a public use, it is subject to regulation and control by the public authorities, not only as to service, but also as to rates. This is a condition which inheres in the operation of such property the moment it is devoted to a public use, and continues as long as it is operated for such use. On the other hand, there is a limitation in the exercise of this rate-regulating authority, which grows out of the Fourteenth Amendment of the Constitution of the United States, and that limitation is, that regulation must not go beyond the point where it deprives the owner of the property of a fair return upon the value thereof. This doctrine has frequently been briefly summarized by the statement that all property devoted to public use is subject to regulation and control, but that regulation and control must be such as not to deprive the owner of the property of a fair rate of return upon the value of such property. In the frequent application of this doctrine, the phrases used in applying the same have been very often loosely constructed, with a view of stating the result of the doctrine, rather than its reasons; and so we have often heard it said that a property

devoted to a public use is only entitled to earn a fair return upon the value of such property. This statement of the rule creates an ambiguity, in that it implies that, irrespective of regulation, the property devoted to a public use is only entitled to earn a fair return upon its value; whereas, a correct statement of the doctrine is, that such property so devoted to a public use is always *subject to be controlled* to such an extent that it can earn no more than a fair return upon its value; but *until the rate-regulating authority deems it expedient to act* in respect of regulation of rates, a property devoted to public use is not subject to restriction in its earnings, other than the *possibility* of regulation which may be applied to it at any time, subject to the limitation above set forth.

Due to this misconception, we frequently hear the theory advanced, at the present time, that if, prior to regulation, a public utility has earned more than a fair return upon its value, this excess is an amount which should be placed to the credit of the public; that the public has paid more than the utility was entitled to collect for its service, by reason of the fact that from the instant of its creation as a public utility a rule automatically applied to it which prevented its making a profit in excess of a fair return. This is, we submit, error, and those who advance this doctrine have completely lost sight of the fundamental principles governing the relation of utilities to the public.

We need go back no further than the case of Munn *v.* Illinois, 94 U. S., 113, where Mr. Chief Justice Waite, in his learned opinion in that case, laid down some of the fundamental principles governing rate regulation. After considering at some length the early English decisions by which the rates in respect of ferrys, common carriers, hackmen, bakers, millers, wharfingers, innkeepers, &c., were fixed by statute, he says, at page 125:

"This brings us to inquire as to the principles upon which this power of regulation rests, in order that we may determine what is within and what without its operative effect. Looking, then, to the common law, from whence came the right which the Constitution protects, we find that when private property is 'affected with a public interest, it ceases to be *juris privati* only.' This was said by Lord Chief Justice Hale more than 200 years ago, in his treatise De Portibus Maris, 1 Harg. Law Tracts, 78, and has been accepted without objection as an essential element in the law of property ever since. Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large. When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good, to the extent of the interest he has thus created. He may withdraw his grant by discontinuing the use; but, so long as he maintains the use, he must submit to the control. * * *

"So if one owns the soil and landing-places on both banks of a stream, he cannot use them for the purposes of a public ferry, except upon such terms and conditions as the body politic may from time to time impose; and this because the common good requires that all public ways shall be under the control of the public authorities. This privilege or prerogative of the King, who in this connection only represents and gives another name to the body politic, is not primarily for his profit, but for the protection of the people and the promotion of the general welfare."

The Court then quotes at length from numerous common law decisions, and then proceeds, as follows (p. 130):

"But we need not go further. Enough has already been said to show that, when private property is devoted to a public use, it is subject to public regulation. It remains only to ascertain whether the

warehouses of these plaintiffs in error, and the business which is carried on there, come within the operation of this principle."

Page 133:

"It matters not in this case that these plaintiffs in error had built their warehouses and established their business before the regulations complained of were adopted. What they did was from the beginning subject to the power of the body politic to require them to conform to such regulations as might be established by the proper authorities for the common good. They entered upon their business and provided themselves with the means to carry it on subject to this condition. If they did not wish to submit themselves to such interference, they should not have clothed the public with an interest in their concerns. The same principle applies to them that does to the proprietor of a hackney-carriage, and as to him it has never been supposed that he was exempt from regulating statutes or ordinances because he had purchased his horses and carriage and established his business before the statute or the ordinance was adopted."

From this decision it is apparent that where property is devoted to public use, the owner "must submit it to be controlled by the public for the common good," and this right of control is a privilege or prerogative of the king or body politic. It will be noted that the Learned Chief Justice does not say that where the property is devoted to public use, an inhibition automatically applies, which prevents it from charging more than a reasonable rate; but upon being devoted to such public use it immediately becomes "subject to public regulation." He specifically says that it does not matter that the warehouses in question had been built and their business established before the regulation was adopted, but they acted from the beginning "subject to the power of the body politic to require them to conform to such regulations as might be established."

So, too, in Smyth *v.* Ames, 169 U. S., 466, Mr. Justice Harlan said (p. 545):

> "A corporation maintaining a public highway, although it owns the property it employs for accomplishing public objects, must be held to have accepted its rights, privileges and franchises subject to the condition that the government creating it, or the government within whose limits it conducts its business, may by legislation protect the people against unreasonable charges for the services rendered by it. * * * The corporation may not be required to use its property for the benefit of the public without receiving just compensation for the services rendered by it. How such compensation may be ascertained, and what are the necessary elements in such an inquiry, will always be an embarrassing question. * * *
>
> "We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used by it for the convenience of the public. * * * What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth."

In this case the Court went further than in the case of Munn *v.* Illinois, and expressed the limitation which should apply to the power of regulation and control, that is, that it should not be such as to deprive the owner of the property of a fair return upon the value thereof.

In the Railroad Commission Cases, 116 U. S., 307, Mr. Justice Waite, again said, page 325:

> "It is now settled in this Court that a State has power to limit the amount of charges by railroad

> companies for the transportation of persons and property within its own jurisdiction, unless restrained by some contract in the charter, or unless what is done amounts to a regulation of foreign or interstate commerce. * * * This power of regulation is a power of government, continuing in its nature, and if it can be bargained away at all it can only be by words of positive grant, or something which is in law equivalent."

Page 331:

> "From what has thus been said, it is not to be inferred that this power of limitation or regulation is itself without limit. This power to regulate is not a power to destroy, and limitation is not the equivalent of confiscation. Under pretense of regulating fares and freights, the State cannot require a railroad corporation to carry persons or property without reward; neither can it do that which in law amounts to a taking of private property for public use without just compensation, or without due process of law."

It will be noted from this language that this power of regulation is a thing which can be bargained away by the public authority, which clearly indicates that no automatic rule applies to property immediately upon its being devoted to public use, but that the power to control is something which could be waived by the authorities empowered to exercise it.

In C. B. & Q. Railroad Co. *v.* Iowa, 94 U. S., 155, Mr. Chief Justice Waite again said:

> "It is a matter of no importance that the power of regulation now under consideration was not exercised for more than 20 years after this company was organized. A power of government which actually exists is not lost by nonuser. A good government never puts forth its extraordinary powers, except under circumstances which require it. That government is the best which, while performing all

its duties, interferes the least with the lawful pursuits of its people."

See, also,

Ames *v.* Union Pacific, 64 Fed., 165.
Brymer *v.* Butler Water Co., 179 Pa. St., 331.
Kennebec Water District *v.* City of Waterville, 97 Me., 185.
Clinton Telephone Case, Wis. R. C. R., Vol. 3, page 126.

From all of the foregoing, it will appear that the Master has fallen into error where he seeks to imply that there is a question not clearly established by the evidence as to whether the plant value represented by its going value was "purchased entirely by earnings below or above a fair return on capital invested," as he says: "It does not satisfactorily appear to just what extent the company's business was acquired at its own expense, and to what extent it was acquired at the expense of the public." That he has entirely misconceived the principles of rate regulation is shown by the following sentence: "The company was at all times entitled to a fair return upon its investment, and whatever was received by it in excess of a fair return should show in some form to the credit of the public."

Furthermore, the extension of this doctrine to its logical conclusion would bring about an absurd result. Assume, for example, that a public utility was constructed and put in operation prior to the exercise of any rate regulating authority; assume, further, that a reasonable rate of return would have been held to be eight per cent., if the rate regulating authority had been exercised; assume, further, that this hypothetical utility earned, for the first ten years of its existence, eighteen per cent. upon the value of its property, or ten per cent. in excess of what would have been held

to have been a fair return, in the event that the regulating authorities had acted. At the end of the ten years the company would have earned not only eight per cent. annually on the value of its property, but, also, in addition, an aggregate of one hundred per cent. of its value; in other words, the original investors would have received from earnings their entire capital investment, plus an annual revenue of eight per cent. thereon. If we assume that at the end of a ten-year period the rate-regulating authority deemed it expedient to act, and a valuation of the company's properties was ordered and had, in accordance with the doctrines announced by the Master, it would then appear that, inasmuch as one hundred per cent. of the value of the property was "acquired at the expense of the public," and, therefore, should "show to the credit of the public," that the public would have the right to step in and take the plant away from the owners, without any compensation whatsoever, or, in the alternative, to compel them to operate the plant from then on and *ad infinitum*, without profit. This, we submit, is an absurd conclusion.

We desire to bring to the attention of the Court what we submit is a misconception which has crept into the opinion of this Court in the case of Des Moines Gas Company *v.* Des Moines, 238 U. S., 153. In considering the value of the utility in that case, by reason of the fact of its being a going concern the Court discussed this feature of value as inhering in a property because of its early losses. Mr. Justice Day there said (p. 165):

> "Included in the going value as usually reckoned is the investment necessary to organizing and establishing the business which is not embraced in the value of its actual physical property."

This is, we submit, not strictly accurate, in view of the fact that in that case, as in here, the present value

of the property was being determined by the application of the reproduction theory; in other words, the Court in that case was not endeavoring to ascertain the "original cost," or "investment value" of the company's property, but it was endeavoring to ascertain the "present value" of the property, established by fixing the cost of reproducing the plant in its present condition. Consequently, the item of going value should be fixed in the same way; in other words, not by reference to the investment in establishing the business, but by the cost of reproducing said business already established:

It will be seen that from this misconception has arisen another inaccuracy, which is contained in the language of the Court immediately following the sentence above quoted. The Learned Justice then proceeds as follows:

> "In this case, what may be called the inception cost of the enterprise entering into the establishing of a going concern had long since been incurred. The present company and its predecessors had long carried on business in the City of Des Moines, under other ordinances, and at higher rates than the ordinance in question established. For aught that appears in this record, these expenses may have been already compensated in rates charged and collected under former ordinances. As we have said, every presumption is in favor of the legitimate exercise of the rate-making power, and it is not to be presumed, without proof, that a company is under the necessity of making up losses and expenditures incidental to the experimental stage of its business."

From this language, we submit that an erroneous conclusion might be drawn, to the effect that if a utility, whose rates are being regulated and whose property is being appraised, has concededly a going value, yet, it might be presumed, in the absence of proof to the con-

trary, especially if the utility was long established, that the so-called early losses had been made up by returns in excess of a fair return, prior to regulation; and that such a presumption, in the absence of proof, would eliminate any consideration of the going value which inhered in the Company's properties.

We submit that the proper doctrine is, especially where the reproduction theory is being applied, that it makes no difference what the early losses of the particular company in question were, or whether or not they had been made up by so-called "excess profits" in the past, prior to the exercise of regulative control. The fact to be considered is, we submit, that in the utility being valued a certain element of value inheres in its property, by reason of the fact that its business is established, and that this element of value is just as real as the value of its physical properties, and that the problem to be determined is how much more valuable is the plant in question with its established business than a plant similarly situated without business; and this leads to the further question, how much would it cost at the present time to establish the business which the company has? We agree that this question is not free from difficulties, but we submit that it is not to be solved by any proof of the actual early losses which any particular company sustained, or by any presumption that those earnings may have been made up by "excess profits" in the past, prior to rate regulation.

In our case, if there is any presumption at all, we submit that the presumption should be in favor of the appellant herein, inasmuch as from the organization of this utility its rates have not only been subject to control, but have actually been regulated by specific ordinance, so that it should be presumed, if any presumption is to be made, that the rates so fixed by ordinance allowed only a reaonable return to the utility.

The Master allows as the going value of the Company some $40,000, but in connection therewith he makes this statement: "The record shows that between 1906 and 1913 the Company paid out of its earnings and charged to operating expenses about $100,000 for the promotion of new business. In view of this fact, I conclude that an allowance of $40,000 for going value is sufficient." This statement of the Master is quite clear, and it means the following: That it would cost to establish the present business of the Company $140,000, but, inasmuch as the Company has expended $100,000 from earnings, and it does not appear as to whether or not those earnings were partly in excess of a reasonable return, and, also, the money so expended was charged to operating expenses, that it should be deducted from that element of value known as going value, which inheres in the Company's properties.

We submit that this doctrine is quite erroneous; that from the Master's own finding the going value of the Company's properties was $140,000; that it is quite immaterial, as clearly stated in the case of People *ex rel.* Kings County Electric Lighting Co. *v.* Willcox, *supra*, and *In re* Application of Public Service Gas Company, report of New Jersey Commission, Vol. 1, p. 433, that this was charged to operating expenses, and that, therefore, "the Company received it back." Whether the amount so expended was received back or not, because charged to operating expenses, the fact remains that the value so established by virtue of said expenditure inheres in the property as of the time the Master's valuation was made, and, inasmuch as his problem was to determine the value of the Company's property at that time, there is no justification in law or reason for not allowing the full sum of $140,000 as such going value."

THE MASTER INDICATED NO BASIS FOR THE DETERMINATION OF GOING VALUE.

We have endeavored, without success, to determine why the Master shows only $140,000 as the going value of the Company's property. If there was any basis for the adoption of this figure, or whether any method whatsoever was applied by the Master in arriving at this amount, the report does not disclose it. His report makes it clear that there is a going value which should be taken into account in the valuation of the property, and that the difficulty in estimating this element of value should not excuse the Court for failure to make a proper determination in respect thereof. He said (Transcript, p. 46):

> "the public is entitled to be served at reasonable rates and that the company rendering the service is entitled to a fair return upon the value of the property used by it in the service. This statement has become, by judicial iteration, an axiom in the law of rate making, and the demand of the company to have it applied in this case is not answered by pointing out difficulties besetting its application. Constitutional guarantees for the protection of private property are not to be set aside, because precision and exactitude in making valuation are not practically attainable. * * * This added value, though hard to estimate, is obvious enough, and cannot in justice and equity be disregarded for whatever purpose the valuation is made."

It is clear from this language that the Master recognizes his responsibility to estimate and determine the going value which inheres in the Company's properties, and further recognizes the fact that the difficulty in estimating the same should not be made a deterring factor in granting the Company the full value of this intangible element.

We submit that the Master in reaching his conclu-

sions as to going value, must look to the evidence in this case, or, at all events, if he uses some method or basis of calculation not advanced by any of the witnesses who testified before him, that he should set forth precisely what this method or basis was which he used, and explain why the methods advanced by the various witnesses were rejected, and why he deemed it more advisable to use the method which he adopted, rather than the method advanced by the various witnesses. Especially is this true where the method employed by him, whatever it was, results in the reduction of all amounts shown in calculations submitted by any of the witnesses, of approximately $85,000. He comments briefly in his report on the method advanced by the witnesses, and criticises some of them, but he does not disclose the alternative method which he adopted in arriving at his conclusions. He said (Transcript, p. 47):

> "The expert witnesses who testified in this case are not in agreement as to the method by which going value should be ascertained. The essence of the process suggested by one of the witnesses is to consider the length of time it would take a person who wanted the business to acquire its equivalent, and then determine the price such person would be willing to pay."

The Master is here referring to the method testified to by the City's witness, Mr. Alton D. Adams, and in this connection we beg in direct the Court's attention to the fact that in spite of repeated and persistent efforts on behalf of counsel for the company, Mr. Alton D. Adams positively refused to give any actual valuation by the employment of the method he suggested, or by any other method whatsoever (Transcript, pp. 1040-1044). He was examined at some length on this matter, and testified as to the various elements which should be considered in making up the measure of going value, but he positively

refused to make any calculation or give any figures resulting from the application of such measure, and at the close of the testimony there was no figure in the record by which the going value of the Company was actually measured by any of the City's witnesses.

As heretofore shown, Mr. Lea, the Company's witness, testified as to the going value of the Company, and stated in his opinion that the same was $225,000, and in justification of his figure he set forth in detail his method of computation, and described at length the elements going into this valuation and the cost of acquiring the business which the company had. This is set forth in Exhibit 7 (Transcript, pp. 1352-5). This method of Mr. Lea's was approved by Mr. Wettling, the expert for the Nebraska Railway Commission, and by Mr. Hurd, the engineer of the Nebraska Railway Commission, and Mr. Wettling further testified the result by a computation of his own, based on the actual experience of the Lincoln Company, which was a matter of his personal knowledge. The Master dismisses from consideration Mr. Lea's method of measure going value, as follows (Transcript, p. 47): "This method seems to me highly artificial, and is, at best, only moderately persuasive." He fails to point out, however, wherein the computation of Mr. Lea is in error, or in just what respect it fails to show the actual value of the Company's business. Furthermore, the method employed by Mr. Lea was approved and applied in the case of People *v.* Kings County Electric Company, *supra.*

The Master states (Transcript, p. 47) that the evidence does not give any adequate basis for the ascertainment of going value by capitalization of early losses. In this he is correct, as no evidence was introduced on the subject, and none was available, and none of the witnesses attempted to measure going value by this means.

The Master, therefore, dismisses from consideration

all methods of computing going value which were offered in evidence, with concrete results. He does not comment on the method advanced by Mr. Alton D. Adams, other than to state what it is, but this method of measuring going value, not being accompanied by any computation showing its actual application, could not have been the basis for any of the Master's conclusions.

It is the position of the Company, and we have always insisted since the filing of the Master's report, that if the Master is to repudiate and discredit the methods of measuring going value which were used by the witnesses who testified before him in calculating the amount of going value and the amounts which they advanced as their opinion represented the going value of the Company, were to be cut down by the Master to the extent of at least $85,000, it was the duty and obligation of the Master to set forth in precise details what method was deemed by him to be the proper one in measuring this element of value. He does not do this. His report contains not the slightest suggestion of how he arrives at his conclusions on this matter. He merely sets forth catagorically his determination that the going value of the Company is worth $140,000. By disposing of the matter in this way, he renders it absolutely impossible for the Company to point out any errors in the method employed or the results obtained from the employment of such method; in other words, he conceals the method by which he reached his figure. This, we submit, is not in conformity with the instructions of the Supreme Court in reversing this case on the trial appeal and remanding the same for complete findings.

Another point which we wish to bring to the attention of the Court is the Master's assumptions with regard to the profits and losses. As to losses, he says

that the evidence gives no adequate basis for their ascertainment, whereas, as to profits, he assumes, in the absence of evidence, that there were past excess profits. This raises two questions: (1) What is the justification for an assumption in respect of profits that does not equally apply to losses? (2) How can profits be assumed or ascertained without a knowledge of losses, both of which go to make up the net result of the company's operations?

We submit that the Company has proved by the preponderance of competent evidence that the going value of the Company's properties is $225,000, but that, furthermore, according to the Master's own finding, the going value of said properties should be not less than $140,000.

## V.

## Valuation for 1907.

### (1)—Mathematical Error of the Master.

The Rate Ordinance here under consideration was adopted in December, 1906; therefore, the valuation of the Company's properties as of January 1st, 1907, is of particular importance, because the year 1907 was the first year in which the rate was intended to take effect.

We submit that the Master in his report (which was confirmed by the Court below), has made, in his determination of the value of the Company's properties as of January 1st, 1907, a simple mathematical error. A proper adjustment of this error upon the basis of the Master's own findings will, we submit, completely upset the Master's conclusions.

It will be recollected that the testimony was taken before the Master after January 1st, 1913, and that all valuations were made as of that date. So that having determined the January 1st, 1913, valuation, it was then

necessary to work back over a period of six years to determine the valuation as of January 1st, 1907. This was done by the experts who were the two principle witnesses for the Company and the City.

The Master said:

> "If the value of plaintiff's property, tangible and intangible, on January 1, 1913, was $676,565, as I have found it to be, its value January 1, 1907, may be readily ascertained by eliminating all values added to the plant between these dates." (Transcript, p. 52.)

He then enters upon a discussion of the construction which had taken place between January 1st, 1907, and January 1st, 1913, and after making certain adjustmens he states:

> "but from a full consideration of the evidence, I find that all values, tangible and intangible, added to the plant between January 1, 1907, and January 1, 1913, were worth at the latter date $240,000. Deducting this amount from $676,565, the value of January 1, 1913, leaves $436,565, representing the investment upon which the Company was entitled on January 1, 1907, to receive a fair return." (Transcript, p. 52.)

It is just here that the Master makes his mathematical error, which is this: His 1913 valuation was a present value, that is to say, a value of the Company's properties as of January 1st, 1913; in other words, a *depreciated* value. Therefore, included in the figure $676,565 (the 1913 valuation), there is embraced the property which the Company owned in 1907, valued as it existed in 1913, that is, with the depreciation from 1907 to 1913 deducted before the final value was arrived at. To express it another way: The property which the Company owned in 1907 was included in the Master's 1913 figure, at a value reduced by six years'

depreciation. When, therefore, the Master deducts from his 1913 valuation "all values, tangible and intangible, added to the plant between January 1, 1907, and January 1, 1913," which "were worth *at the latter date* $240,000," he reached a result which represented the property owned by the Company in 1907, less the amount which it had been depreciating from year to year between 1907 and 1913.

The only question which remains, in order to adjust the Master's 1907 valuation to his own figure, is to find out just how much the property, as it existed in 1907, was depreciating each year, in order to add this amount to the value of that same property as it existed in 1913. Now, the Master found that in 1907 a sufficient allowance for a depreciation reserve, to be charged into the operating expenses of that year, was $10,000; that is to say, in 1907 the Company's property then owned was depreciating at the rate of $10,000 a year. Obviously, therefore, this property was worth $60,000 less in 1913 than in 1907. In order, then, to recast the Master's figures and work back from his 1913 valuation to 1907, it will be necessary to add $60,000 to the sum of $436,565, which the Master found as the 1907 valuation. On the basis of the Master's own findings, therefore, the 1907 valuation should be $496,565, instead of $436,565.

The Master, after figuring the company's gross and net income, and what he considers a proper allowance for operating expenses, concludes that the company would have earned, in 1907, with gas selling at $1.00 per M cubic feet, 5.12% upon the value of its property. However, if we adjust the error in the Master's figures, as pointed out above, we find that the return in that year, on the valuation as the Master found it, was only 4.5%.

If we go further, and add to the 1907 valuation the $100,000 of going value which the Master found existed, but which he left out of his calculation for the reasons

heretofore stated, we would have a valuation in 1907, of $596,565, and a rate of return of 3.7%.

In view of the evidence in this case, can this be said to be a fair return on the value of the company's properties in the first year in which the ordinance was to be effective? If we grant that the ordinance was invalid, because confiscatory, the first year that it was to be operative, this eliminates the necessity of further consideration of any of the subsequent years.

Even though the Master, on the basis of his own findings of values and returns, and including the error which his own figures show, finds a return of but 5.12% for the year 1907, he also finds that "a rate not lower than six per cent. upon their invested capital could not be regarded as confiscatory." He justifies his upholding the rate by the following:

> "All human experience has shown that increased consumption follows quickly a reduction in the price of commodities, and the evidence in this case satisfactorily shows that gas is no exception to the rule. I find that with gas selling at $1.00 per M cubic feet, plaintiff would have received since December 1, 1907, when the rate ordinance was to be effective, not less than 6 per cent. per annum upon the value of the property employed by it in serving the people of Lincoln" (Transcript, p. 55).

The entire basis for the Master's conclusion that the Rate Ordinance was valid, is based upon his mere speculation that with the reduced rate the sales of gas would have so greatly increased that they would have made up the difference between the $1.00 rate and the $1.20 rate; although there is no evidence in the record, either opinion or otherwise, which would indicate that such effect would take place the first year after the ordinance was put into effect. We submit that there is no warrant or justification for such a conclusion, and that the com-

pany's properties should not be confiscated by the hypothetical deductions of the Master.

From a consideration of the above matters, we respectfully submit that the testimony in this case, even on the basis of the Master's own figures, conclusively proves that the properties of the appellant were confiscated by the Rate Ordinance, which is the subject matter of this suit, and that said Ordinance is, and was, since the time of its adoption, null and void.

(2) MASTER'S 1907 VALUATION NOT SUPPORTED BY THE EVIDENCE.

The Master's valuation for 1907 is so clearly inadequate, and the basis for it so concealed as to require the Court, in our judgment, on this appeal to set it aside and fix a value in a proper and adequate amount.

The Master fixed the present value of the Company's properties, as of January 1, 1907, at $436,565. This is the Master's present value for the whole property. There is nothing in the Master's report and findings showing (1) his valuation of any particular portion of the Company's property, but the value is given in a lump sum for the whole property; (2) there is nothing to show the Master's present value of the physical properties of the Company as of that date; (3) or to show the Master's value for intangible properties of the Company as of that date; (4) or to show the amount of working capital included in the value of the Company's properties as of that date; (5) or to show the amount of accrued depreciation in any portion or all of the Company's properties as of that date; (6) or to show the Master's figure for replacement cost of any part or portion or the whole of the property valued as of that date. The Master simply gives a valuation in which he has combined the tangible and intangible properties of the company, presumably from his valuation of 1913, and gives a lump sum of $436,565 as the

present depreciated value. It is impossible for the Company to compare this lump sum, including, as it does, both tangible and the intangible properties, and including working capital, with the replacement cost and present value of the physical properties of the Company, as shown by the evidence, or as found by Judge Munger upon the former trial.

The construction account of the Company, running back to 1873, showed construction, after making all proper credits for reconstruction, in the amount of $589,887.84 (City's Exhibit 185; Transcript, p. 1896). This amount shown in the construction account does not include (1) working capital, (2) going value, or (3) overhead expenses, such as were considered and allowed by the Master in his valuation for 1913. This amount shown in the construction account simply represents the labor and material cost, without the ordinary overhead entering into the construction of the physical properties of the Company. There is evidence in the record to show that the construction account, as carried by the Company on its books, did not include all of the new construction or all of the items which should be included in the construction account.

Mr. Wiggins, expert accountant, was called by the City as a witness, and testified that in the preparation of the Exhibit 185, he had gone outside of the construction account to get one item of $20,000, which he brought in as a proper item to be added to the construction account (Transcript, p. 1254). It developed in the course of Mr. Wiggins' examination that he had devoted considerable time checking over the books and records of account of the Company, and prepared an Exhibit, which the City introduced in evidence, showing the amount charged to construction on the books of the Company from 1873 to 1912. This Exhibit, down to 1907, was prepared by Mr. Wiggins, and was offered

in evidence upon the former hearing, and is Exhibit E (Transcript, p. 253), and the items entering into the construction account for each of the years, as prepared by Mr. Wiggins and offered in evidence by the City, are found on pages 305 to 387. The construction account shown in the Exhibit presented by the City, showed $603,278.14 entered in the account up to June 30, 1907. After this case was referred to the Master, Mr. Wiggins, for the city, brought the construction account down to 1912, and submitted Exhibit 158 (Transcript, p. 1896-1897), and also an Exhibit showing the credits in this account from 1873 to 1912 (Transcript, p. 2037-2061). Mr. Wiggins testified:

> "I found an honest effort on the part of the Company to keep a correct record of the cost of the expenditures of the Company, and found nothing to criticize in the showing of the income and expenses (Transcript, p. 1252). * * * In 1873 the construction account was some $54,000 and the next year only $887.31, and the next year I found nothing (Transcript, p. 1253). * * * My Exhibit shows the total construction account up to 1890, the total there is $203,450.83."

At page 207, upon the former hearing, Mr. Wiggins, referring to the construction account, testified:

> "I have not seen anything to indicate but what the charges were proper enough. From all of these items * * * I find no charge in the construction account, but what appears on the face of the record to be legitimate, especially the more important items."

Mr. Wiggins further testified (Transcript, p. 1254):

> "In 1890 I had to go outside and get $20,000, and put it in the construction account. I believed it belonged there. In 1875 and 1876, the record shows that it was necessary to take up $2,396 feet of 6 inch

pipe, and lay from the works to 11th Street on O and 400 feet of 3 inch pipe on O Street, and relay that amount of iron pipe. The construction account of that year shows a total of $9,937.44, of which $1,001.00 is for pipe. The 1878 construction account was $1,656.06, and in the minutes of the meetings of the stockholders, held on January 15th of that year, there is shown that they built a retort house 30 x 50 and also built a brick lime house 12 x 20; a coal house 14 x 30 and a new coal gas works of the latest make made by Morris, Haskin & Company of sufficient capacity to make 40,000 feet of gas daily and I find no items in the construction account of 1878 covering that, but in 1876, I find that the Morris, Haskin Company was paid $2,417.00. The construction account for 1877 is $3,371.55, and I hardly suppose that the cost of a new coal gas works would be included in an item of that size. Under the same date in the same record they have constructed a lead of 9,800 feet of mains, and that has not been included in the construction account of 1877 of $3,371.55 and in the next year $1,656.06. I am unable to explain this. If an inventory is honestly taken, it controls over bookkeeping.

From Mr. Wiggins' Exhibit 158 (Transcript, p. 1896), it appears that at the close of 1889 there was charged to constuction, from 1873, on the books of the Company, $160,149.55, and that on October 31, 1900, from 1873, there was charged to construction account $407,620.46, and that at the close of 1906 there was charged to construction account $589,887.84.

Mr. Phillips, Secretary of the Company, testified, showing that the construction account did not carry expenditures for main maintenance, or the amount expended on reconstruction. He testified:

"If we were to put in a new water gas set and discard entirely the old set, the original cost of the old set would be deducted from the cost of the

> new set and the difference charged to construction (Transcript, p. 757). * * * We keep a separate account which covers additional equipment or items of a nature which would increase the value of the property. Nothing of a replacement nature or bettering expense or maintenance expense is charged in this account." (Transcript, p. 756.)

Mr. Homer Honeywell, Manager, in 1907, testified, referring to the construction account:

> "This $603,278 (shown in Exhibit E; Transcript, p. 253) includes all that has been paid out in constructing the gas plant, * * but it does not include replacing mains. We have an account called Main Maintenance in which that would be put. For instance, if you took up a 4-inch main worth 50c. a foot to us and laid down an 8-inch main that was worth $1 to us, we would charge construction with the difference—50c. only. * * If the old main was entirely worn out and had to be replaced by an entirely new one, it would all be charged to maintenance. No part would go to construction at all." (Transcript, p. 138.)

Mr. Honeywell testified further on this subject:

> "The item of $603,000 invested in the plant did not cover any investment necessary for supplies on hand, and what has been termed working capital" (Transcript, p. 142).

The evidence is conclusive to the effect that the construction account does not represent all of the money invested by the company in the plant, or the net difference resulting from the difference in cost between the original equipment and the plant equipment in service in 1907. The record shows that in the early days of the Company, according to Mr. Wiggins' testimony, a large part of the construction was charged off every year (Transcript, p. 210), and that for one year nothing had been entered in the construction account (Transcript, p. 1253).

The evidence of plant cost shown in the construction account is not to be confused with the Master's criticism of expert testimony. The construction account, we submit, is a witness as to values derived from costs, which is a better guide to a correct result than the Master's findings on the valuation for 1907. The Master indicated that he was confused because the testimony of expert witnesses was irreconcilable, and we submit, that in that situation the actual expenditures of the company, representing the cost of the property, would have been a safe guide for the Master to have followed.

The result of his valuation for 1907, we assume from his valuation of 1913, includes the items of working capital, going value and twelve and one-half per cent. overhead, in addition to the values of the physical properties. The Master allowed $60,000 working capital for 1913. Judge Munger allowed $50,000 working capital in 1907. If we assume that $50,000 working capital is included in the Master's $436,565, then, to get a comparison between the Master's figure and the construction account, $50,000 should be added to the $589,887.84 in the construction account, which would result in $639,-887.84. The Master's valuation is more than $200,000 below this figure, and if the twelve and one-half per cent. overhead and going value included in the Master's 1907 valuation are taken into account, it will be seen that the Master's figure for 1907 is practically $300,000 below the construction cost entered in the construction account. If the Master had made a valuation of the physical properties separate and apart from working capital, going value and overhead, we could have a definite basis in comparing his valuation on physical properties with the record cost of the physical properties, but, in the absence of such segregation of statement from the Master, we can only reach a presumption based upon assumptions, as to how much of his total

figure represents physical property and how much represests intangible property.

The evidence here shows that in 1913, there was approximately $767,000 of bonds of the Company and $500,000 of three-year collateral trust notes outstanding, issued under authority and by order of the Railway Commission of the State of Nebraska. These obligations were secured by a mortgage upon the combined gas and electric properties of the Company, and the evidence shows that the electric properties of the Company were of a value between $500,000 and $600,000. The Company would be expected to put out securities covering the cost of new construction, and if the investment disclosed by the construction account is evidenced by the bonds and notes of the Company, then it would follow that before the investment cost was depreciated, some good reason should exist for its depreciation, because it would not only deprive the Company of the values in its properties, but it would also involve the impairment of its securities. The Court, in considering the fair rate of return upon the value of the Company's properties under rate legislation, considers of prime importance, that the rate should be sufficient to induce investments in the Company covering extensions and betterments of the property. In that situation, if the construction account shows the cost of the extensions and betterments, that amount should not be depreciated without good and substantial reasons. The City offered no evidence impeaching the construction account, but, on the other hand, caused an exhibit to be prepared by Mr. Wiggins showing the construction account, and offered the exhibit in evidence, so that it stands in this record as the evidence offered on behalf of the City.

Judge Munger, upon the former trial of this case, found the present value of the properties of the company, as of January 1, 1907, to be $516,073.59, after

deducting $49,688.17 for accrued depreciation. To this value, Judge Munger added $50,000 for working capital, reaching a total value of $566,073.59. The Company appealed from the judgment of the Court, claiming that the Court at that time had omitted certain properties and values which should have been included, as shown by the opinion of this Court, page 359:

| | |
|---|---|
| Water gas apparatus, item of steam boiler... | $2,225.00 |
| Real estate and buildings—Reduction of real estate ..... | 3,200.00 |
| Reduction of buildings and fixtures..... | 12,643.00 |
| Gas meter connections, reduced..... | 6,780.00 |
| Working capital, reduced..... | 9,146.88 |
| Organization expenses, reduced..... | 21,950.00 |
| Engineering (consequent on reduction of totals) ..... | 1,339.78 |
| Contingent or overhead charges reduced.... | 22,884.00 |
| Interest during construction, disallowed..... | 39,050.00 |
| Cost of obtaining money, disallowed..... | 149,512.00 |
| Going value and franchise, disallowed..... | 100,000.00 |

The Court, in the course of the opinion, page 358, says:

> "The valuation fixed by the Court is the main point of attack. That the company is entitled to a fair return upon the value of the property at the time of the inquiry is the rule."

And, further quoting:

> "Upon all of these questions of valuation and of operating expenses there is much evidence, and much of it conflicting. The findings of the Court, as before stated, are of too comprehensive a character to be of much help in dealing with the details which are embraced."

And further, page 361:

> "This case is full of difficult and grave questions.

> Such conclusions as to facts as are found in the Court's opinion are not helpful when, as here, errors are assigned which open up substantially the whole case."

It is clear from the opinion of the Court that the Company upon the former appeal was complaining of the valuation fixed by Judge Munger, who had excluded certain items of property and certain elements of value, and the Company was insisting that those items and elements of value should be added.

The Master in this case included going value, which Judge Munger excluded, and reached a valuation with this element of value included, more than $100,000 below the valuation fixed by Judge Munger. The opinion of this Court in the former hearing discloses that the City contended that Judge Munger's valuation was excessive as to two items, namely, the item of $107,000 for gas services; and the item of $50,000 for working capital (Opinion, p. 360).

Judge Munger, in valuing the property, gave a definite value for the different items of property entering into his total valuation, and gave the replacement cost and the amount of depreciation resulting in his depreciated value. The Master, in this case, gives the one figure, depreciated value. The Court indicated in the opinion reviewing Judge Munger's findings, that they were not sufficiently definite and in detail to enable the Court to review errors assigned against them, without going into the whole record. If that was the situation with respect to Judge Munger's findings and valuation of 1907, what is to be said about the Master's findings for 1907, which give the one figure only, depreciated value, and leaves the Court in the dark as to how much of that amount represents the value of the physical properties, and how much represents working capital or the intangible property, and how much the Master

depreciated the physical property to reach that value. When it is shown, as here, that the value reached by the Master, including working capital and going value, is approximately $200,000 below the naked cost of the physical properties, as shown by the records of the Company, that valuation, in our judgment, should not be allowed to stand. It works a serious and grave injustice to the Company and to those who have invested their money in the Company's securities and properties.

The Master not only had before him the findings of Judge Munger as to the value of the Company's property in 1907, but he had the testimony of Mr. Malone, who was the Company's witness who inventoried and valued the property as of that date, showing a replacement cost of $904,000, without including therein anything for going value or franchise. The record shows that Mr. Malone inspected and examined the property and inventoried it in 1907, and that he was a competent witness. The City attacked his valuation at the two points indicated in the Court's opinion in this case. The Master found a value of approximately $500,000 below the value fixed by Mr. Malone.

After this case was reversed and referred to the Special Master, further testimony was taken, and a complete detailed inventory of the property was made, and a valuation arrived at as of January 1, 1913. Mr. Lea valued the property for the Company as of that date, and his valuation is corroborated by the records of the company, showing the cost of the things which he valued, and by the testimony of competent witnesses, among others, George L. Campen, former City Engineer, who valued the distribution system, and whose competency was not questioned; Mr. Steinmueller, who represented the Western Gas Construction Company, the concern that furnished a large portion of the gas equipment; and by contractors and

builders who had constructed the buildings upon the property. Mr. Lea's valuation for 1907 was derived from his valuation for 1913, and showed a reproduction or replacement cost as of January 1, 1907, of $906,141, and the present value of $784,682.

The City offered testimony from a witness who derived a value for 1907 from his figures and valuation for 1913. This witness' competency was challenged and assailed by the Company, and the evidence in this case shows that he was not a competent witness and nothing more than a student of statistics. In this situation and with this state of the record, the valuation of the Master standing against the construction account, showing in part the investment of the company in its properties, and against the valuation fixed by Judge Munger upon the former trial, and the valuation fixed by the Company's witnesses upon this trial, who were competent to testify, if so clearly contrary to the evidence, that it cannot be justified or allowed to stand.

## VI.

**The Master's valuation of the Company's properties, as of January 1, 1913, is unsupported by the evidence, and is clearly wrong.**

The Master found the present value of the Company's properties, as of that date, to be $676,565, which includes $60,000 for working capital and $40,000 for going value, reducing his present value of the physical properties to $576,565.

The construction account of the Company showed that the Company had invested in its physical properties, excluding working capital, going value, and twelve and one-half per cent. overhead used by the

Master, the sum of $784,307.49, which leaves the Master's present value of physical properties $207,742.49 below the investment cost to the Company of such properties. There should be added to the $784,307.49, shown in the construction account, working capital, overhead and going value, which would place the investment cost of the properties, with these elements added, at approximately one million dollars. If this property is depreciated, in accordance with Judge Munger's finding upon the former hearing, in the amount of ten per cent., it would still leave a present value of $900,000.

Mr. Wiggins, testifying for the City, said that the net amount charged to construction was $784,307.49, after deducting all credits (Transcript, p. 1255).

Mr. Wiggins, when called in 1912 by the City, further testified with reference to his exhibit, showing the amount entered in the construction account between 1907 and 1912:

> "In checking over the construction account the second time, I have checked back my own account and have found certain minor corrections which I have noted. Subsequent to 1907, I checked the large items in the construction account against the vouchers of the Company, and found it to be correct as entered in the books" (Transcript, p. 1253).

In the opinion of this Court in the Des Moines case, reported in 238 U. S., 153, it was disclosed that the value, fixed by the Master and sustained by this Court, of the physical properties was $2,240,928. The Master, in the Des Moines case, found that the going value, in addition to the value of the physical properties of the company, was $300,000. The valuation of the physical properties in the Des Moines case was not questioned or challenged in this Court by the City of Des Moines, but was accepted as a fair valuation of that property upon the appeal to this Court. The record in the Des

Moines case shows that it was a city of 98,000 people, and that the output of the plant was approximately 550,000 M cubic feet of gas per annum, whereas, Lincoln is a city, according to the record in this case, of 44,000 people, and with a plant output of 227,000 M cubic feet per annum in 1912. A valuation for the Lincoln plant of a million dollars in 1912, would compare normally with a valuation of two and one-quarter millions for the Des Moines plant in the same year; in other words, although the City of Lincoln is approximately half as large as the City of Des Moines, and the gas output of the Lincoln plant is approximately one-half of the output of the Des Moisnes plant, the Master's valuation in the Lincoln case was only one-quarter of the valuation of the Master in the Des Moines case.

Mr. Lea's Exhibit (Transcript, p. 2063) shows the reproduction cost of the Company's properties, at the close of 1912, to be $1,258,461, and the present value of $1,090,913. This valuation by Mr. Lea is corroborated and sustained by the Company's records showing the cost of extensions and equipment between 1907 and 1912, for which contracts were produced and vouchers showing the amount paid. In Mr. Lea's figure of present value is included $225,000 for going value, as computed and determined by Mr. Lea, his computation being shown in detail in Exhibit 7, Subdivision K (Transcript, p. 1353).

In Subdivision IV of this brief, we have considered and discussed the reduction made by the Master in the going value of this property, and have pointed out, as we believe, the error made by the Master in reducing the amount of the going value from the amount shown in the evidence to the figure of $140,000, and the further error in deducting $100,000 of the $140,000 from the value of the properties.

In the Master's valuation as of January 1, 1913, while he assumed to value the property by determining the net construction cost, in the first instance, to which twelve and one-half per cent. overhead was to be added, as we understand his report, in reaching the replacement cost, and from the replacement cost he deducted the accrued depreciation in reaching the present value. In his findings, however, in dealing with the properties as grouped in his report for the purpose of valuation, namely, real estate, buildings, works equipment and distribution system, he omits from his report and findings some one of the factors used by him evidently in reaching his value; so that it is difficult, if not impossible, to check out his present value from the assumed basis employed by him. With respect to buildings, he does not give (1) the net construction cost of any of the buildings; (2) nor the amount or rate of annual depreciation upon any of the buildings; (3) nor the age or assumed life of the buildings. The amount which the Master depreciated any building in order to reach his value, or the rate of depreciation, cannot be determined from his report. In this situation, in taking into account the testimony which is offered on behalf of the City and the Company, covering: (1) the cost of the buildings without overhead expense, or the net construction cost; (2) the reproduction cost, or the cost plus the overhead; (3) the age and assumed life of the buildings, each separately; (4) the accrued depreciation and the annual depreciation resulting in the present value, the testimony was complete, but the findings of the Master were incomplete on the necessary elements to be considered in the valuation.

With respect to works equipment, there were 73 separate items entering into this subdivision, and each of these items was valued by both the Company and

the City, giving the net construction cost, reproduction cost and present value, age, assumed life and rate of depreciation. The Master gave the reproduction cost and present value only of the combined 73 items, and as to the separate items, gave only the present value; so that from the Master's findings, in order to check out his valuation against the evidence and against the necessary factors to be considered in reviewing his findings, we find omitted: (1) net construction cost for each of the items; (2) reproduction cost; (3) accrued depreciation; (4) age and assumed life; (5) rate of depreciation.

With respect to the distribution system, the Master gave the total net construction cost and the present value, but did not give (1) the present value or reproduction cost of the properties going to make up the distribution system, or any of the subdivisions; (2) the accrued depreciation; (3) or the age or assumed life of any part or portion of the distribution system.

We submit that the directions of this Court for specific findings were ignored by the Master in the valuation as of January 1, 1913, and were completely ignored in his valuation of 1907, and all to the disadvantage of the Company in attempting to point out the errors of the Master in his valuations for lack of detail and information as to how his figures were reached.

The Company, in Exhibit 7, Subdivision (8) (Transcript, p. 1304), showed the age and assumed life, and the depreciation, computed on a straight-line basis, and on a sinking fund basis, for each piece of property involved in the valuation.

The Company, also, in Exhibit 425, Subdivision N (Transcript, p. 1384), submitted in detail the amount expended by the Company for repairs and renewals on each part of the Company's property, for each of the years from 1903 to 1913, inclusive. This detailed information was furnished by the Company in order that

the Master might comply with the orders and directions of this Court in making a valuation of the properties, and to enable the Court to check out and determine the accuracy of the valuations.

The net earnings of the Company for 1912, as shown by Mr. Lea at the $1.00 rate, would have been $21,817.73. Mr. Lea also shows the gross and net earnings of the Company for 1913 (Transcript, p. 2064), and in comparison with the earnings for 1912, are as follows:

| | Full year, 1912. | Full year, 1913. |
|---|---|---|
| Gross Earnings for Gas Dep't. as Reported | $282,162.11 | $273,595.52 |
| Deduct Receipts from Gas Sales Outside Lincoln | 8,986.18 | 8,471.35 |
| Corrected Gross Earnings Gas Dep't. | $273.175.93 | $265.124.17 |
| Total Operating Expenses as Reported | $175,573.49 | $183,436.77 |
| Deduct Output Cost Gas Sold Outside Lincoln | 1,873.62 | 2,471.92 |
| | $173,689.87 | $180,964.85 |
| Add for Excessive Residual Credits as Reported | 2,722.23 | |
| Add for Depreciation (minimum shown by sinking fund calculation) | 20,865.03 | 20,865.03 |
| Corrected Operating Expenses Gas Dep't. | $197,277.13 | $201,829.88 |
| Corrected Net Earnings Gas Dep't. | $75,898.80 | $63,294.29 |

If the rate was reduced to $1.00, it would result in a reduction of one-sixth of the gross receipts, or a reduction of $44,187.36 from the gross earnings of $265,124.17 for 1913, leaving gross earnings for 1913 at $220,936.81, with operating expenses of $201,829.88, leaving a net balance of $19,106.93 at the $1.00 rate. Deducting the 3% occupation tax on gross earnings at the $1.00 rate or $6,628.43, leaves $12,478.50 of net earnings for the year 1913.

The result of this calculation illustrates the conclusions of the Master's findings upon the Company's continued operation. According to his own figures, the net earnings of the Company, in 1907, were $22,349 (Transcript, p. 53), which he finds would be a return of 5.12% on his then estimated value of the company's properties; and, as we have shown, it would be a return of 4.5% if his mathematical error were corrected, and a return of 3.7% if $100,000 of going value, which he found existed but deducted for reasons stated, were added to his 1907 valuation; or 2.8% if the values shown by the company were accepted. As against these net earnings in 1907, we have shown how the gross earnings fell off in the year 1913, as compared with the year 1912, and that the net earnings of the Company in 1913, according to the Company's figures, were but $12,478.50, which, on the basis of the Master's 1912 valuation, is but a return of 1.8%;. and on the basis of the Company's 1912 valuation, is but a return of 1.01%.

The Master endeavors to justify his conclusion by certain arbitrary eliminations from the expense account of the Company, which represented the Company's actual disbursements in the year 1912. The propriety of these eliminations we will now proceed to discuss:

## VII.

### 1912 Operating Expenses.

It will be noted in the Master's criticism of the expenses of the Company for 1912, that he eliminated an expenditure actually incurred by the company of more than $7,000 in the new-business department, on the assumption that the Company was not justified in making this expenditure, in order to either hold the business that it had, in face of competition by the electric companies, or to acquire new business. The expense for this item was $19,692.64, in 1912. In 1904, as already indicated, the expense for this department was more than $16,000. In 1913, the Company reduced this expense for this department to $10,399.90 (Transcript, p. 2062), and the gross sales of the Company for 1913 dropped from 227,297,000 cubic feet in 1912 to 219,249,900 cubic feet, and the gross earnings from gas sales fell off from $273,175.93 to $265,124.17, and the net earnings from $75,898.80 to $63,294.29, at the $1.20 rate (Transcript, p. 2062). If the Company, by the expenditure of money to hold its business, had not been able to increase its business, but had simply been able to hold what it had, in the face of competition from the electric service, which had practically driven the gas department from the lighting field, it would be no justification for the Court in eliminating the expenditure, or any part of it, if the Court were free to substitute its judgment as to how much should be expended by the company to hold its business, or to extend its business. The same rule would apply to any expenditures of the Company, and would result in a disallowance of money expended for equipment or extensions, where the Court might feel that the expenditure was not wisely made. We submit, where a company acting in good faith and under the direction of competent management, as indi-

cated in this case, that this Company was being managed by a skilled and competent manager, that the judgment in the expenditure of money, either for equipment or for holding or extending its business, should be protected and should not be eliminated from consideration without substantial and serious reasons for it.

The Master injected in his report a statement (entirely without warrant (as the record shows), which clearly implies that the Company disbursed large sums of money in new business, for the purpose of defeating this gas case Ordinance; that this implication of the Master's was quite without justification, is shown by the evidence in the record. The Company spent in its new-business department, between the years 1904 and 1913, the following sums of money:

| | |
|---|---|
| 1904 | $16,400.65 |
| 1905 | 15,919.73 |
| 1906 | 13,432.41 |
| 1907 | 13,394.04 |
| 1908 | 11,634.96 |
| 1909 | 14,019.36 |
| 1910 | 16,152.75 |
| 1911 | 18,985.52 |
| 1912 | 19,692.64 |

(Transcript, p. 1382)

| | |
|---|---|
| 1913 | 10,399.90 |

(Transcript, p. 2062.)

A brief analysis of this table will show how wide of the mark the Master was in his implication above referred to. It appears that the Company spent more money in 1904 than it did in any subsequent year until 1911. And yet there was no rate suit pending in 1904, the Rate Ordinance having been passed in November, 1906. During the years 1906 and 1908 the expenditures in the new-business department actually decreased from $13,432.41 to $11,634.96, during which years this rate suit was actually in litigation. Furthermore, it appears

that in 1908, while this suit was then in litigation, that the Company spent less money in its new-business department than in any year since the institution of the new-business department, except 1903, the first year of its institution. Also, there was expended in 1904, two years prior to the passage of the Rate Ordinance, more money than in any of the years in which the new-business department was in existence, except 1911 and 1912. And we have already shown the result of the decrease in 1913, as compared with 1912, the result being a falling off in sales and earnings. Furthermore, the City of Lincoln established an electric lighting plant in about 1907, and subsequent to 1911 entered the the commercial field, the result of which was that the new-business department had to bear the burden of the advertising necessitated by this competition. The unfairness created by this situation can be seen at a glance: The City is competing with a gas company in the lighting business, with its ability to pay its expenses out of general taxes, and at the same time in this rate case against the Company it objects to the Company's cost of advertisement, necessitated by the competition which the City had created.

In view of the above facts, can it be said that there is any justification for the Master's imputation to the effect that the Company deliberately dissipated its earnings in order to win this rate case? The serious effect of this trimming of operating expenses on the part of the Master can be shown by a simple computation. If we take the Master's figure of a 6% rate of return, and make a calculation on a 6% basis, it will be seen that every dollar which the Master eliminates from the Company's operating expenses is equivalent to eliminating $16 2/3 from the valuation of the Company's properties, so that an elimination of $7,692 from operating expenses is equivalent to reducing the value of the Company's properties approximately $120,000.

If this item of $7,692 had been permitted to stand in the operating expenses of the Company where it properly belongs, then the net income of the Company for 1912, even on the valuation as found by the Master, with all the other adjustments in the operating expenses which the Master had made, would be less than 6%.

Another mathematical error which the Master made, this time in his 1912 figures, is the deduction of the salary of the Chairman of the Board of Directors ($3,000) and the retainer of New York counsel ($600). He deducted this entire amount from the operating expenses of the gas department of the Company, whereas, these salaries were apportioned between the gas and electric departments, and, if there was any deduction to be made at all, it only should have included that proportion of these salaries as applied to the gas end of he Company's business. The Master apportioned such of the operating expenses as were common to both the gas and electric department of the Company as follows: 73% to the gas department and 27% to the electric department. On this basis, intead of deducting $3,600 for these two salaries, as aforesaid, he should only have deducted approximately, $2,600, or $1,000 less. If we deduct this additional item of $1,000 from the 1912 net revenue of the Company, as found by the Master, it would reduce said net revenue to approximately $38,000. On this basis, the rate of return which the Company would have earned in 1912, at the $1.00 rate, on the Master's own findings, as adjusted, would only have been 5.6%, instead of 6.9%, as he finds. And if we add to the Master's 1912 valuation the $100,000 of going value, which he found existed but refused to allow, the result, at the rate of return earned by the Gas Company in 1912, on the Master's own figures, as adjusted, would only be, at the $1.00 rate, 4.9%.

In conclusion of the matters heretofore discussed, we submit herewith the results sought to be accomplished

by the City, and which will, in fact, be secured if the decision in this case is affirmed:

1. The value of the company's properties, as of January 1, 1913, will be definitely fixed at $676,565.

2. The City will enforce refunds equal to the difference between the $1.00 rate and the $1.20 rate, for the period between January 1, 1907, and May 1, 1915. The amount of these claimed refunds, with interest to the time of the hearing before Judge Page Morris (approximately July 1, 1915), is as follows:

| Year | Principal | | Int. at 7% |
|---|---|---|---|
| 1907 | 35,725.20 | 8 yrs. | 20,005.11 |
| 1908 | 38,819.32 | 7 " | 19,021.46 |
| 1909 | 40,648.72 | 6 " | 17,072.46 |
| 1910 | 41,604.62 | 5 " | 14,561.61 |
| 1911 | 44,445.62 | 4 " | 12,444.77 |
| 1912 | 45,459.40 | 3 " | 9,546.48 |
| 1913 | 44,047.54 | 2 " | 6,166.66 |
| 1914 | 46,702.28 | 1 " | 3,269.16 |
| 5 mos. 1915 | 18,916.64 | | |
| | 356,369.34 | | 102,087.71 |
| | | | 356,369.34 |
| | | Total | $458,457.05 |
| Interest on 1915 refund at 2% | | | 378.33 |
| Interest on total principle from July 1st, 1915, to January 1st, 1916 (3½%) | | | 12,472.93 |
| Total principle and interest to January 1st, 1916, | | | 471,308.31 |
| Interest for years 1916 and 1917 (approximately $25,000 per year) | | | 50,000.00 |
| | | | $521,308.31 |

3. The City will proceed with its attempt to collect its occupation taxes, which, for the years 1910 to 1913, inclusive, with interest and penalties through the current year, now amount to $40,846. This figure does not include any claimed occupation taxes for the years 1914 to 1917, inclusive, and is attempted to be levied irrespective of general taxes, which, in 1912, as the record shows, were over $15,000 per annum.

4. The City will proceed, with its municipal electric plant, to compete with the company in the lighting business, wherein the City levies a three per cent. occupation tax on the electric business of the company, and is free from that tax in its own service.

5. The City will proceed to press to judgment its suit to oust the company from the streets and public grounds of the City of Lincoln.

6. The City will then be in a position to push its plans for a municipal gas plant, and to that end, to force this company into such a position that the City can acquire its plant without compensation.

We submit that this array of facts and conditions, together with the established proof that the company never paid dividends, but used all its earnings in paying bond interest and operating expenses, and in making betterments, improvements and extensions to its property, demonstrates the utter confiscatory character of the ordinance in question.

## LINCOLN GAS & ELECTRIC LIGHT COMPANY v. THE CITY OF LINCOLN.

### TABULATIONS SHOWING MASTER'S MATHEMATICAL ERROR IN DETERMINING COMPANY'S 1907 VALUATION.

### I.

(1)

| | |
|---|---|
| Master's 1913 Valuation | $676,565 |
| Less Values added between 1907 and 1913 | 240,000 |
| 1907 Value found by Master | $436,565 |

(2)

| | |
|---|---|
| Master's 1913 Valuation | $676,565 |
| Less Values added between 1907 and 1913 | 240,000 |
| 1907 Value found by Master | $436,565 |
| Depreciation which was going on in period intervening between 1907 and 1913, at $10,000 per year, as found by Master | 60,000 |
| Correct value, according to Master's figures, which he should have shown, instead of value in Table I | $496,565 |

In calculating values from 1913 back to 1907, the Master (after deducting the values added in the intervening period) should have built up the 1913 value at the rate of $10,000 a year, which was the rate he found the property to be depreciating annually in 1907.

### II.

If we use the Master's 1907 valuation of $436,565 with his 1907 annual depreciation of $10,000, the result is not in accordance with the Master's own 1913 valuation.

| 1907 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 |
|---|---|---|---|---|---|---|
| 436,565 | 426,565 | 416,565 | 406,565 | 396,565 | 386,565 | 376,565 |

| | |
|---|---|
| All values, tangible and intangible, added to plant between January 1, 1907, and January 1, 1913, as found by Master | 240,000 |
| Total | $616,565 |

This result illustrates the Master's error, because his 1913 valuation of $676,565 could not be arrived at if the 1907 valuation were only $436,565, with his annual depreciation of $10,000.

### III.

If we correct the Master's mathematical error, which brings his 1907 valuation up to $496,565, and use his 1907 depreciation of $10,000 a year, the result will be the precise figure of the Master's 1913 valuation, to wit, $676,565.

| 1907 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 |
|---|---|---|---|---|---|---|
| 496,565 | 486,565 | 476,565 | 466,565 | 456,565 | 446,565 | 436,565 |

| | |
|---|---|
| All values, tangible and intangible, added to plant between January 1, 1907, and January 1, 1913, as found by Master | 240,000 |
| Master's 1913 Valuation | $676,565 |

This shows that in order to arrive at Master's 1913 valuation, with the rate of depreciation in 1907, as fixed by Master, at $10,000, he should have found the value of the Company's properties in 1907 to be $496,565.

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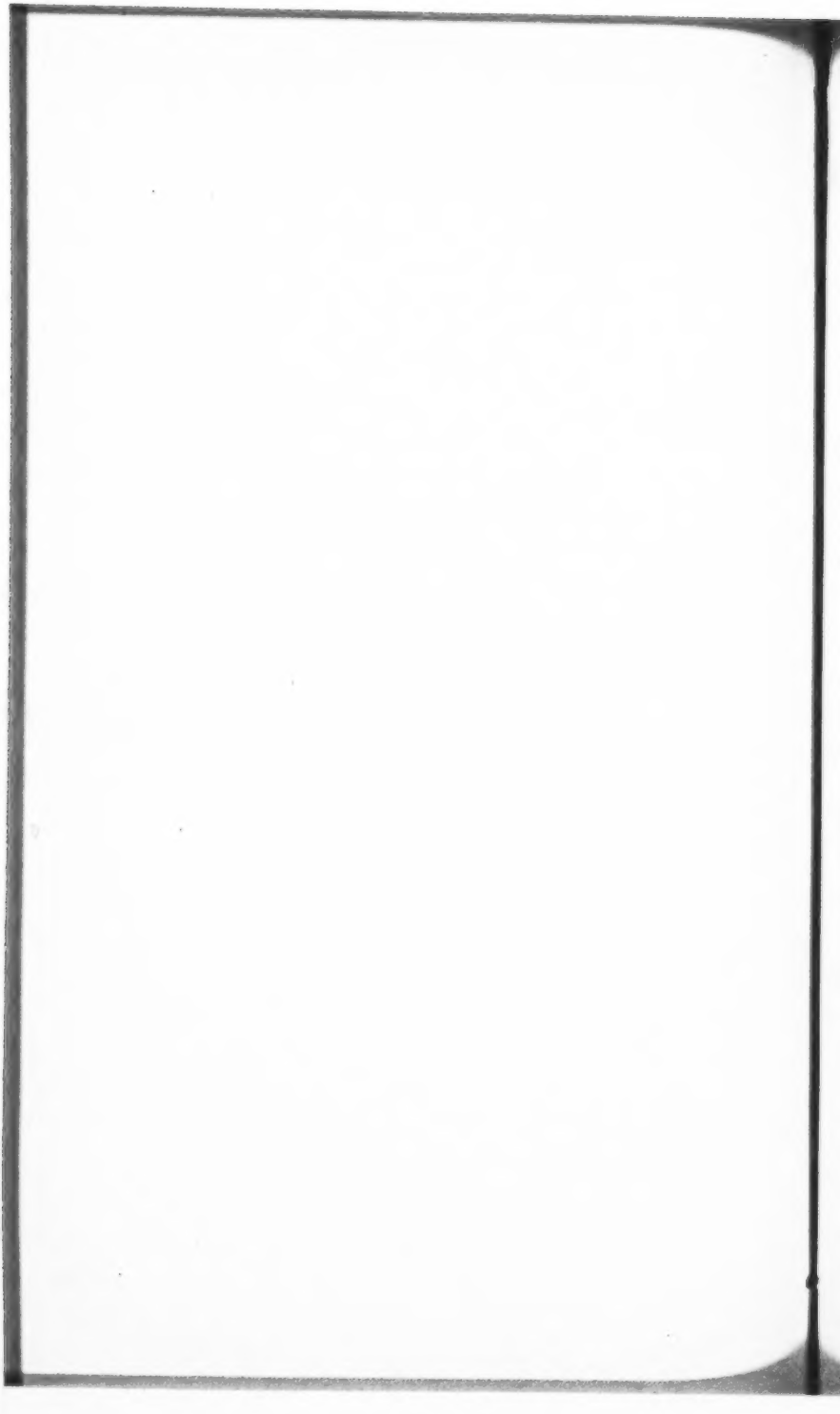

VOL. II.

SUPREME COURT OF THE UNITED STATES.

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant, *v.* THE CITY OF LINCOLN, *et al.*, Appellees. | October Term, 1917. No. 300. |

**Discussion of the Evidence.**

In view of the fact that this Court, in its determination of the prior appeal of this case, remanded this cause to the Court below, to refer the case to a Master to make a full and complete report of his findings, based upon all the testimony which either side might present, and in view of the further fact that the Master has notably failed to do this, and this Court's instructions in that respect have been completely disregarded, we deem it not only useful, but imperative, to take up the various findings of the Master separately, and to analyze them in the light of the testimony which was introduced in respect of the various items of valuation, operating expenses and earnings. For this reason, we have prepared in this volume such an analysis, and here submit it for the consideration of this Court.

**Overhead Charges.**

The Master recognized the propriety of adding an amount for overhead charges to the net construction

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cost of the Company's property in order to determine the reproduction value of said property.

In determining this amount, the Master said in his report, under the heading "Overhead Charges":

> "Just what it should be, is the question about which there is much difference of opinion among engineers, courts and commissions. In this case, Mr. Lea puts it at 16 per cent and Mr. A. D. Adams at 7 per cent. The matter is not governed by any inflexible rule, but it is to be determined in every case by the exercise of good sense and sound discretion. The amount should be sufficient rather than liberal, especially where liberality might result in blotting out legislation, which, in the regulation of rates, is only required to stop just short of confiscation." (Transcript, p. 37.)

We beg to disagree with this general statement of the Master. The amount of "overhead charge" is to be determined by another element as well as "the exercise of good sense and sound discretion." That other element is *engineering experience*. That is, the determination must be based upon the experience of engineers skilled in the art and trade of constructing gas properties. And although the experience of such engineers does not fix, with precise certainty, the amount to be allowed for overhead charges, still we submit that the experience of such engineers completely fails to justify the estimated amount finally fixed by the Master, through the exercise, as he expresses it, of "good sense and sound discretion."

He says further:

> "My judgment upon the matter is that an allowance of 12½ per cent on the total net construction cost of the physical property, excepting real estate and working capital, is sufficient to cover all overhead expenses, including engineering, superintendence, legal expenses, taxes, interest during construc-

tion, omissions and contingencies, casualty liability and whatever else is usually classified under this caption. This is necessarily an estimate based almost entirely upon expert testimony. No accounts were kept and no books, vouchers or other evidence produced showing with even approximate accuracy what expenditures were actually made and properly chargeable to this account. The value of the property has substantially increased by addition made to it in recent years, but the only means of ascertaining what the overhead charges on account of such additions were, is by the use of a more or less reliable hypothesis. Courts and commissions differ widely upon this question, and *while it may be that the percentage here allowed is not enough, the evidence will not convince me that it ought to be more.*" (Transcript, p. 38.)

Why does the Master choose 12½ per cent for overhead charges? It is impossible to tell from his report. He maintains a profound silence with regard thereto. He states Mr. Lea's estimate as 16 per cent and Mr. Adams' as 7 per cent. What induced the Master to pick 12½ per cent is a matter purely of conjecture. He says that the "evidence does not convince me that it ought to be more." What evidence? Whose evidence? What evidence convinced the Master that it should be as much as 12½ per cent? He may know, but he fails to specify in his report.

At the outset it is apparent that the Master has fallen into error when he compares Mr. Lea's 16 per cent with Mr. Adams' 7 per cent. These percentage figures do not purport to cover the same thing. Mr. Lea went very fully into the items which made up his overhead charge estimate. His estimate is made up of two distinct groups, which the Master evidently has completely lost sight of. The first is the item of 16 per cent, which includes:

"Engineering and supervision ..... 6%
"Casualty liability ..... 2%
"Taxes and loss of interest during construction, 4%
"Omissions and contingencies ..... 4%

"Total ..... 16%"

(Transcript, p. 1303.)

This he adds to the net construction cost of all physical equipment except real estate and working capital.

In addition to this 16 per cent. Mr. Lea estimates a sum in dollars to cover organization and legal expenses. The amount is $33,000 (Exhibit "7A") which is made up of the following items:

| | |
|---|---|
| "Preliminary investigation ..... | $ 3,000.00 |
| "Preparing articles of incorporation, making and certifying abstracts, drawing and examining contracts and general retaining fee ..... | 7,500.00 |
| "Salaries of manager and clerical force during construction (2 years) ..... | 18,000.00 |
| "Incidental and traveling expenses (2 years) ..... | 2,500.00 |
| "Rent and Stationery ..... | 2,000.00 |
| "Total ..... | $33,000.00" |

(Transcript, p. 1300.)

This $33,000.00 for organization and legal expenses is approximately 3 per cent. of the valuation of the property as fixed by Mr. Lea, which, added to the 16 per cent. for engineering, etc., would make a total of 19 per cent. for overhead charges. Mr. A. D. Adams estimates 7 per cent as sufficient to cover all of the items included in both these groups (Transcript, p. 1131). It is evident, therefore, that the Master should have set the 7 per cent. estimate of Mr. A. D. Adams against the 19 per cent., as the total overhead estimate of Mr. Lea.

Either the Master, through error, set the 16 per cent. against the 7 per cent. or he did so deliberately to make it appear that he finally selected a figure (12½) which was nearer to Mr. Lea's than to Mr. Adams' estimate. Such, however, is not the fact, because Mr. Lea's total estimate for overhead was approximately 19 per cent., or, as he definitely states it, 16 per cent. for engineering, etc., and $33,000.00 additional for organization and legal expenses.

What the Master actually decided in regard to the items of organization and legal expenses, which makes up Mr. Lea's total of $33,000.00, is difficult to determine. He does not discuss that matter at all, except insofar as he determines that 12½ per cent. covers "overhead expenses, including engineering, superintendence, legal expenses, taxes, interest during construction, omissions and contingencies, casualty liability and *whatever else is usually classified under this caption.*"

To analyze Mr. Adams' estimate of 7 per cent. for overhead charges in a problem which we confess we are unable to solve. And apparently such was the case with Mr. A. D. Adams; for his testimony does not attempt to disclose any subdivision or application of any part of the 7 per cent. to any particular part of the engineering, legal or organization expenses. However, there was submitted by *counsel* for the City in the course of the argument a division of the 7 per cent. as follows:

> "For engineering and supervision, including investigations, drawing and making contracts, clerical work connected with construction, plans, specifications and full supervision, 5 per cent.; for interest paid or lost on money for construction or on construction accounts up to the time when each part of the plant goes into use, one year being the period for completion of construction, 1 per cent.; and for

all other general costs incident to construction, including law, rent, stationery, insurance, clerical services, taxes, incidentals and omissions, 1 per cent."

But it is worthy of note in determining the weight to be attached to Mr. A. D. Adams' figure that in the course of the cross examination, which extended over a period of one week, Mr. A. D. Adams was requested practically every day, by counsel for the Company, for a subdivision or analysis of the 7 per cent., and for a specification of the proportions thereof, assigned or set aside for organization and legal expenses, for engineering, for interest during construction, for taxes, for casualty liability and for omissions and contingencies. It is evident that the 7 per cent. could not be made to cover these items of expense or overhead charges, if any attempt to subdivide the total figure of 7 per cent. had been made.

Mr. Lea testified that 6 per cent. for engineering and supervision was the current price among competent engineers, where engineers are appointed for preparation of plans and specifications, the taking of competitive bids and placing the contract and overseeing the construction and passing on the fulfillment of the contract; that the organization and legal expense, involved a preliminary examination by the engineer for a determination of the feasibility of the project and a survey of ground available for the plant and laying out and determining the distribution system; that the engineering service involved in the organization and legal expense, and in the engineering expense involved drawings of all the buildings, a large part of the works equipment and the distribution system, and calculations as to the kind and size of the pipe, pressure, etc., all of which required a great deal of time, practice, skill and ability; that casualty liability covered the item of insurance protection against

liability on account of damage claims and otherwise during the course of construction, and particularly while the streets were open and the public subjected more or less to the hazard of accidents; that the item for taxes and loss of interest during construction contemplated that it would require fully three years to complete the construction of the plant, and that in ordinary practice one-half of the interest is allowed on the investment for the full period of construction; that it was customary in construction work of this character, as well as other construction work to allow for omissions and contingencies; that construction expenses usually exceed the original estimate and in detailed inventories there are usually omissions (Transcript, pp. 398-400).

The record discloses that Mr. Lea was competent to testify with respect to such items and was qualified from actual experience in the construction and management of gas properties.

Mr. L. E. Wettling testified with respect to these items of overhead and disclosed in his testimony his knowledge and familiarity with the practice of Public Service Commissions and valuation bodies in determining the propriety and amount of such items, and disclosed qualifications to testify with respect to them; that it had been his duty in the service of the Nebraska State Railway Commission to make a study of and become fully informed with respect to overhead charges in properties of the kind involved here. Mr. Wettling testified that the inventory of materials in the composite plant would not necessarily reflect the cost of construction; that it is not practically possible to show all the materials necessary to be purchased and actually in the completed plant on an inventory; that in the ordinary course there are variations usually for omissions; that it is not possible to avoid the loss of materials by

breakage, accident or otherwise in the construction of a complete plant; that contingencies usually cover the loss of material, breakage of material, unforeseen accidents, unforeseen difficulties met in construction; that an allowance of from 3 to 5 per cent. for contingencies would be reasonable. Mr. Wettling called attention to the inventory submitted by the Lincoln Telephone & Telegraph Company to the Railway Commission, wherein it was specifically shown that in spite of the greatest care in the taking of the inventory, errors of omissions exceeding 5 per cent. of the total value were found. He also called attention to like omissions in the inventories submitted to the Railway Commission by telephone companies from York and Johnson Counties. That casualty liability is considered as a separate and distinct item and is an expense necessarily incurred in the construction of a plant; that the rates for such insurance run from 1 per cent. to as high as 5 or 6 per cent., and in some cases as high as 10 per cent., on the payroll; that the cost here would run from 4 to 5 per cent. on the payroll, and assuming the labor cost would constitute practically one-half of the entire cost of the plant, would amount from 2 to 2½ per cent.; that it is necessary in the construction of a plant like this to employ engineering skill and other supervision as the work progresses, and that no gas plant of any magnitude is built without such assistance from engineers; that preliminary work is to be done in the matter of surveying the field, determining the best location for the plant itself, the best location for the distribution system and general outline which involves a study of population centers in the particular place and in other places, and requires engineers who have specialized in that particular utility; that for engineering and supervision taken together the expense would be from 5 to 8 per cent., depending upon the difficulties and length of time required. That interest during

construction is one of the necessary items of cost and legitimate capital charge in the construction of the plant and by most regulating bodies and engineers, and is calculated at 6 per cent. per annum for one-half of the period of construction; that Courts and Commissions and engineers recognize and allow for expenditures involved in the organization of the company, the expenditures for making estimates and preliminary investigation, for obtaining money, securing franchise and promoting the enterprise; that these expenditures are sometimes included with the so-called overhead charges or expenditures in the group along with engineering, supervision, contingencies and interest during construction; that such expenditures are appropriate and necessary and are a part of the capital contribution, and are as necessary in a well-conducted and carefully planned organization as purchase of the machinery itself; that ordinarily it is necessary for the promoter to establish an office at the beginning of the construction in the community where the enterprise is being carried on and to surround himself with the necessary help to generally supervise and look after the work of construction, and to see that the work is prosecuted under the plans laid out by him (Transcript, p. 797 *et seq.*).

E. C. Hurd testified with respect to the so-called overhead charges, and testified that for the past five years he had charge of the valuation of utility property in this State as chief engineer for the Nebraska State Railway Commission; that he had constructed several hundred mlies of steam railroad, 50 miles of electric railway, four separate electric light and power plants, two hydro-electric plants, and had taken part in the business management of electric property; had done work on gas plants, and particularly in an advisory capacity in the handling of property for bankers and brokers

interested in such properties; that he had valued the railroad properties and express company properties, in which was included almost every conceivable class of property; that he had valued the street railway property in the City of Lincoln and suburbs; that he was acquainted with the fundamental elements that enter into the cost of construction of utility plants; that the usual practice for engineers or valuators who are acquainted thoroughly with that class of work is to make an addition to the original fundamental item for omissions and contingencies. Mr. Hurd called attention to the fact of the inventory of the Missouri Pacific Railroad Company, submitted by the company as complete, and the omissions from such inventory discovered by his department in the valuing of the property of three important steel bridges; also to omission discovered by this department in checking the inventories submitted by the telephone Company, and stated that the Railroad Commission allowed 5 per cent. for contingencies and omissions. Mr. Hurd also called attention to the double tracking by the Union Pacific, where the materials were carefully checked and gone over as to the weight of rails and distance and the track fastenings, and where the conditions were ideal, but that upon rechecking after the work was completed, it was discovered that the amount of materials that were actually used was approximately 3 per cent. more than the amount found in the track.

With respect to the item of casualty liability, Mr. Hurd says that he never knew of an extensive construction that did not experience such an item; that the labor item in the construction of this plant would probably amount to from 1.8 per cent. of the total to 2 per cent. of the inventory value; that interest during construction is figured at 6 per cent. for one-half of the construction period, and that for the construction of a plant like this it would take something like two

and one-half years; that you might hurry the construction, but to do it on an economical and sensible basis would be cheaper in the long run; that hurried construction costs more than construction at a moderate rate, and that if you hurried your equipment and materials an additional charge would be made therefor; that it would be financial foolhardiness to erect the buildings all at once, with no respect to machinery, and then lay the mains all at once without respect to the possible consumer's situation; that to intelligently attack the proposition, as a whole, it would take about two and one-half years to successfully put in a plant and complete it in the most economical way; that a plant adroitly engineered should have as a general principle a greater efficiency value than a crudely constructed plant, and while the engineering cost might add somewhat to the capital at the beginning, such cost would afterward tend to reduce the operating expense; that the superintending factor is a larger one in the cost than the purely engineering (Transcript, p. 814 *et seq.*).

The testimony of Mr. Wettling and Mr. Hurd completely supports and confirms the testimony and estimates of Mr. Lea on his calculation of overhead charges. In many instances the figures given by Mr. Wettling and Mr. Hurd *exceed* the amounts designated by Mr. Lea for these items of expense.

It is not even contended by the City that Mr. Wettling and Mr. Hurd are not competent to speak as to these costs. Their qualifications are conceded. There are no men in this State better fitted from experience to testify as experts on the subject of costs than Mr. Wettling and Mr. Hurd. Mr. Lea's competency has already been stated.

As against the testimony of these three men, skilled and fully advised as they are, the City has introduced the testimony of one witness, Mr. A. D. Adams, whose

training as a gas or other engineer, and whose capacity for a full and fair statement of facts or opinions, we will hereafter discuss.

The clipping of approximately 12 per cent. on the overhead charges by A. D. Adams for the City at the very beginning of the valuation of the Company's property, is pursued consistently on each and every item of property possessed by this Company.

To demonstrate that the proposed 7 per cent does not represent a qualified honest judgment as to the cost for these items of overhead, we desire to call your Honors' attention to the amount allowed for such items of overhead by engineers and valuating boards and commissions, and to call your Honors' attention to the particular properties and the amounts allowed for such overhead and the amounts involved in such appraisements. The railroad properties of the state of Michigan were valued by Mortimer E. Cobley, Dean, of the engineering department of the University of Michigan, with his staff, and his valuation was approved by the Commission, and included an overhead charge on the railroad properties in that state of 21.2 per cent. The railroad properties of Minnesota were valued by Dwight C. Morgan, engineer for the Minnesota Railroad Commission, and his valuation was approved by the Commission and included for overheard charges 20.8 per cent. on the depreciated present value of the property. The railroad property of South Dakota was valued by Carl C. Witt, engineer for the Railroad Commission, and his valuation was approved, including overhead charges 16.3 per cent. on the depreciated present value. The railroad property of Wisconsin was valued by Prof-William D. Taylor, engineer for the Board, and his valuation was approved, including overhead charges in the amount of 16.5 per cent. on the depreciated value of the property. The surface railway properties in

the City of Chicago were appraised and valued for and under the direction of the City by Bion J. Arnold, Mortimer E. Cooley and A. B. DuPont, and there was allowed for overhead charges 21.7 per cent. on the inventory-reproduction cost. The Chicago gas plant was appraised and valued by the City for the purpose of rate regulation, and the amount allowed for overhead charges in the City's appraisal was 17 per cent. The Public Service Commission of Maryland, in appraising and valuing the Consolidated Gas, Electric Light & Power Company's property of Baltimore, allowed for overhead charges 21.39 per cent. of the physical properties, excluding land. The Validation Board of the State of Massachusetts valued and appraised the street railway properties in that state, and allowed for overhead charges 23 per cent. of the value of the physical property. The Public Utility Commission of New Jersey valued the Public Service Gas Company's property for rate making purposes, and in the valuation allowed for overhead charges 17.6 per cent. of the value of the physical properties. The Railway Commission of the State of Wisconsin, in October, 1913, prepared and submitted an estimate of the cost of municipal lighting plant for the City of Milwaukee, and in the estimate submitted fixed the overhead charges at 20.7 per cent. of the physical property, including land. The Nebraska State Railway Commission appraised and valued the Lincoln Telephone & Telegraph Company's property on June 26, 1913, in the matter of regulating rates and allowed for overhead charges 17.2 per cent. on the reproduction cost or 20.8 per cent. on the net construction cost of the physical property, including land. The Railway Commission of Michigan, on June 11, 1913, in appraising and determining the amount of overhead charges in the application of the Northern Michigan Power Company, and upon the report of

Prof. M. E. Cooley allowed for overhead charges 22.2 per cent. of the value of the physical property.

We present herewith the detailed statement of each of these cases and other cases where the overhead allowance was fixed, and which included the items involved in Mr. Lea's 16 per cent., and in the $33,000 for organization and legal expense and the items involved in A. D. Adams' 7 per cent.

The Royal Railway and Canal Commission of Great Britain, on January 13, 1913, passed upon the value of the National Telephone Company's property in Great Britain, which was being taken over by the English Government, and there appeared before the Commission in that proceeding the most distinguished engineers in England and in this country. The transaction was of such importance as to insure the greatest care and the highest skill. The government of Great Britain was represented in the proceeding by its Attorney General and Solicitor General. The opinion in the proceedings was written by Justice Lawrence and concurred in by Hardy and Woodhouse, of the Commission.

Pending the hearing an agreement was reached between the representatives of the government and the National Telephone Company covering the fundamental costs, or, as known in this proceeding, the net construction cost of the physical equipment and properties, aggregating in amount 12,294,813 pounds sterling. This left in controversy the amount of the overhead charges and the amount of depreciation. The Postmaster General, who had direct charge of the proceedings for the government, contended that 17.76 per cent. was sufficient for the overhead costs. The telephone company contended that a larger per cent. was necessary to cover the items of overhead, and the Royal Commission, after an extended hearing and an exhaustive inquiry into costs of that nature, decided that there should be allowed

for all items covering overhead an amount equal to 31.4 per cent. of the fundamental agreed cost, excluding lands and buildings, and amounting to 3,217,671 pounds sterling.

Of this 31.4 per cent the Commission allowed for items covering engineering, supervision and administration of head office, district and local, 14.55 per cent for the cost or ordering and storing material, 2.61 per cent for interest during construction 4.53 per cent, being a total for these particular items of 21.69 per cent. These items correspond to the items included in Mr. Lea's allowance of 16 per cent, under the heading "Engineering, etc." Other allowances made by the Royal Commission involved in overhead charges were as follows: For obtaining way leaves, .97 per cent (being in the nature of right-of-way); for rents, maintenance, way leave payments, insurance until plant is revenue earning, 1.95 per cent, making the total of the last items of 2.92 per cent.

In addition to the items aggregating 21.69 per cent, above referred to, these last items correspond closely to Mr. Lea's item of approximately 3 per cent, or $33,000 for organization, legal and other preliminary expense. It addition to the above items the Commission made further allowances for overhead costs as follows: For cost of obtaining subscriber's agreements, 1.46 per cent; for cost of obtaining money, 2.41 per cent, and for contractor's profit, 2.92 per cent.

The fundamental agreed costs upon which calculation was made for these allowances was 10,239,345 pounds sterling, and the allowances in pounds sterling and percentages were in detail as follows:

| | £ Sterling | Per cent |
|---|---|---|
| Head office engineering and administration | 560,806 | 5.48 |
| Local engineering and supervision | 660,732 | 6.46 |
| District and local administration | 267,759 | 2.61 |
| Ordering and storing material | 267,759 | 2.61 |
| Interest during construction | 463,426 | 4.53 |
| Total of above group of items, 2,220.482 equals 21.69 per cent. | | |
| Obtaining way leaves | 100,000 | .97 |
| Rents, maintenance, way leave payments and insurance | 200,000 | 1.95 |
| Obtaining subscribers' agreements | 150,000 | 1.46 |
| Cost of obtaining money | 247,189 | 2.41 |
| Contractor's profits | 300,000 | 2.92 |
| Total allowance | 3,217,671 | 31.40 |

Attention is called to the fact that in making these allowances for intangible values under the various heads the Royal Commission made deductions for depreciation on the items which it considered were subject thereto, and in making up its tabulation on which final judgment was allowed deduction was made from the fundamental agreed costs for depreciation and final judgment rendered for 12,515,264 pounds sterling. The total overhead and intangible charges included therein amounted to 3,217,671 pounds, and were 34.58 per cent of the depreciated value of the plant, including lands and buildings.

No doubt can exist in a transaction of this magnitude, involving the actual payment of approximately $61,000,000, that an allowance of nearly $16,000,000 for intangibles was not made without grave consideration for the actual necessity and propriety therefor.

The Commission had the benefit of the judgment and skill of the best engineers in reaching its conclusion and allowance of 21.69 per cent for the items practically corresponding with the items included in Mr. Lea's allowance of 16 per cent. It is not likely that, had the Royal Commission had the benefit of the judgment of

the City's expert in this case and a presentation of his 7 per cent for corresponding items that a different result would have been reached.

We do not feel that Mr. Lea's allowance of 16 per cent is subject to question or criticism in view of this high authority.

In this connection we also draw your Honors' attention to the fact that the Special Master in the Des Moines case allowed 15 per cent for the items directly corresponding to items covered by Mr. Lea's 16 per cent, and said:

> After careful consideration of the case, it is my conclusion that 15 per cent *in addition to the cost of organization* is a fair and just allowance therefor. There is undoubtedly no absolute rule for the amount that should be allowed and care should be taken that they should not be made excessive. They should be reckoned on an economical basis." * * * (182).

We wish to bring to the Court's attention certain actions and proceedings in which the calculation of overhead charges was treated and determined.

*In re Application Public Service Gas Co.*, Public Utility Commissioners of New Jersey, reported in Vol. 1, page 433, of the Published Report of that Commission, the matter of overhead charges was considered and passed upon by the Commission.

The Public Utility Commissioners of New Jersey appointed Forstall and Robinson as engineers for the Commission to value the gas property of the Public Service Gas Company in the matter of the application pending before that Commission.

In the opinion on the matter of overhead charges the Commission say (451):

"To the estimate of bare cost there must be added certain allowances for expenditures generally called overhead charges. Forstall's appraisal includes a total allowance of 15.54 per cent; Randolph allowed 20 per cent; Stone & Webster 20.5 per cent; Bartlett & Hayward 20.4 per cent; Humphreys & Miller allowed approximately 21.7 per cent. Forstall, however, stated that an additional 2 per cent ought to be added to his allowance. This is best explained by quoting from the letter transmitting his appraisal to this board. It runs as follows:

"'In these charges we cover only engineering and supervision, omissions, contingencies and interest during construction. We have taken engineering and supervision at 5 per cent, omissions, in view of the careful inventory at only 2 per cent, and contingencies at 2 per cent. The allowance for interest is based upon a period for and a progress of construction that would call for an average payment of interest at the rate of 6 per cent for one year on the total amount expended. It will be seen that the overhead charges applied do not include any organization expenses, liability for accidents and damages during construction nor taxes during construction. Without the value of the land and with the uncertainty as to the extent of the liability for accident under the existing law, we have not felt able to fix a definite percentage for the omitted items, but think they would amount to at least 2 per cent of the total before any overhead charges are applied.'

"Eleven per cent should, therefore, be added before computing the interest at 6 per cent, this making a total of 17.6 per cent.

"After due consideration we accept this figure as the fairest estimate for these allowances, and apply it in connection with each class of property" (452).

Nebraska State Railway Commission, on June 26, 1913, passed upon the application of the Lincoln Telephone and Telegraph Company for permission to establish temporary rates to be charged for service; application No. 1637.

In the decision in that case the Commission allowed 17.2 per cent for overhead on the gross reproduction cost which was the equivalent or 20.8 per cent of the net construction cost. The Commission in the decision says:

> "The taking of testimony developed considerable controversy with regard to the question of general expense items entering into the values, and this controversy was apparently founded on the suspicion that the amounts allowed for general expense, or so-called overhead items, was excessive. The commission is convinced that the amount of 17.2 per cent for general expenditures allowed by our engineers is conservative, particularly in view of the manner in which they have built up their unit cost. It is generally in line with the accepted percentages and theories of commissions and regulating bodies of other jurisdictions, many of which allow over 20 per cent for these items. In the case of the taking over of the telephones of the Kingdom by the Crown, the commissioners in Great Britain allowed for this item 26 per cent.
>
> "Various commissions, as well as many of the prominent engineers of the country, apply the general expenses in this way, others include or conceal such expenditures in the units of costs, thereby producing apparently smaller percentages for overhead expenses, and when so treated in a valuation there will be apparently no general charges whatever, In other cases part of the general expense are applied to the unit price and another part is set up as general expense, which thus makes it appear as though a lower ratio of general expense had been applied in the valuation. Thus in the case of Wisconsin, which during the hearing was quoted as allowing only 12 per cent, it is found that the commission does in fact allow as much as 15 per cent for the so-called overhead items, and that as much as 10 per cent in addition is first applied to the units, thus bringing the range of allowances, depending upon the particular utility under con-

sideration, from 19 to 25 per cent. We quote from an address delivered in Chicago, March 24, 1913, by Mr. Commissioner Halford Erickson:

"'As to overhead expenses, that is also a matter, I think, that is not quite understood. The Wisconsin Commission in the case of small utilities allows 12 per cent. In the case of large utilities where they have a great deal of difficult city work to do, crossing rivers and work of that kind which often involves considerable risk, we allow 15 per cent. That however, is the figure which is apparent, which is visible in determining the unit price upon which to compute the cost of the various items or elements. We nearly always allow 10 per cent for contractor's profit. This is an element which entered into the cost as a whole and is not given separately. However, if that were taken out of the unit prices where is appears, and added to the 12 per cent, that figure would be considerably increased. It might not add 10 per cent to that figure, but it probably would add 8 per cent or 7 per cent, sometimes 9 per cent, so that the overhead expense used by us is considerably higher than 12 per cent. We have explained that on several occasions, but it appears perhaps that our practice is not quite understood.'"

*In re Application of the Northern Michigan Power Co.* for authority to issue stocks and bonds, reported in the Railway Commission Reports of Michigan for the year 1913, decided June 11, 1913, D. 626.

In this case application was made to the Railway Commission of Michigan for authority to issue stocks and bonds. The Commission referred the engineering matters involved in the application to Prof. M. E. Cooley, Dean of the engineering department of the University of Michigan, and to Profs: Riggs and Anderson. Profs. Riggs, Cooley and Anderson made a report finding the value of the tangible property and providing for the overhead charges for which an allowance of 22 per

cent of the tangible value was made. The Railway Commission, in passing upon this report and upon the application of the opinion, says:

> "For the purpose of checking the estimates for the construction of the physical property the Commission has submitted the appellants' petitions and engineering data to Profs. Cooley, Riggs and Anderson of the University of Michigan, who have submitted a comprehensive report which has been added to the record. The computations made by these gentlemen are based upon a thorough examination of the plant, maps, and field notes of petitioning Company, as well as on such data obtained by these gentlemen in the supervision of work of like character in other portions of this and adjacent territory. The summary of the report as respects physical value shows the following:

| | | |
|---|---|---|
| "1. | Land and flowage rights (assumed as valued by promoters of the enterprise | $2,565,000 |
| "2. | Construction based upon independent estimate | 4,275,701 |
| "3. | Overhead charges, including contingencies, engineering, organization, interest during construction, working capital, stores and supplies | 1,520,396 |
| | "Total overhead charges | 22.2 per cent." |

In *Bachrach* v. *Consolidated Gas, Electric Light and Power Company of Baltimore*, reported in the Published Volume Public Service Commission of Maryland, vol. 4, page 39, decided in 1913, the Commission had under consideration the matter of overhead charges in valuing the Consolidated Gas Company's property.

The Commission in the opinion says:

> "The item for preliminary organization includes: Time and expense in securing organization; (2) Cost of obtaining capital; (3) Interest on and during construction; (4) Cost of Consolidated Gas and Electric divisions:
>
> "For the gas division the allowance is $1,949,748 or 12 per cent. of the total value; 18.36 per cent. of the land and structures and 21.22 per cent. of the

structures alone. In the electric division the allowance is $1,434,672 or 12.68 per cent. of the total value. For the two divisions the allowance is $3,284,442 or 12.35 per cent. of the total value; 19 per cent. of the land and structures and 21.39 per cent. of the structures alone.

"The allowance for overhead expenses as above indicated was $3,384,422 or 21.39 per cent, of the value of the structures alone" (50-52).

*Des Moines Water Co.* v. *City of Des Moines.*

| | Amount | Percent of Inventory Cost |
|---|---|---|
| 1. Engineering, superintendence, contingencies, general and legal exp. | $116,928 | 8 |
| 2. Interest during constr. | 116,928 | 8 |
| | $233,856 | 16 |

Whitten, sec. 246, p. 221.

Massachusetts Street Railway Valuation by Validation Board:

| | |
|---|---|
| 1. Engineering 5 per cent. of physical cost of reproduction | 5 |
| 2. Contingencies 5 per cent. of physical cost of reproduction | 5 |
| 3. Legal and general expenses 3 per cent. of physical cost of rep. | 3 |
| 4. Interest 6 per cent. of physical cost of reproduction plus the above, or about 7 per cent. on the physical cost of reproduc. | 7 |
| 5. Commissions for marketing securities 3 per cent. of physical cost of reproduction | 3 |
| Making total of about 23 per cent. of physical cost of reproduc. | 23 |

Whitten, sec. 248, p. 223.

**Massachusetts Validation Board, 1911, *in re Appraisal of N. Y., N. H. & H. R. R. Co.:***

| | |
|---|---|
| 1. Engineering 5 per cent. on total cost; excepting the land and equipment | 5 |
| 2. Contingencies; 5 per cent. on total cost, excepting land and equipment | 5 |
| 3. Legal expense—1 per cent. on total, excepting land and equip. | 1 |
| 4. General expenses; 1 per cent. on the total, excepting land and equipment and 3 per cent. on cost of land | 1.2 |
| 5. Interest and commissions, 12 per cent. on the total cost, inc. land, but excl. equip. and inc. eng., conting., legal and gen. exp. | 12 |
| Total | 24 |

Whitten, sec. 249, p. 225.

**Michigan Railroad Appraisal 1900-1901 (work in charge of Prof. M. E. Cooley):**

| | Percent of Inventory Cost |
|---|---|
| 1. Engineering | 3.2 |
| 2. Contingencies | 10.8 |
| 3. Legal expenses | .4 |
| 4. Interest during construction | 3.1 |
| 5. Organization | 1.5 |
| Total | 19 |
| In this appraisal the reproduction cost, less depreciation was also determined. The overhead charges amounted to 21.2 per cent. on reproduction cost, less depreciation | 21.2 |
| Inventory—reproduction cost | $170,291,556.00 |
| Overhead charges | 32,424,706.00 |

Whitten, sec. 251, p. 227.

## Minnesota Railroad Appraisal, 1908:

| | | |
|---|---|---|
| Inventory—reproduction cost | | $345,260,418.73 |
| Overhead charges | | 61,264,764.84 |
| | Amount | Percent of Inventory Cost |
| 1. Engineering, superintend. and legal exp. | $12,133,641.89 | 3.5 |
| 2. Contingencies | 17,869,703.02 | 5.2 |
| 3. Interest dur. const. | 31,261,419.93 | 9 |
| | $61,264,764.84 | 17.7 |
| In this appraisal the reproduction cost less depreciation was also determined, but the overhead charges were not depreciated. The overhead charges amounted to 20.8 per cent. on the inventory-reproduction-cost-less-depreciation | | 20.8 |

Whitten, sec. 252, p. 228.

## South Dakota Railroad Appraisal, 1910:

| | | |
|---|---|---|
| Inventory-reproduction cost | | $93,609,443.00 |
| Overhead charges | | 12,885,060.00 |
| 1. Engineering, superintendence and legal exp. | $3,645,811 | 3.9 |
| 2. Contingencies | 5,349,039 | 5.7 |
| 3. Other expenses | 972,552 | 1 |
| 4. Interest dur. construction | 2,917,658 | 3.1 |
| Total overhead | $12,885,060 | 13.7 |
| In this appraisal the reproduction cost less depreciation was also determined, but the overhead charges were not depreciated. The overhead charges amounted to 16.3 per cent. of the inventory-cost-less-depreciation | | 16.3 |

Whitten, sec. 257, p. 232.

**Washington Railroad Commission, 1910, *in re Valuation of Puget Sound Electric Railway Company:***

Inventory-reproduction-cost ..... $3,177,768
Overhead charges ..... 499,517

| | | Amount | Percent of Inventory Cost |
|---|---|---|---|
| 1. | Engineering and superintendence | $ 53,336 | 1.7 |
| 2. | Fiscal and physical superv. and management | 186,955 | 5.9 |
| 3. | Contingencies | 96,266 | 3 |
| 4. | Legal and general expenses | 17,779 | .5 |
| 5. | Interest during construction | 145,181 | 4.6 |
| | Total overhead | $499,517 | 15.7 |
| | In this appraisal the reproduction cost less depreciation was also determined, but the overhead charges were not depreciated. The overhead charges amounted to 19 per cent. of the inventory-reproduction-cost-less-depreciation | | 19 |

Whitten, sec. 259, p. 235.

**Wisconsin Railroad Appraisal (made by Prof. Wm. D. Taylor for and adopted by Wisconsin State Board 1903):**

Inventory-reproduction-cost ..... $179,223,284
Overhead Charges ..... 23,692,921

| | | Amount | Percent of Inventory Cost |
|---|---|---|---|
| 1. | Engineering, superintendence and legal expense | $6,253,188 | 3.5 |
| 2. | Contingencies | 9,857,280 | 5.5 |
| 3. | Interest during construct | 5,376,698 | 3 |
| 4. | Organization | 2,205,755 | 1.2 |
| | Total overhead charges | $23,692,921 | 13.2 |
| | In this appraisal the reproduction-cost-less-depreciation was also determined, but the overhead charges were not depreciated. The overhead charges amounted to 16.5 per cent. of the inventory reproduction-cost-less-depreciation | | 16.5 |

Whitten, sec. 261, p. 237.

**Appraisal of Chicago Surface Railways, 1906 (by Bion J. Arnold, Mortimer E. Cooley and A. B. DuPont):**

The appraisal was made under the authority and di-

rection of the City of Chicago, and as a basis the franchise settlement ordinances passed February 11, 1907.

| | |
|---|---|
| Inventory-reproduction-cost | $19,629,395 |
| Overhead Charges | 4,259,190 |

| | Amount | Percent of Inventory Cost |
|---|---|---|
| 1. Organizing, engineering and incidentals | $2,295,121 | 11.7 |
| 2. Legal exp., int., brokerage and contingencies | 1,964,069 | 10 |
| Total overhead | $4,259,190 | 21.7 |

Whitten, sec. 241, p. 213.

Appraisal Chicago Gas Plant, 1911, *in re Regulation of Gas Rates* (Appraisal by the City of Chicago):

| | |
|---|---|
| For the second period of construction allowances were: | |
| 1. Interest during construction | 5 |
| 2. Engineering, supervision | 5 |
| 3. Organization and legal | 2 |
| 4. Contingencies | 5 |
| Total | 17 |
| For the first Construction period allowances were: | |
| 1. Interest during construction | 6 |
| 2. Engineering and supervision | 5 |
| 3. Organization and legal expenses | 3 |
| 4. Taxes | 1 |
| 5. Contingencies | 7 |
| Total | 22 |

Average for entire period, 17 per cent., except on land 12 per cent., and in addition to these allowed 6 per cent. for discount on bonds.

Whitten, sec. 243, p. 217.

*Mayhew* v. *Kings County Lighting Co.*, 2 P. S. C., 1st D., N. Y.:

The following tabulation shows the overhead charges allowed in this appraisal made by the Commission in the matter of fixing the rate for gas:

| | | |
|---|---|---|
| Inventory-reproduction-cost | | $2,211,628 |
| Overhead Charges | | 601,149 |
| | Amount | Percent of Inventory Cost |
| 1. Contractors' profits, engineering and administration, conting. and incid. | $341,149 | 15.4 |
| 2. Preliminary and devel. expenses | 260,000 | 11.7 |
| Total overhead charges | $601,149 | 27.1 |

Whitten, sec. 255, p. 230.

**Wisconsin Railroad Commission,** ***in re Estimate of Cost of Municipal Lighting Plant for City of Milwaukee:***

Made for the city October, 1913, and set out in full in October number of Public Service Regulation, page 526.

| | | | |
|---|---|---|---|
| 1. Physical properties | | | $1,237,067 |
| 2. Overhead: | | | |
| (a) Omissions | | $ 61,853 | 5 |
| (b) Engineer, sup., contin. and c. | | 194,838 | 15.7 |
| Total overhead | | $256,691 | 20.7 |

See also:

*State Journal Printing Company* v. *The Madison Gas & Electric Light Company,* 4 W. R. C. R., 501.

*In re City of Beloit* v. *Beloit Water, Gas and Electric Company,* 7 W. R. C. R., 237.

*In re Oshkosh Waterworks Company,* 13 W. R. C. R. (decided September 27, 1913).

SUMMARY OF PRINCIPAL VALUATIONS NAMED ABOVE AND SHOWING ALLOWANCES FOR OVERHEAD CHARGES.

STEAM RAILROADS

| | Gross | Overhead | Percent |
|---|---|---|---|
| Michigan* | $152,715,000 | $32,425,000 | 21.2 |
| Minnesota* | 294,525,000 | 61,265,000 | 20.8 |
| South Dakota | 93,609,000 | 12,885,000 | 16.3 |
| Wisconsin | 202,910,000 | 23,693,000 | 16.5 |
| Massachusetts | 299,970,000 | 40,334,000 | 15.5 |

*Present Value. Average of Overhead, 19.5%

## OTHER PUBLIC SERVICE UTILITIES—OVERHEAD ALLOWANCE.

| | |
|---|---|
| Des Moines, Ia.—Gas Company | 15 |
| New Jersey—Gas Company | 17.6 |
| Maryland—Gas Company | 21.39 |
| Chicago—Gas Company | 17 |
| New York—Gas Company | 27.1 |
| Des Moines—Water Works | 16 |
| Chicago—Surface Railways | 21.7 |
| Washington—Electric Railways | 19 |
| Massachusetts—Street Railways | 23 |
| Massachusetts—Steam Railways | 24 |
| Nebraska—Telephone Co. | 20.8 |
| Wisconsin—Electric Light | 20.7 |
| Great Britain—Telephone case | 31.4 |

The total value in the cases cited above exceeds one and one-half billion dollars, and the average allowance exceeds 20 per cent.

In this connection it must be borne in mind that the percentage of overhead allowances inclines to a reduction in large properties and is usually somewhat below the necessity for such allowances in smaller properties. The reports of the Public Utilities Commissions and the Courts are full of other cases which might be cited in support of our contention in this matter, but we feel that it is unnecessary to burden the Court with further discussion along these lines or the citation of many other decisions.

Attention is also called to the fact that the decisions cited are not those of any one body nor of one particular class of corporations, but cover a wide field both as to class of utilities and as to location; they are of sufficient importance to insure that the conclusions have been arrived at conservatively, after due deliberation and great care, and the consideration of these cases should be convincing proof that the percentage for overhead claimed by Mr. Lea is extremely conservative and not subject to criticism.

It was shown during the trial by Mr. Wiggins, the City's witness, that the actual construction cost to the company up to the first of January, 1913, was in excess of $784,000, and his testimony in this and the former hearing disclosed that some extensions and betterments made prior to 1890, in the earlier years of the history of the plant were not included in the construction account. His testimony was not questioned by any one except only inferentially by A. D. Adams, when he submitted his estimate of values, utterly ignoring actual costs. If we accept the testimony of Mr. Wiggins as a basis for construction cost of the plant and make calculations thereon for the item of interest during construction alone, conservatively estimated at a minimum period of one and one-half years, and apply thereto the current rate of interest of 6 per cent., this item alone would amount to $35,280.00, and would exceed the total allowance by A. D. Adams for interest during construction, engineering, contingencies, and all other items of overhead charges by $8,120.00.

On cross examination (Transcript, p. 1132) A. D. Adams said he made little or no allowance for taxes during construction, because they could or in all probability might be "dodged," but as we view this matter these expenditures are necessary and inflexible as fate; the items above enumerated alone equal $52,460.00, or $25,300.00 more than the total allowance of A. D. Adams. He concedes the necessity for all items, but after having expended $25,300.00 more than his gross allowance for the items named, where shall we look for funds to defray the equally and concededly necessary expenses for—

(1) Legal expense of organization, preparation of articles of incorporation, franchises and legal advice;

(2) Rent, stationery, clerical services and incidentals;

(3) Preliminary investigations, surveys, engineering plans, plats, specifications, preparation of contracts, and promotion;

(4) Engineering, supervision, administration and clerical services during construction, as well as rents, stationery and supplies;

(5) Omissions, contingencies and incidentals.

A. D. Adams does not claim to set up this estimate for overhead charges by reason of actual experience and knowledge acquired in the practical prosecution of gas plant construction or the gas business, but bases his knowledge solely upon his study and analysis of the reports and records lodged with the authorities of the Commonwealth of Massachusetts. A casual reference to those reports unequivocally discloses the fact that the authorities of the Commonwealth of Massachusetts allow for overhead charges, percentages in excess of those claimed by Mr. Lea, so that if, as Mr. Adams claims, his knowledge was derived from a study of these said reports, he is not giving us the benefit of his knowledge acquired through them, or he has deliberately ignored them in ariving at his alleged conclusions in this case in order that in his zeal for his client he might better serve his own interests.

Now, in the face of all the testimony heretofore recited and the authority quoted from, we beg to inquire how any one can justify the Master's findings of 12½ per cent. for overhead charges. We can not help concluding that he must have been influenced by the grotesque estimate of Mr. A. D. Adams. The Master does not say he was so influenced, but he fails to state why he did not estimate 19 per cent. on the one hand or 7 per cent. on the other, or why he eventually settled on a figure approximately midway between.

We respectfully submit that the Master erred in determining that 12½ per cent. was the proper allowance for overhead charges.

**Real Estate.**

The Master states in his report that he has valued all the real estate of the Company in the City of Lincoln actually or constructively used in its gas business. There is scarcely any escape from such a conclusion, for there would be no merit whatever in disallowing the value of land which is not now in immediate use, but which was purchased by the company in the exercise of its sound, honest discretion for future needs or other purposes.

As to the estimated value of the land, the Master first says:

> "Upon this property, Henry I. Lea, the gas engineer, who made the general appraisement for the company, placed a valuation of $19,320.00" (Transcript, p. 38).

This statement is not quite true, so for the sake of accuracy it may as well be corrected at once. Mr. Lea named the figure quoted by the Master to cover *all* the real estate connected with the company's gas business; but for the real estate situated in the City of Lincoln, his estimate was $18,520.00, which excluded two lots in Havelock, valued at $800.00.

The Master continues:

> "This figure was fixed upon by Mr. Lea after inquiry among real estate dealers and others having knowledge of land values in and about Lincoln. Its substantial correctness is vouched for in detail by other witnesses testifying on behalf of the company. On the other hand, Mr. A. D. Adams, consulting gas engineer, testifying for the City, fixed the value of Lots '1' to '12,' inclusive, Block '79,' which the City claims is the only real estate devoted to the gas business, at $2,625.00" (Transcript, p. 38).

It is not of place to remark at this point that for the very piece of property which Mr. A. D. Adams, the City's expert, values at $2,625.00, the experts for the company gave the following value: Lea, $11,000.00; Purbaugh, $13,600.00; Green $12,000,00; Culbertson, $14,400,00; Reed, $11,569.00. As to the qualifications of these witnesses, we beg to refer to our discussion of that subject in Vol. III of this brief.

Continuing in his report, the Master makes some statements which, though unimportant at first glance, are, we submit, of tremendous significance in determining the merit of the Master's conclusions in this case. He said:

> "*This estimate* (referring to the City's estimate of $2,625.00) though *obviously too low* for the lots embraced in it, *is supported* to a considerable extent *by witnesses for the City.* The local witnesses were all men of fair intelligence, evident candor and *qualified* by observation and experience *to give evidence* entitled to *serious consideration.* In circumstances of this kind there is, of course, no means by which a court can with precision lay its finger on the truth. The most it can do, in the light of the opinions given by others, is to express an opinion of its own. In my judgment, $16,250.00 is a fair allowance to the plaintiff for all of the real estate which it claims is devoted to or properly chargeable against the gas business" (Transcript, p. 38).

Let us analyze this situation a little more closely, for we claim that it is most significant and enlightening. The Master finds that Mr. A. D. Adams's estimate is "*obviously too low.*" In other words, the Master himself, although knowing nothing about the value of real estate in Lincoln, and basing his statement solely on the evidence, says that Mr. A. D. Adams's estimate is *obviously* too low—that is, the fact that the figure is too low is *easily apparent, readily discernible*, even to a

casual observer. *Obviously*, then, Mr. A. D. Adams knows nothing about real estate values in the City of Lincoln, or he would not have given an estimate which is so apparently without merit. But another very significant fact is, that the estimate, although obviously too low, "is supported to a considerable extent by witnesses for the City." Stated in another way, the Master says that the City put four witnesses on the stand *as experts*, who *supported* a real estate *value* which was *obviously* too low, even to the Master. Now, what weigh would the normal, sensible person—the average prudent man—give to the opinion of a so-called real estate expert who attempts to sustain and give an opinion under oath as to a valuation which is *obviously* too low? His conclusion would immediately be that the alleged expert was either dishonest or ignorant about real estate values. In either case further consideration of the alleged expert's opinion would be dismissed with scant ceremony. But the Master says that "the local men (which phrase includes the City's so-called experts) were all men of fair intelligence, evident candor and qualified by observation and experience to give evidence entitled to serious consideration." This means that the Master concludes that the City's real estate witnesses, who were the men attempting to support, under oath, the estimate which was obviously too low, were considered by the Master to be "qualified by observation and experience to give evidence entitled to serious consideration." Here is the only place in the Master's report where he gives a faint suggestion (in general terms, to be sure) of his judgment concerning the weight to be attached to the testimony of persons who testified before him as expert witnesses. And he states that the City's witnesses on this subject—although they gave opinions supporting a value which was, even to the Master, obviously too low—gave "***evidence entitled to serious consideration.***"

But there is still further significance to the Master's statement above quoted. It will be noted that the City's witnesses on real estate gave an estimate on only a fraction of the Company's real estate. These pieces of real estate are known as lots "1" to "12," block "79." And this was the estimate of $2,625.00, which the Master says was obviously too low. The City's witnesses did not attempt to give estimates on the remainder of the Company's real estate. Their one estimate, therefore, was summarily dismissed by the Master. It was too low, obviously. To all appearances their opinions and estimates were thrown out of the calculation, or if they were not, they ought to have been. The result is just this—there was no evidence on real estate values before the Master, entitled to consideration, except the Company's witnesses. Their estimates of all the Company's lands devoted to the gas business in Lincoln were: Lea $18,520.00 (Transcript, p. 557), Purbaugh $19,030.00 (Transcript, p. 561), Green $17,600.00 (Transcript, p. 559), Culbertson $18,390.00 (Transcript, 560).

The Master estimates the Company's real estate at $16,250.00. Where did he get that figure? He doesn't say. We cannot even guess. It was not from the estimates given by the Company's witnesses. Manipulate as you will, the estimates of Messrs. Lea, Purbaugh, Green, Culbertson and Reed, you cannot arrive at a conclusion of $16,250.00. Now the estimates of the Company's witnesses were the only ones before the Master for him to pick from. The values given by the City's witnesses were dismissed from the calculation as obviously too low. There was nothing left for the Master to choose from except the estimates of the Company's witnesses. It is true that their values were not conclusive on the Master as a matter of law, but as a matter of common reason and fairness, some one of those five values should have been adopted; unless by chance the Mas-

ter had some reason to believe they were all too high. But he does not say so in his report. He gives no reason for lowering their estimates; no reason why their estimates were not deemed reliable. But the most mysterious phase of the matter is to determine how the Master calculated the figure, $16,250.00.

To be frank, we do not think he did calculate that figure. We think he merely picked it out at random.

Now we have gone into this matter of real estate valuation rather fully in spite of the fact that the difference between the Company's estimates and the Master's finding is comparatively small in dollars and cents —a matter of two thousand dollars odd. But we see well illustrated in this finding of the Master a well defined tendency which runs through the length of his report, to base his estimates on no figure submitted in evidence, but merely to reach out haphazard somewhere between the respective valuations of the Company and the City, pick a figure and write it down as a final valuation in his report. And all this without suggesting in his report the faintest hint of his reasons for adopting his specific value as against the estimate of the Company on the one hand, or the City on the other (except that in the matter of real estate valuation he does say that the estimate of the City's witnesses was obviously too low); and he never once attempts to make a statement of the basis of his calculation.

This suit is a serious matter for the Lincoln Gas & Electric Light Company. It claims that its properties are being confiscated. It has its day in court and before it is dismissed thence, it has a right, in all fairness, to ask the reason. It has used painstaking care to present to the Master in this case the best opinions as to gas properties and operation which it can obtain; it has toiled laboriously and expended much time and money to place before the Master *all the facts and all the rea-*

*sons* upon which it bases its estimates. Now if the opinions of its experts are not accepted, or if the facts it presents are held not to sustain its conclusion, it has a right, and it demands to know, the reasons. The Master's report fails to give reasons.

Another inducement which persuaded us to discuss the question of real estate valuation at such length in this brief, is because we think it illustrates a further point with regard to the Master's decision in this case. And that point can be stated in quite simple and unequivocal terms: The *Master's judgment* as to the *qualifications* of expert witnesses and the *weight* to be attached to their testimony *is not sound.*

**Buildings.**

In order to aid the Court in determining at a glance the differences between the estimated costs and present values of Buildings as given by Mr. Lea and Mr. A. D. Adams and the conclusions of the Master in respect thereof, we have prepared and here insert a tabulation showing such differences in convenient form. (Where blanks occur it indicates that no finding was made or testimony submitted):

BUILDINGS.

| | Master | Lea | Adams |
|---|---|---|---|
| **Purifying House:** | | | |
| Net Construction Cost | $..... | $16,620 | $12,577 |
| Reproduction Cost | 16,700 | 19,277 | 13,457 |
| Present Value | 13,200 | 14,074 | 8,427 |
| **Generator House:** | | | |
| Net Construction Cost | ..... | 3,759 | 3,261 |
| Reproduction Cost | 4,000 | 4,337 | 3,489 |
| Present Value | 3,800 | 4,120 | 3,016 |
| **Retort House:** | | | |
| Net Construction Cost | ..... | 3,739 | 6,088 |
| Reproduction Cost | 7,500 | 8,919 | 6,515 |
| Present Value | 6,375 | 6,511 | 4,079 |

| | | | |
|---|---|---|---|
| **Meter Shop and Booster House:** | | | |
| Net Construction Cost | | 2,616 | 2,049 |
| Reproduction Cost | 2,850 | 3,035 | 2,192 |
| Present Value | 2,660 | 2,883 | 1,895 |
| **Coal Shed:** | | | |
| Net Construction Cost | | 1,793 | 1,657 |
| Reproduction Cost | 2,080 | 2,080 | 1,773 |
| Present Value | 520 | 520 | 746 |
| **Oil Tank House:** | | | |
| Net Construction Cost | | 1,558 | 1,107 |
| Reproduction Cost | 1,807 | 1,807 | 1,185 |
| Present Value | 1,500 | 1,500 | 858 |
| **Stable and Blacksmith Shop:** | | | |
| Net Construction Cost | | 818 | 818 |
| Reproduction Cost | 949 | 949 | 875 |
| Present Value | 493 | 493 | 327 |
| **District Holder Booster House:** | | | |
| Net Construction Cost | | 721 | ..... |
| Reproduction Cost | 811 | 836 | ..... |
| Present Value | 770 | 803 | ..... |
| **Oxide Shed:** | | | |
| Net Construction Cost | | 60 | 60 |
| Reproduction Cost | 70 | 70 | 64 |
| Present Value | 63 | 63 | 53 |
| **Totals:** | | | |
| Net Construction Cost | | $35,614 | $27,617 |
| Reproduction Cost | $36,767 | 41,312 | 29,550 |
| Present Value | 29,381 | 30,967 | 19,401 |

(As to Lea's valuations see Transcript, pp. 1304-1320; as to Adams' valuations see Transcript, p. 1453; as to the Master's valuations see Transcript, pp. 39, 40.)

Here again it will be noted that the difference in totals between Mr. Lea's estimate and the Master's findings does not represent a very great amount in dollars. But nevertheless it is clear that the Master used no definite method of calculation, based on the evidence, in arriving at his results. He does not specify what evidence or whose evidence he is relying on (except in the case of a few of the smaller buildings where he accepts the figures of Mr. Lea), nor does he show why the estimates of either witness are disregarded or accepted as the case may be

or what effect the testimony of the respective witnesses had upon his conclusions. For instance, in the cases of the Coal Shed, the Oil Tank House, the Stable and Blacksmith Shop and the Oxide Shed, he uses the Reproduction Cost and Present Value of Mr. Lea without the slightest variation, even though the estimates of Mr. A. D. Adams were in each case appreciably different. Now, if Mr. Lea is competent and qualified to give an accurate valuation of some of the buildings, why is not more consideration given to his estimates on all of the buildings? The report does not tell us. What reason is there for not accepting Mr. Lea's figure on the Purifying House, which is the most expensive building of all, and concerning which Mr. Lea testified more in detail than all the other buildings combined; and his estimates on the Purifying House were corroborated more closely by the testimony of other witnesses than any of the other buildings? If Mr. Lea's figures are not reliable in one case why not in all? The Master should have specified which items of unit cost in the Purifying House were erroneously given by Mr. Lea. Furthermore, as to the District Holder Booster House Mr. Lea's estimates were the only ones submitted in evidence and there could be no other valuation on which the Master could possibly rely. Yet he reaches a figure lower than Mr. Lea's, though why he does so, we are at a loss to know. The amount involved is comparatively trifling, but it shows clearly that the Master has not made findings based on the evidence.

Moreover, if we analyze the Master's findings on Buildings Valuation, the conclusion cannot be resisted that, throughout this group of valuations at least, he had no method or basis of determining values and did not even rely on the evidence before him. Both Mr. Lea and Mr. A. D. Adams gave their estimated values in three forms, to wit: They first estimated the Net Construction Cost

(which includes the cost of materials and labor solely); from this they calculated the Reproduction Cost (which is arrived at by adding Overhead Charges to the Net Construction Cost); they next deduced the Present Value (which is found by deducting from the Reproduction Cost the estimated amount of Depreciation). In all of their estimates, Mr. Lea and Mr. A. D. Adams present their figures under these three headings. The Master, however, fails to give, in case of each of the buildings, a finding as to estimated Net Construction Cost. He does not specify what unit costs for labor and materials he uses, and it is impossible to determine the Master's Net Construction Cost, except by indirect means—that is, calculating his Net Construction Cost by deducting 12½ per cent. from his Reproduction Cost (12½ per cent. being what the Master has estimated to be a proper allowance for Overhead Charges). This method shows us what the Master's Net Construction Costs (whether he realized it or not) were. The following shows the same in tabulated form:

| | |
|---|---|
| Purifying House | $14,844.00 |
| Generator House | 3,556.00 |
| Retort House | 6,667.00 |
| Meter Shop and Booster House | 2,533.00 |
| Coal Shed | 1,849.00 |
| Oil Tank House | 1,606.00 |
| Oxide Shed | 62.00 |
| Stable and Blacksmith Shop | 844.00 |
| District Holder Booster House | 721.00 |
| Total | $32,682.00 |

This tabulation puts the Master's findings in a rather peculiar light. In the case of the Coal Shed, Oil Tank House, Stable and Blacksmith Shop and Oxide Shed, his Net Construction Cost is *higher* than Mr. Lea's, and

Mr. Lea's Net Construction Cost was the *highest* submitted in evidence. In other words, in all those instances, where the Master has adopted Mr. Lea's Reproduction Cost, the Master's Net Construction Cost *ipso facto* becomes higher than any estimate in the record. Now the Net Construction Cost, it will be remembered, is made up of the total *unit cost* of materials and labor. So that the unit cost for materials and labor in the Coal Shed, Oil Tank House, Stable and Blacksmith Shop and Oxide Shed the Master finds to be higher than any estimate given by any witness. This must be the case or his findings would be meaningless. Now, if the Master's unit costs of materials and labor are higher than Mr. Lea's in the case of the buildings just mentioned, then it follows that they must be higher in the case of, let us say, the Purifying House. There is positively no reason why this does not hold true. The units of cost are the same in each of the buildings. That being the case, how could the Master have calculated his Net Construction Cost of the Purifying House, using higher unit costs than Mr. Lea, so as to reach a result lower than Mr. Lea's Net Construction Cost, unless there is doubt in the record as to the amount of material which actually went into the building; but there is no question as to the amount of material in each building, because Mr. Brodnax in his inventory (prepared with "unusual thoroughness," as the Master says), shows exactly what was there. The Master specifically states that during the long trial there was only *one error discovered in this inventory* and the record shows that this so-called error, which the Master is referring to, occurred in calculating the number of feet of mains, and had nothing to do with the buildings. So that it is conceded by the Master that there can be no doubt of the amount of material in the building.

The only ground for difference in estimating Net Con-

struction Cost, therefore, is in determining the unit costs. The situation which confronts us is that the Master, although using higher unit costs for the same amount of material, estimates a lower Net Construction Cost than Mr. Lea. Such a finding is clearly absurd. If we deduct the Master's 12½ per cent. (representing his Overhead Charges) in order to get his Net Construction Cost on the Purifying House, we arrive at the figure of $14,844 as against Mr. Lea's $16,620. But we have just shown that inasmuch as the Master's units of cost were *higher* than Mr. Lea's, the former's Net Construction Cost must be *at least* equal to, though logically, more than Mr. Lea's. But assuming for the purpose of a quick calculation that the Master's Net Construction Cost is equal to Mr. Lea's, then the Master's Reproduction Cost (on the basis of 12½ per cent. Overhead) should have been *at least* $18,707 for the Purifying House instead of $16,700, which appears in his report. It is quite evident that the Master must have made a serious blunder somewhere in his calculation when he finds the Reproduction Cost of the Purifying House as $16,700 when, as we have shown, it should have been $18,707.

We will be frank, however, and state unequivocally, that we firmly believe the Master had no method of calculation whatsoever. As we have said before, we believe he has merely picked his figures at random. We don't believe he estimated any Net Construction Cost at all or used any unit of cost for labor or materials or anything else, when framing his report; and that he omitted to specify any Net Construction Cost in his report in an effort to save himself from laborious calculations. But the fact that he was compelled to specify some per cent. for Overhead Charges and chose 12½ per cent., unables us to check his figures and show that his estimates are absolutely without foundation in the record.

To bring out our contention more clearly we will make another calculation. The Master does not show the estimated life of any of the Buildings—that is, their expected existence or usefulness. Now, the matter of life and actual age of Buildings must be decided on in order to determine their Present Value (which is figured by deducting the Depreciation from the Reproduction Cost). There was considerable difference between the estimate as to life or expected existence of these Buildings as given by Mr Lea and Mr. A. D Adams, but there was no controversy at all as to the *actual ages* of any of the Buildings, because that was a matter of fact which was proved and admitted. As to the calculation of Depreciation, the Master states in his report that he has used the "straight line" method of figuring; that is a method by which Depreciation is found by deducting from the Reproduction Cost a certain per cent. of said Reproduction Cost, based on the number of years the property has been in existence. In figuring his Present Value from his Reproduction Cost, therefore, the Master must have determined the life of each Building and thus decided the amount to be deducted from the Reproduction Cost for each year of actual existence. As we have said, the Master does not tell us his findings as to the various estimated lives of the respective Buildings; but having his Reproduction Cost and his Present Value, we know that he must have deducted the difference between the two from his Reproduction Cost as representing the amount of Depreciation in dollars. By dividing this sum by the number of years the Buildings have been in existence, we can tell what was the amount in dollars which the Master found must be set aside annually to take care of Depreciation. And by dividing the amount thus found, representing the Depreciation annuity, into the total Reproduction Cost, we get exactly the life *in years* which the Master

must have estimated the respective Buildings had. The calculation with the Master's figures to determine this Depreciation annuity results, as follows:

| Buildings | Age (Yrs.) | Reproduction Cost | Present Value | Depreciation Annuity |
|---|---|---|---|---|
| Purifying House | 22 | $16,700.00 | $13,200.00 | $159.09 |
| Generator House | 5 | 4,000.00 | 3,800.00 | 40.00 |
| Retort House | 22 | 7,500.00 | 6,375.00 | 51.14 |
| Meter Shop and Booster House | 5 | 2,850.00 | 2,660.00 | 38.00 |
| Coal Shed | 22 | 2,080.00 | 520.00 | 70.90 |
| Oil Tank House | 15 | 1,807.00 | 1,500.00 | 20.47 |
| Stable and Blacksmith Shop | 15 | 949.00 | 493.00 | 30.40 |
| District Holder Booster House | 3 | 811.00 | 770.00 | 18.67 |
| Oxide Shed | 3 | 70.00 | 63.00 | 2.33 |

Having found the Depreciation annuity we can then determine the life (in years) of each Building ascribed to it by the Master, and we have set this conclusion down in the following tabulation together with the estimated lives as given by Mr. Lea and Mr. A. D. Adams in their testimony:

| Buildings | Master | Lea | Adams |
|---|---|---|---|
| Purifying House | 104.9 | 50. | 66.6 |
| Generator House | 100. | 50. | 66.6 |
| Retort House | 146.6 | 50. | 66.6 |
| Meter Shop and Booster House | 75. | 50. | 66.6 |
| Coal Shed | 29.3 | 25. | 40. |
| Oil Tank House | 88.2 | 50. | 66.6 |
| Oxide Shed | 30. | 20. | 25. |
| Stable and Blacksmith Shop | 31.2 | 25. | 25. |
| District Holder Booster House | 59.3 | 40. | 66.6 |
| Average or composite life of all buildings. | 86.3 | 46.25 | 62.5 |

Having made a casual inspection of the above tabulation, we then put the following pertinent inquiries:

(1) Did the Master base his findings on the evidence?

(2) Did the Master actually adopt any real method of calculating values or has he picked values at random?

(3) Was the Master appointed to find facts from evidence or merely to give his own opinion?

(4) Does the Master consider himself better qualified as an expert than both Mr. Lea and Mr. A. D. Adams?

(5) Have the Master's findings any real merit?

We think it will aid the Court in deciding the questions raised by our exceptions, to give herein a brief summary of the evidence before the Master on the valuation of buildings, confining ourselves, however, in order not unnecessarily to prolong the discussion, to a consideration of the evidence relating solely to the Generator House, inasmuch as the Generator House was built in 1907 and there was better opportunity to show its actual cost.

Mr. Lea in Exhibit "7," sub. H, gave the Net Construction Cost of all the buildings at $35,614.00, the Reproduction Cost at $41,312.00 and the Present Value at $30,967.64. (Transcript, p. 1304.)

Mr. A. D. Adams for the City gave the Net Construction Cost at $27,617.00; the Reproduction Cost at $29,550, and the Present Value at $20,759.00. (Transcript, p. 1453.)

Mr. Lea's valuation of the buildings is supported by the record of the buildings and by the testimony of Mr. Hahn, who constructed portions of the building, and Mr. Davis, the architect, who gave the unit cost of the materials and labor entering into the construction. Against this valuation is the testimony of Mr. A. D. Adams and in part the foolish estimates presented by Mr. Assenmacher. We have already considered in the early

part of this case the qualifications of Mr. Assenmacher, as an expert on the value of buildings, and we do not deem it necessary to add here anything further to what we have heretofore stated.

Mr. Brodnax with a corps of assistants made a complete detailed inventory of all the Company's property, including the buildings, which was made the basis for Mr. Lea's valuation.

Mr. Brodnax testified, with reference to the inventory to the effect that he first made a property plan showing the location and size of each building, taking each building separately and making a scale drawing with transverse and longitudinal sections and plans; then summarized the materials in the buildings, making the same practically in the form of a bill of material, beginning primarily with the excavation footings, making actual measurements of the lengths, height and thickness of the walls, besides the brick, in each building, and computed the amount and made a detailed statement of all the material in the buildings, ascertaining in each instance the exact quantity and character of material, to the end that he would have practically the same bill of materials in taking down the building in this way that would be used in putting it up. (Transcript, p. 502.)

*Generator House.*

Mr. Lea's estimate:

Net Construction Cost, $3,739; Reproduction Cost, $4,337; Present Value, $4,120.

In Exhibit "7-H," (Transcript, pp. 1305-20), Mr. Lea gives the details in quantities and materials entering into the Generator House, and gives a Net Construction cost of each of such units of quantities.

Mr. Lea figured brick in the wall at $17 per thousand,

except in brick in the pilasters and cornices, which were figured at $21.25 per thousand; lumber at the works at $26, $27 and $28, and lumber in place at $42 per thousand (303); steel in the floors and roof of the building at 3c to 5c per lb. in place, depending upon size and weight.

Mr. Lea figured brick f. o. b. Lincoln $7.50 per thousand, sand per thousand brick 38c, cement 79c, lime 49c, total $9.07; labor and time for brick layers $4.16; helpers $1.87; carpenter 77c, miscellaneous cost of handling materials $1.16; total labor $7.96. The total cost of material and labor per thousand brick in wall would therefore be $17.03, and for the sake of convenience, Mr. Lea used $17.

In this computation Mr. Lea figured on common brick and used the figure $17 per thousand in place and $21.25 for the pilasters and cornices, and applying these unit costs to the quantities of material in the Generator House, Mr. Lea found the Net Construction Cost to be $3,739.

Ellery Davis, the architect, was a witness for the Company. His qualifications have been heretofore discussed. He prepared and submitted a detailed statement of the items of material and labor cost per thousand brick in the wall—where lime mortar was used and where cement mortar was used—and a detailed statement of the quantity of material and the cost of each, and the labor cost of the concrete and rubble stone work, the details of which will be found in his testimony on pages 539 to 544. We present here a summary of the unit costs for material and labor for brick and stone work submitted by Mr. Davis:

## Unit Cost for Brick Work.

By Ellery Davis.

| MATERIAL | | LABOR | |
|---|---|---|---|
| Brick, per thousand | $8.00 | Mason work, Union scale | $0.70 |
| Sand, per yard | 1.35 | Stone mason | .65 |
| Lime, per yard | 1.25 | Helper | .30 |
| Stone, com., per yard | 2.56 | Common laborer or shoveler | .25 |
| Stone, small, per yard | 2.70 | | |

Note: These totals include profit of from 10 to 15%.

Note: Profit of 10% should be added to total of above items.

### Cost for 1,000 Brick With Lime Mortar.

| MATERIAL | | LABOR | |
|---|---|---|---|
| Brick, per thousand | $8.00 | Mason (160 brick per hr. at 70c. per hr.; 6 hrs.) | $4.20 |
| Lime, white, .91 bbl. | 1.14 | Helper, 6 hrs. at 30c. | 1.80 |
| Sand, ⅝ yard | .84 | Adding 10% profit | .60 |
| Waste, broken brick | .30 | | |
| Total material | $10.28 | Total labor | $6.60 |

Total labor plus material, $16.88.

This does not include anything for foreman's time.

### Cost for 1,000 Brick With Cement Mortar.

| MATERIAL | | LABOR | |
|---|---|---|---|
| Brick, per thousand | $8.00 | Mason, 7 hours | $4.90 |
| Cement, per bbl. | 2.00 | Helper, 7 hrs. | 2.10 |
| Lime, .73 bbl. | .91 | Adding profit 10% | .70 |
| Sand, ⅝ yard | .84 | | |
| 3% storage and waste | .35 | Total labor | $7.70 |
| | | Total material | 12.10 |
| Total material | $12.10 | Total material and labor | $19.80 |

Mr. Brodnax testified that he had applied the unit cost furnished by Mr. Davis to the quantities of material in the different buildings and determined the cost based on such unit prices; that using the unit cost for excavation furnished by Robert Malone, the excavator, the computation showed a net construction cost for the generator house of $3,902, as against Mr. Lea's $3,739, and a repro-

duction cost of $4,526, as against Mr. Lea's $4,337, and as against Alton D. Adams's net construction cost of $3,261 and reproduction cost of $3,489 or a difference between the net construction cost as furnished by Davis-Brodnax, and as testified to by A. D. Adams, of $1,037 (Transcript, p. 509).

The company offered in evidence the detailed statement taken from the books of the Company, showing the actual cost of this generator house. The items and details are shown (Transcript, pp. 1717-19), and show the amount of money paid out by the Company, on account of the generator house. The cost records of the Company show that the company paid out in building the generator house, exclusive of the Otis elevator, the sum of $4,465.88. This is $1,204.88 more than A. D. Adams's estimate and allowance for the net construction of the generator house. The record of the actual cost of this building is a truthful witness and stands as proof of the fact that this building cost the company $1,204.88 more than the estimated cost by the City's alleged expert.

Mr. Perry Hahn, the contractor, who built the generator house above the foundation walls for the company, testified in part, as follows:

> "A. I paid $7.50 per thousand F. O. B. gas works for the brick and got them of Yankee Hill Brick Company. At that time the ordinary price at which brick were selling was $7 per thousand, and I paid $7.50, because I got an extra good brick. * * * When I took the job they specified that there would have to be an extra hard brick for the outside and that represents the extra cost" (Transcript, p. 545).

Mr. Hahn gave the details for material and labor costs per thousand in place, on cross examination by A. D. Adams and testified that he was a building contractor and had followed that business in Lincoln since 1881, and had built three of the buildings for the gas

plant; testified that his contract price for that portion of the generator house built by him was $3,650 and presented a statement, showing the cost of materials and labor itemized, which was identified as Exhibit "365" (Transcript, pp. 20-26).

As against this testimony on the part of the company, which speaks conclusively on the cost and value of the generator house, we have the testimony of A. D. Adams, *who accepted the quantities of materials,* but applied a different unit cost for the four items; (1) brick f. o. b. plant, and in place; (2) concrete; (3) excavation; (4) stone.

The vouchers for brick upon which the witness, Adams, based his estimate are Exhibits "420," "421" and "422" (Transcript, p. 1631).

Exhibit "421" is a voucher showing payment for a small amount of brick purchased by the company from Mr. Hahn in 1909, showing a price of $2.75 per thousand. Mr. Hahn testified that he was not in the brick business and did not remember having sold any brick; that if he sold these brick it must have been that he had finished up his work and had brick left over, and rather than pay further switching charges and expense in reloading the brick, he may have sold what he had left over on the job to the company for less than the amount he paid. (Transcript, p. 546.)

Exhibit "420" was for brick purchased in 1907. The amount of the bill was $388.12, and with respect to this bill A. D. Adams, on cross-examination, admitted there should be added a switching charge of 25c a thousand; that the bill did not indicate whether the brick were f. o. b. brick works or plant, or whether the brick were common brick for use about the plant where a cheaper class of brick can be used; or whether they were a good grade of hard building brick; that the character of the brick would account for a variation

of several dollars per thousand; that he did not know whether the freight charges or switching charges were included, and did not know the kind or character of the brick represented by the bills. (Transcript, p. 1091-3.)

We insist that with this limited information the witness was not qualified to testify as to the unit price for a good quality of brick such as was required in the buildings at the gas plant. Exhibit No. "422" is for $91,000 worth of brick at $7.00 per thousand, and this bill, like the exhibits "420" and "421," conveys no information as to the character of the brick or whether the brick were f. o. b. brick factory or f. o. b. plant, and if f. o. b. brick factory would indicate a price on the particular brick whatever their quality may have been, equal to the price paid by Mr. Hahn. These three vouchers and exhibits are the sum total of the information acquired by the witness A. D. Adams on the price of brick locally upon which he based his price of $7.00 per thousand for the generator house, purifying house and other buildings of the Company, and it is this character of information that he regarded as more reliable than information available at the brick factory, or from those engaged in handling building materials in the city, or from contractors and builders or architects in the city. It is unbelievable that he did not investigate and learn from architects, contractors and builders and those engaged in handling building materials in the locality, what such materials would cost. It is our conviction that he did make such investigation and was not able to secure from that source the kind of information needed; that his assumption that such information was not reliable is a pretense and excuse for not bringing such witnesses before the Court. Under the circumstances, when such low costs were required, he was the only witness who would fill the bill and answer the purpose.

The witness A. D. Adams testified that he used the unit price of $7.00 per thousand for brick in the various buildings and $15.00 per thousand for the brick in the walls (Transcript, p. 1094); that he used the unit price of $7.00 per yard for stone and concrete in the foundations and 40c per cubic yard for excavation, removal and disposition of the dirt (Transcript, pp. 873, 1095); that he investigated the cost of removing the dirt from the three State Fair buildings before making up his estimate (Transcript, p. 1088), but does not recall that he had any other figures in Lincoln for the removal of dirt for buildings (Transcript, p. 1088).

The evidence shows that the cost for excavation at the plant for these buildings was not less than $1.00 per cubic yard.

The testimony of Robert Malon and Mr. Abel sufficiently establish the cost for excavation at the plant at $1.00 per cubic yard. We will present later the matter of the cost in our discussion of the cost of excavation for the trenches. It is sufficient here to call attention to the testimony of Mr. Malone and Mr. Abel, introduced by the company on this point. They are the two men in this locality whose business it is to know excavation costs, and both men were familiar with the conditions in Salt Creek valley and at the plant. Their statement as to the cost for excavation at the plant were backed by experience in that kind of work.

The following is a summary of the value of the buildings, net construction cost, as shown by the witnesses for the Company and the witness for the City:

NET CONSTRUCTION COST.

| | | |
|---|---|---|
| H. I. Lea | Exhibit "7-F" | $35,614.00 |
| Davis-Brodnax | Exhibit "65" | 38,768.00 |
| A. D. Adams | Exhibit "235" | 27,617.00 |

REPRODUCTION COST.

| | | |
|---|---|---|
| H. I. Lea | Exhibit "7-D" | $41,312.00 |
| Davis-Brodnax | Exhibit "65" | 44,970.00 |
| A. D. Adams | Exhibit "235," 7% | 29,550.00 |

In view of the testimony as above summarized, we submit that it appears from the record that the estimate of the Company's witnesses was fully substantiated and that there was no justification in the record for the Master's finding of a value for buildings lower than the Company's. We submit that the Master's findings indicate his practice in this suit of cutting off some part of the values proved by the Company (varying in degree in each instance), irrespective of the evidence before him.

**Works Equipment.**

The various items making up the Company's Works Equipment was settled by the Broadnax inventory, which was used and followed throughout the hearing by all the parties. Therefore, the various items being admitted, it was only necessary in determining the Net Construction Cost to apply the proper unit costs. From the Net Construction Cost the Reporoduction Cost is then calculated by adding the amount of the Overhead Charges; and from this amount the Present Value is figured by deducting Depreciation.

The Master, in that part of his report headed "Works Equipment," begins by saying:

> "The property here included consists of seventy-three items. The evidence of value comes principally from the experts, Lea and Adams, and clashes irreconcilably at almost every point." (Transcript, p. 40.)

But the Master fails to explain that there was no clash between Mr. Lea and Mr. Steinmueller, the expert

from the Western Gas Construction Company, who gave estimates on the Net Construction Cost of the principal or more expensive items of Works Equipment, and whose figures uniformly sustained Mr. Lea's; in fact, the total figures for the items on which Mr. Steinmueller gave estimates was slightly higher than Mr. Lea's for the same items. Mr. Lea's Net Construction Cost figures are $155,524 for these items and Mr. Steinmueller's $158,524. And there was no clash between Mr. Lea and Mr. Steinmueller, and the records of the company as to what has *actually been paid in cash* for the various items of equipment. The only clash between Mr. A. D. Adams on the one hand and Mr. Lea, Mr. Steinmueller and the company's records on the other.

Furthermore, if the evidence of Mr. Lea and Mr. Adams clashed *irreconcilably*, at least one of the two witnesses must have been in serious error—in fact, not qualified to testify as an expert. And where all the other evidence corroborates and supports one of the witnesses, it does not require a great amount of acumen to determine which of the witnesses is in error. But nevertheless the Master here, as always, steadfastly refuses to give us his conclusions as to the weight which he attaches to any of the evidence. We are left completely in the dark as to why he selects the value set forth in his reports. He says further:

> "In considering the evidence of these experts, I have been aided, of course, by the testimony of other witnesses and by reports, letters, bills, contracts, vouchers and other documentary proofs. *Upon every disputed item all the evidence, oral and written, which I have been able to find in the record has been examined, considered and given in the decision reached its proper weight of inflence.* After ascertaining the Reproduction Cost which is in the aggregate $198,868, and making proper deductions for Depreciation, I present here *without discussion*

> *of the evidence* my conclusion that the present value of the seventy-three units, which compose this division of the company's property, is $179,310" (Transcript, p. 40).

Now, if the Master has, as he says, examined, considered and given proper weight to *all the evidence upon every disputed item*, we think we have the right to inquire why he sets forth merely his conclusions "without discussion of the evidence." Does he honestly believe, as he states at the outset of his report under "Preliminary Observations," that a summary of the evidence would "aid neither court nor counsel in testing the correctness of the conclusions which I have reached." We ask in all seriousness how the Court or we can test the correctness of his conclusions unless he does discuss the evidence upon which his conclusions must be founded. There is only one other possible way to do so, and that is for the Court to read the entire record from beginning to end, and even then the Court would lack the opportunity to personally observe the bearing of the various witnesses on the stand and to aid his judgment by such observation. The Master was appointed for the very purpose of reporting on and summarizing the evidence, as well as to give his conclusions based thereon, in order to relieve the Court of the burden of reading a great mass of testimony, much of which relates to issues at first deemed important by the City but later abandoned as immaterial. We can not understand how the Master so completely fails to grasp the proper conception of the necessity for appointing him to act as such.

Furthermore, we feel compelled to state frankly, and we will proceed to point out, that the Master *has not* done what he claims to have done—that is, he has not examined or considered all the evidence which he could have found in the record nor given it proper weight of

influence. We believe we can demonstrate this with little difficulty, as follows:

The Master gives us his Reproduction Cost and his Present Value. He does not specifically state what his Net Construction Cost is. We will first compare the Master's total estimates (or rather such of those as are given by him) with the estimates of Mr. Lea and Mr. A. D. Adams.

| | Master. | Lea. | Adams. |
|---|---|---|---|
| Net Construction Cost... ..... | | $218,358 | $160,069 |
| Reproduction Cost..... | $198,868 | 253,298 | 171,274 |
| Present Value ..... | 179,310 | 196,759 | 130,544 |

(Transcript, pp. 40, 1368).

Now, although the Master has not told us in figures what his Net Construction Cost is, we know that he must have calculated his Reproduction Cost by adding 12½ per cent to his estimated Net Construction Cost. Having his Reproduction Cost only, we can reverse the operation and get his Net Construction Cost, which is $176,771. This represents the total unit cost applied to all the items. This figure first appears to be somewhere between the estimates of Mr. Lea and Mr. Adams as to Net Construction Cost, Mr. Lea's being $218,358 and Mr. Adams' $160,069. But it will be remembered, however, that the City and Mr. A. D. Adams claimed, throughout the suit, that in estimating the Company's Works Equipment, there should be excluded the East Lincoln District Holder and all equipment connected therewith, their contention being that this Holder and its equipment was installed primarily to supply consumers outside of the City of Lincoln, and therefore should not be included in estimating the value of the Company's property in the City of Lincoln. Consequently, Mr. A. D. Adams gave no estimate on the East Lincoln District Holder or its equipment, and said property was not included by him in making

up his Net Construction Cost; so that the only estimates given for this portion of the Company's Works Equipment were those presented by the Company's witnesses. The Master disagreed with the City's contention and included the Holder and its equipment in his estimate. His report shows that clearly, and he discusses why he does so. So that in the Master's Net Construction Cost estimate of $176,771 is included the value of the East Lincoln District Holder and its appurtenant equipment. On these items Mr. Lea gives the only Net Construction Cost estimate in evidence, which is as follows:

| | |
|---|---|
| 100,000 cu. ft. gas holder | $18,685.00 |
| Water piping | 177.00 |
| Gas yard mains | 463.00 |
| Manholes, etc. | 1,533.00 |
| 25 h. p. motor | 423.00 |
| 5 h. p. motor | 160.00 |
| No. 5 Sturtevant blower | 180.00 |
| No. 5 Sturtevant blower | 210.00 |
| Total | $21,831.00 |

(Transcript, p. 1370.)

If we deduct the total of these items from the Master's Net Construction Cost of $176,771 we get $154,940 as the Master's Net Construction Cost exclusive of the East Lincoln District Holder and equipment. Here, now, is a basis of comparison between the Master's Net Construction Cost and Mr. A. D. Adams' Net Construction Cost, the former's being $154,940 and the latter's, $160,069; that is, the Master's estimate is $5,129 lower than Mr. Adams' estimate. This result leads to the discovery of another absurdity in the Master's report, to wit, that he has used a Net Construction Cost estimate *lower than any introduced in evidence*. In other words, in spite of the irreconcilable clash between Mr. Lea's and Mr.

Adam's figures, Mr. Adams' being so much lower than Mr. Lea's, yet the Master adopts units of cost which gives him a Net Construction Cost lower even than Mr. Adams' by $5,129. We will go further in order to make clear our point. We will eliminate from consideration, for the moment, all equipment in the East Lincoln District except the 100,000 cubic feet Holder itself. The Net Construction Cost of this one item was given by Mr. Lea at $18,685, by Mr. Steinmueller at $18,000, and by the Company's records at $19,207.32. Take the lowest figures submitted in evidence for this one item—Mr. Steinmueller's of $18,000—and deduct it from the Master's Net Construction Cost, and we have $158,771, or approximately $2,000 below Mr. Adams' Net Construction Cost. This means that the Master has used lower cost units than any of the witnesses in this suit. And yet the Master says:

> "Upon every disputed item all the evidence, oral and written, which I have been able to find in the record, has been examined, considered and given in the decision reached its proper weight of influence" (Transcript, p. 40).

We unhesitatingly deny this statement. We insist, as we have said before, that the report convincingly shows that the Master *completely disregarded the evidence* in reaching his conclusions.

We will make still another computation to illustrate our contention that the Master's findings are not based on the evidence.

The Master's Reproduction Cost estimate for Works Equipment is $198,868, and his Present Value is $179,310. The Present Value, as we have explained before, is arrived at by deducting the Depreciation from the Reproduction Cost. Depreciation is estimated by considering the life, age and present condition of the equipment. The present condition when determined may be

expressed in terms of per cent., and was so expressed by Mr. Lea and Mr. A. D. Adams in their testimony. Mr. Lea's Reproduction Cost was $253,298 and his Present Value $196,759. Mr. A. D. Adams' Reproduction Cost was $171,274 and his Present Value $130,544. The Master's Reproduction Cost was $198,868 and his Present Value, $179,310. Mr. Lea based his Present Value estimate on an estimated present per cent. condition of 77.67 per cent.; Mr. A. D. Adams based his Present Value on an estimated present per cent. condition of 76.2 per cent.; the Master's figures show that his Present Value is based on a present per cent. condition of *90.17* per cent. This estimate is 12.50 points higher than the highest estimate in the record. On whose testimony did the Master rely when he made this estimate? What evidence, *given its proper weight of influence*, was reflected in that conclusion? The extent of the *irreconcilable* clash, between the testimony of Mr. Lea and Mr. A. D. Adams, as to the present per cent. condition of Works Equipment, represented exactly 1.47 points, whereas the Master's findings clashes with Mr. Lea's estimate to the extent of 12.50 points and with Mr. A. D. Adams' to the extent of 13.97 points.

Can there be any reasonable doubt that the Master ignored the evidence when framing his report?

The Master gives his findings as to the Present Value of each of the seventy-three items of Works Equipmnt, but he has not given his Net Construction Cost nor his Reproduction Cost of the respective items. His only figure for the Reproduction Cost is expressed as a total sum which we can not possibly subdivide for the purpose of analysis or criticism. We deem this matter of sufficient importance to set forth in a comparative statement all the estimates of the various witnesses and the findings of the Master such as are given. The table is as follows:

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| **Works Equipment—Total:** | | | | | |
| Net Construction Cost.. | $..... | $218,358 | $160,069 | ..... | ..... |
| Reproduction Cost ..... | 198,868 | 253,298 | 171,274 | ..... | ..... |
| Present Value ..... | 179,310 | 196,759 | 130,544 | ..... | ..... |
| **(1) 7' 6" Water Gas Set:** | | | | | |
| Net Construction Cost.. ..... | | 8,477 | 7,506 | $8,400 | $8,322.94 |
| Reproduction Cost ..... ..... | | 9,833 | 8,031 | ..... | ..... |
| Present Value ..... | 8,030 | 9,636 | 7,067 | ..... | ..... |
| **(2) 7' 6" Water Gas Set:** | | | | | |
| Net Construction Cost.. ..... | | 8,477 | 7,506 | 8,300 | 13,365.72 |
| Reproduction Cost ..... ..... | | 9,833 | 8,031 | ..... | ..... |
| Present Value ..... | 7,710 | 9,341 | 8,031 | ..... | ..... |
| **(3) Condenser and Scrubber:** | | | | | |
| Net Construction Cost.. ..... | | 1,219 | 1,206 | 1.675 | Inc. in 2 |
| Reproduction Cost..... ..... | | 1,414 | 1,290 | ..... | ..... |
| Present Value ..... | 1,215 | 1,343 | 1,135 | ..... | ..... |
| **(4) Operating Floor:** | | | | | |
| Net Construction Cost.. ..... | | 2,052 | 1,319 | ..... | Inc. in 2 |
| Reproduction Cost ..... ..... | | 2,380 | 1,411 | ..... | ..... |
| Present Value ..... | 1,810 | 2,332 | 1,369 | ..... | ..... |
| **(5) 6' 6" Water Gas Set:** | | | | | |
| Net Construction Cost.. ..... | | 8,072 | 5,808 | 8,200 | 8,763.20 |
| Reproduction Cost ..... ..... | | 9,364 | 6,215 | ..... | ..... |
| Present Value ..... | 5,850 | 6,648 | 4,351 | ..... | ..... |
| **(6) 6' 6" Springer Set:** | | | | | |
| Net Cost Construction.. ..... | | 4,991 | 2,904 | ..... | 9,184.22 |
| Reproduction Cost ..... ..... | | 5,790 | 3,107 | ..... | ..... |
| Present Value ..... | 1,625 | 2,200 | 870 | ..... | ..... |
| **(7) Operating Floor:** | | | | | |
| Net Construction Cost.. ..... | | 1,871 | 1,184 | ..... | Inc. Sp. St. |
| Reproduction Cost ..... ..... | | 2,170 | 1,267 | ..... | ..... |
| Present Value ..... | 1,380 | 1,584 | 1.076 | ..... | ..... |
| **(8) No. 7 Sturtevant Blower:** | | | | | |
| Net Construction Cost.. ..... | | 272 | 254 | ..... | ..... |
| Reproduction Cost ..... ..... | | 316 | 272 | ..... | ..... |
| Present Value ..... | 260 | 275 | 251 | ..... | ..... |
| **(9) No. 7 Sturtevant Blower:** | | | | | |
| Net Construction Cost.. ..... | | 279 | 258 | ..... | ..... |
| Reproduction Cost ..... ..... | | 324 | 276 | ..... | ..... |
| Present Value ..... | 275 | 288 | 256 | ..... | ..... |
| **(10) Root's Blower No. 1:** | | | | | |
| Net Construction Cost.. ..... | | 273 | 142 | ..... | ..... |
| Reproduction Cost ..... ..... | | 317 | 152 | ..... | ..... |
| Present Value ..... | 150 | 200 | 110 | ..... | ..... |

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| (11) **No. 8 Sturtevant Turbo Blower:** | | | | | |
| Net Construction Cost.. ..... | | 1,435 | 1,336 | ..... | ..... |
| Reproduction Cost ..... ..... | | 1,665 | 1,430 | ..... | ..... |
| Present Value ..... | 1,330 | 1,432 | 1,258 | ..... | ..... |
| (12) **No. 8 Sturtevant Blower:** | | | | | |
| Net Construction Cost.. ..... | | 453 | 559 | ..... | ..... |
| Reproduction Cost ..... ..... | | 525 | 598 | ..... | ..... |
| Present Value ..... | 467 | 467 | 553 | ..... | ..... |
| (13) **No. 6 Root's Exhauster:** | | | | | |
| Net Construction Cost.. ..... | | 791 | 824 | ..... | ..... |
| Reproduction Cost ..... ..... | | 918 | 882 | ..... | ..... |
| Present Value ..... | 376 | 376 | 397 | ..... | ..... |
| (14) **No. 6 Sturtevant Exhauster: (Blower)** | | | | | |
| Net Construction Cost.. ..... | | 346 | 590 | ..... | ..... |
| Reproduction Cost ..... ..... | | 401 | 631 | ..... | ..... |
| Present Value ..... | 361 | 361 | 568 | ..... | ..... |
| (15) **No. 10 McKenzie Exhauster:** | | | | | |
| Net Construction Cost.. ..... | | 440 | 425 | ..... | ..... |
| Reproduction Cost ..... ..... | | 510 | 455 | ..... | ..... |
| Present Value ..... | 227 | 209 | 227 | ..... | ..... |
| (16) **Greenfield Engine 4x5:** | | | | | |
| Net Construction Cost.. ..... | | 240 | 265 | ..... | ..... |
| Reproduction Cost ..... ..... | | 278 | 284 | ..... | ..... |
| Present Value ..... | 97 | 97 | 178 | ..... | ..... |
| (17) **Sturtevant Engine 5x5:** | | | | | |
| Net Construction Cost.. ..... | | 270 | ..... | ..... | ..... |
| Reproduction Cost ..... | | 313 | ..... | ..... | ..... |
| Present Value ..... | 257 | 257 | ..... | ..... | ..... |
| (18) **Sturtevant Engine 7x6:** | | | | | |
| Net Construction Cost.. ..... | | 367 | 357 | ..... | ..... |
| Reproduction Cost ..... ..... | | 426 | 382 | ..... | ..... |
| Present Value ..... | 353 | 366 | 353 | ..... | ..... |
| (19) **40 H. P. Motor:** | | | | | |
| Net Construction Cost.. ..... | | 655 | 250 | ..... | ..... |
| Reproduction Cost ..... ..... | | 760 | 268 | ..... | ..... |
| Present Value ..... | 430 | 570 | 203 | ..... | ..... |
| (20) **35 H. P. Motor:** | | | | | |
| Net Construction Cost.. ..... | | 566 | 535 | ..... | ..... |
| Reproduction Cost ..... ..... | | 657 | 572 | ..... | ..... |
| Present Value ..... | 401 | 401 | 435 | ..... | ..... |

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| (21) **Countershafting, etc.:** | | | | | |
| Net Construction Cost.. ..... | | 77 | 77 | ..... | ..... |
| Reproduction Cost ..... ..... | | 89 | 82 | ..... | ..... |
| Present Value ..... | 22 | 22 | 30 | ..... | ..... |
| (22) **Benches 6' 5.** | | | | | |
| Net Construction Cost.. ..... | | 17,993 | 14,668 | 16,250 | ..... |
| Reproduction Cost ..... ..... | | 20,872 | 15,695 | ..... | ..... |
| Present Value ..... | 14,950 | 16,280 | 8,484 | ..... | ..... |
| (23) **Charging Floor:** | | | | | |
| Net Construction Cost.. ..... | | 2,440 | 1,605 | ..... | ..... |
| Reproduction Cost ..... ..... | | 2,830 | 1,717 | ..... | ..... |
| Present Value ..... | 1,730 | 2,349 | 1,331 | ..... | ..... |
| (24) **4' 6" x 25' 0" Condenser:** | | | | | |
| Net Construction Cost.. ..... | | 761 | 583 | ..... | ..... |
| Reproduction Cost ..... ..... | | 883 | 624 | ..... | ..... |
| Present Value ..... | 327 | 336 | 280 | ..... | ..... |
| (25) **5' 6" x 31' 0" Scrubber:** | | | | | |
| Net Construction Cost.. ..... | | 411 | 319 | ..... | ..... |
| Reproduction Cost ..... ..... | | 477 | 341 | ..... | ..... |
| Present Value ..... | 160 | 181 | 154 | ..... | ..... |
| (26) **4' 6" x 5' 0" Rotary Scrubber:** | | | | | |
| Net Construction Cost.. ..... | | 2,121 | 2,138 | ..... | ..... |
| Reproduction Cost ..... ..... | | 2,460 | 2,288 | ..... | ..... |
| Present Value ..... | 858 | 935 | 858 | ..... | ..... |
| (27) **4–20'x24'x4' Purifying Boxes:** | | | | | |
| Net Construction Cost.. ..... | | 13,088 | 7,680 | 15,000 | ..... |
| Reproduction Cost ..... ..... | | 15,182 | 8,218 | ..... | ..... |
| Present Value ..... | 9,950 | 11,235 | 5,259 | ..... | ..... |
| (28) **10' Station Meter:** | | | | | |
| Net Construction Cost.. ..... | | 3,901 | 3,940 | ..... | ..... |
| Reproduction Cost ..... ..... | | 4,525 | 4,216 | ..... | ..... |
| Present Value ..... | 3,440 | 3,756 | 2,845 | ..... | ..... |
| (29) **6' Station Meter:** | | | | | |
| Net Construction Cost.. ..... | | 1,358 | 1,250 | ..... | ..... |
| Reproduction Cost .... ..... | | 1,575 | 1,338 | ..... | ..... |
| Present Value ..... | 400 | 441 | 334 | ..... | ..... |
| (30) **500,000 cu. ft. Gas Holder:** | | | | | |
| Net Construction Cost.. ..... | | 43,985 | 41,537 | 45,000 | 43,897.62 |
| Reproduction Cost .... ..... | | 51,023 | 44,445 | ..... | ..... |
| Present Value ..... | 45,925 | 47,451 | 41,779 | ..... | ..... |
| (31) **200,000 cu. ft. Gas Holder:** | | | | | |
| Net Construction Cost.. ..... | | 25,119 | 18,000 | 26,600 | ..... |
| Reproduction Cost .... ..... | | 29,138 | 19,260 | ..... | ..... |
| Present Value ..... | 14,920 | 16,026 | 12,904 | ..... | ..... |

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| **(32) 50,000 cu. ft. Gas Holder:** | | | | | |
| Net Construction Cost.. ..... | | 10,409 | 8,000 | 10,000 | ..... |
| Reproduction Cost .... ..... | | 12,074 | 8.560 | ..... | ..... |
| Present Value ..... | 4,400 | 4,105 | 4,708 | ..... | ..... |
| **(33) 20" Connelly Governor:** | | | | | |
| Net Construction Cost.. ..... | | 840 | 860 | ..... | ..... |
| Reproduction Cost .... ..... | | 974 | 920 | ..... | ..... |
| Present Value ..... | 404 | 721 | 404 | ..... | ..... |
| **(34) 12 Reynolds Governor:** | | | | | |
| Net Construction Cost.. ..... | | 415 | 380 | ..... | ..... |
| Reproduction Cost .... ..... | | 481 | 407 | ..... | ..... |
| Present Value ..... | 415 | 443 | 382 | ..... | ..... |
| **(35) 6" & 10"x5"x10" Knowles Pump:** | | | | | |
| Net Construction Cost.. ..... | | 360 | 418 | ..... | ..... |
| Reproduction Cost .... ..... | | 418 | 447 | ..... | ..... |
| Present Value ..... | 255 | 255 | 269 | ..... | ..... |
| **(36) 3"x4" Vertical Pump:** | | | | | |
| Net Construction Cost.. ..... | | 160 | 186 | ..... | ..... |
| Reproduction Cost .... ..... | | 186 | 199 | ..... | ..... |
| Present Value ..... | 40 | 47 | 40 | ..... | ..... |
| **(37) 3½"x4"x6" Gardner Pump:** | | | | | |
| Net Construction Cost.. ..... | | 90 | 104 | ..... | ..... |
| Reproduction Cost .... ..... | | 104 | 111 | ..... | ..... |
| Present Value ..... | 81 | 81 | 85 | ..... | ..... |
| **(38) 4½"x3¾"x4" Worthington Pump:** | | | | | |
| Net Construction Cost.. ..... | | 100 | 116 | ..... | ..... |
| Reproduction Cost .... ..... | | 116 | 124 | ..... | ..... |
| Present Value ..... | 108 | 108 | 114 | ..... | ..... |
| **(39) 4½"x2¾"x4" Gardner Pump:** | | | | | |
| Net Construction Cost.. ..... | | 95 | 110 | ..... | ..... |
| Reproduction Cost .... ..... | | 110 | 118 | ..... | ..... |
| Present Value ..... | 95 | 95 | 98 | ..... | ..... |
| **(40) 4½"x2¾"x4" Worthington Pump:** | | | | | |
| Net Construction Cost.. ..... | | 95 | 110 | ..... | ..... |
| Reproduction Cost .... ..... | | 110 | 118 | ..... | ..... |
| Present Value ..... | 95 | 95 | 98 | ..... | ..... |
| **(41) 3"x2"x2" Worthington Pump:** | | | | | |
| Net Construction Cost.. ..... | | 85 | 99 | ..... | ..... |
| Reproduction Cost .... ..... | | 99 | 106 | ..... | ..... |
| Present Value ..... | 86 | 96 | 102 | ..... | ..... |

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| **(42) 6"x6"x6" Warren Pump:** | | | | | |
| Net Construction Cost | | 160 | 186 | ..... | ..... |
| Reproduction Cost | | 186 | 199 | ..... | ..... |
| Present Value | 47 | 47 | 40 | ..... | ..... |
| **(43) 2½"x3"x4" Marsh Pump:** | | | | | |
| Net Construction Cost | | 80 | 93 | ..... | ..... |
| Reproduction Cost | | 93 | 100 | ..... | ..... |
| Present Value | 80 | 80 | 83 | ..... | ..... |
| **(44) Otis Platform Elevator:** | | | | | |
| Net Construction Cost | | 1,060 | 965 | ..... | ..... |
| Reproduction Cost | | 1,230 | 1,033 | ..... | ..... |
| Present Value | 960 | 1,058 | 908 | ..... | ..... |
| **(45) Fairbanks Scale:** | | | | | |
| Net Construction Cost | | 60 | 60 | ..... | ..... |
| Reproduction Cost | | 70 | 64 | ..... | ..... |
| Present Value | 50 | 50 | 55 | ..... | ..... |
| **(46) Photometer:** | | | | | |
| Net Construction Cost | | 450 | 300 | ..... | ..... |
| Reproduction Cost | | 522 | 321 | ..... | ..... |
| Present Value | 160 | 183 | 138 | ..... | ..... |
| **(47) Calorimeter:** | | | | | |
| Net Construction Cost | | 210 | 200 | ..... | ..... |
| Reproduction Cost | | 244 | 214 | ..... | ..... |
| Present Value | 78 | 178 | 188 | ..... | ..... |
| **(48) No. 90 Drill Press:** | | | | | |
| Net Construction Cost | | 45 | ..... | ..... | ..... |
| Reproduction Cost | | 52 | ..... | ..... | ..... |
| Present Value | 32 | 37 | ..... | ..... | ..... |
| **(49) Shop Tools and Mis.:** | | | | | |
| Net Construction Cost | | 462 | 462 | ..... | ..... |
| Reproduction Cost | | 536 | 494 | ..... | ..... |
| Present Value | 300 | 300 | 356 | ..... | ..... |
| **(50) 4 Steel Tar Tanks:** | | | | | |
| Net Construction Cost | | 760 | 393 | ..... | ..... |
| Reproduction Cost | | 882 | 421 | ..... | ..... |
| Present Value | 410 | 776 | 210 | ..... | ..... |
| **(51) Tar Separator:** | | | | | |
| Net Construction Cost | | 179 | 179 | ..... | ..... |
| Reproduction Cost | | 208 | 192 | ..... | ..... |
| Present Value | 158 | 183 | 158 | ..... | ..... |

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| (52) 3′ 3″x3′3″x10′ 10″ Tar Well: | | | | | |
| Net Construction Cost | | 104 | 104 | | |
| Reproduction Cost | | 121 | 111 | | |
| Present Value | 74 | 74 | 78 | | |
| (53) 6′ 0″x20′ 0″x12′ 0″ Tar Well: | | | | | |
| Net Construction Cost | | 472 | 472 | | |
| Reproduction Cost | | 548 | 505 | | |
| Present Value | 390 | 411 | 399 | | |
| (54) 2 Steel Tar Tanks: | | | | | |
| Net Construction Cost | | 1,587 | 1,056 | | |
| Reproduction Cost | | 1,841 | 1,130 | | |
| Present Value | 1,575 | 1,657 | 1,096 | | |
| (55) 2 Steel Oil Tanks: | | | | | |
| Net Construction Cost | | 1,855 | 1,160 | | |
| Reproduction Cost | | 2,152 | 1,241 | | |
| Present Value | 1,620 | 1,829 | 1,186 | | |
| (56) 2 Steel Oil Tanks: | | | | | |
| Net Construction Cost | | 1,220 | 624 | | |
| Reproduction Cost | | 1,415 | 668 | | |
| Present Value | 790 | 1,090 | 578 | | |
| (57) Brick Oil Tank: | | | | | |
| Net Construction Cost | | 228 | 228 | | |
| Reproduction Cost | | 264 | 244 | | |
| Present Value | 193 | 198 | 193 | | |
| (58) Drain Piping: | | | | | |
| Net Construction Cost | | 1,683 | 1,683 | | |
| Reproduction Cost | | 1,952 | 1,801 | | |
| Present Value | 1,395 | 1,503 | 1,350 | | |
| (59) Water Piping: | | | | | |
| Net Construction Cost | | 821 | 821 | | |
| Reproduction Cost | | 952 | 878 | | |
| Present Value | 549 | 638 | 641 | | |
| (60) Oil Piping: | | | | | |
| Net Construction Cost | | 443 | 443 | | |
| Reproduction Cost | | 514 | 474 | | |
| Present Value | 368 | 406 | 368 | | |
| (61) Gas Yard Mains: | | | | | |
| Net Construction Cost | | 6,750 | 5,008 | | |
| Reproduction Cost | | 7,830 | 5,358 | | |
| Present Value | 5,110 | 6,342 | 4,395 | | |

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| (62) **Steam Piping:** | | | | | |
| Net Construction Cost | | 2,657 | 2,657 | ..... | ..... |
| Reproduction Cost | | 3,082 | 2,843 | ..... | ..... |
| Present Value | 2,075 | 2,188 | 1,933 | ..... | ..... |
| (63) **Tar Piping:** | | | | | |
| Net Construction Cost | | 586 | 586 | ..... | ..... |
| Reproduction Cost | | 680 | 627 | ..... | ..... |
| Present Value | 347 | 347 | 439 | ..... | ..... |
| (64) **Works Tools:** | | | | | |
| Net Construction Cost | | 600 | 462 | ..... | ..... |
| Reproduction Cost | | 696 | 494 | ..... | ..... |
| Present Value | 395 | 508 | 346 | ..... | ..... |
| (65) **Main Office Furn.** | | | | | |
| Net Construction Cost | | 8,606 | 6,519 | ..... | ..... |
| Reproduction Cost | | 9,983 | 6,974 | ..... | ..... |
| Present Value | 7,400 | 8,985 | 6,140 | ..... | ..... |
| (66) **100,000 cu. ft. Gas Holder District Station:** | | | | | |
| Net Construction Cost | | 18,685 | ..... | 18,000 | 19,207.32 |
| Reproduction Cost | | 21,675 | ..... | ..... | ..... |
| Present Value | 20,225 | 20,808 | ..... | ..... | ..... |
| (67) **Water Piping, District Station:** | | | | | |
| Net Construction Cost | | 177 | ..... | ..... | ..... |
| Reproduction Cost | | 205 | ..... | ..... | ..... |
| Present Value | 175 | 185 | ..... | ..... | ..... |
| (68) **Gas Yard Mains District Station:** | | | | | |
| Net Construction Cost | | 463 | ..... | ..... | ..... |
| Reproduction Cost | | 537 | ..... | ..... | ..... |
| Present Value | 475 | 516 | ..... | ..... | ..... |
| (69) **Manholes, District Station:** | | | | | |
| Net Construction Cost | | 1,533 | ..... | ..... | ..... |
| Reproduction Cost | | 1,778 | ..... | ..... | ..... |
| Present Value | 1,650 | 1,707 | ..... | ..... | ..... |
| (70) **25 H. P. Motor Dist. Station:** | | | | | |
| Net Construction Cost | | 423 | ..... | ..... | ..... |
| Reproduction Cost | | 491 | ..... | ..... | ..... |
| Present Value | 420 | 442 | ..... | ..... | ..... |

| | Master | Lea | Adams | Stein-mueller | Co. Costs |
|---|---|---|---|---|---|
| (71) 5 H. P. Motor Dist. Station: | | | | | |
| Net Construction Cost.. ..... | | 160 | ..... | ..... | ..... |
| Reproduction Cost .... ..... | | 186 | ..... | ..... | ..... |
| Present Value ..... | 155 | 167 | ..... | ..... | ..... |
| (72) No. 5 Sturtevant Blower Dist. Station: | | | | | |
| Net Construction Cost.. ..... | | 180 | ..... | ..... | ..... |
| Reproduction Cost .... ..... | | 209 | ..... | ..... | ..... |
| Present Value ..... | 183 | 196 | ..... | ..... | ..... |
| (73) No. 5 Sturtevant Blower Dist. Station: | | | | | |
| Net Construction Cost.. ..... | | 210 | ..... | ..... | ..... |
| Reproduction Cost .... ..... | | 244 | ..... | ..... | ..... |
| Present Value ..... | 206 | 229 | ..... | ..... | ..... |

(Transcript, 40-2, 1370, 1719-45, 516-20.)

Here, again, will be noted the habitual practice on the part of the Master to pick a Present Value somewhere between the estimates of the opposing witnesses, though why he selects the figures he does is a question which only the Master can answer, and he expressly refuses so to do. It will be noted in comparing the figures in the above table that the great majority of the Present Values found are much nearer the estimates of Mr. A. D. Adams than those of the other witnesses. It seems to us that where the Master is rejecting the evidence of two experts (plus the records of the company on actual transactions) and reaches figures nearer the estimate of the third witness, we are entitled to know why the testimony of the two experts and the records of the company are disregarded. This is especially true where the *competency* of Mr. A. D. Adams as an expert was subject to such constant attack during the hearing, whereas the qualification of Mr. Steinmueller *were never questioned* by the City; nor was Mr. Lea's right to speak as an expert challenged or his experience in the gas business questioned, although his estimates were not accepted by the City. But we submit that where

the qualifications of one of the witnesses in this suit was so insistently assailed the Master should at least explain why said witness' estimates were deemed nearer the proper figure than the other estimates offered in evidence. And let us point out again that the Master, in reaching his conclusions as to Works Equipment has used a unit cost lower than Mr. Adams—the lowest in evidence—in calculating Net Construction Cost; but has thereupon faced about when he calculates a Present Value, and has adopted a present per cent. condition higher than Mr. Lea's—the highest in evidence. So that it is difficult to conclude what witness the Master did rely on in reaching his Present Value. We think we are entitled to an explanation of this situation.

**Distribution System.**

The Master opens this part of his report by giving his Net Construction Costs. This is the first time thus far in the report that the Master has seen fit to tell what his Net Construction Cost estimates are. We will set his conclusion down in a table in comparison with Mr. Lea's and Mr. A. D. Adams' Net Construction Cost estimates.

| | Master | Lea | Adams |
|---|---|---|---|
| Street Mains (exclusive of paving) | $173,700 | $179,814 | $130,913 |
| Services (exclusive of paving) | 76,116 | 111,689 | 69,939 |
| Service Boxes and Cocks | 9,000 | 11,068 | 2,472 |
| Service Governors | 18,950 | 19,902 | 13,365 |
| Meters | 60,500 | 63,444 | 56,592 |
| Distribution Tools | 6,210 | 6,210 | 6,210 |
| Street Main Drips | 1,113 | 1,113 | ..... |
| Street Main Valves | 328 | 328 | ..... |
| District Governor | 225 | 225 | ..... |
| Railway Crossings | 2,800 | 6,220 | ..... |
| Gas Appliances Loaned | 3,250 | 3,791 | ..... |
| Total Net Const. Cost (exc. of paving) | $352,192 | $403,804 | $279,491 |

(Transcript, pp. 43, 1372.)

It will be noted in this table that Mr. A. D. Adams gives no separate Net Construction Cost figures on the items Street Main Drips, Street Main Valves, District Governor, Railway Crossing and Gas Appliances Loaned, but Mr. Adams claimed that these items were included in his other Net Construction Cost figures on the Distribution System. Consequently, the only estimate given on these items as units were Mr. Lea's. On three of these items, to wit: Street Main Drips, Street Main Valves, and District Governor, the Master adopts the estimate of Mr. Lea. As to the other two items, to wit: Railway Crossings and Gas Appliances Loaned, the Master chooses figures under Mr. Lea's estimate (as to Railway Crossings approximately one-third of Mr. Lea's figure). Why the Master adopts Mr. Lea's estimate in some of the instances where Mr. Lea's was the only one in evidence and repudiates it in other instances where it was the only one in evidence, is quite incomprehensible to us.

The Master then attempts to explain some of his figures, and in so doing makes such an absurd statement that it is apparent that by this time he has become completely bewildered in his attempt to work out his conclusions. He said:

> "The difference between the total cost as fixed by me and the total cost according to Mr. Lea ($529,736), consists for the most part in the elimination from Mr. Lea's figures of three items, namely:
>
> "1. 3½ per cent excess overhead:
>
> "2. The cost of paving over mains and services, and
>
> "3. The cost of service pipes paid for by patrons of the Company." (Transcript, p. 43.)

Now the Master is here considering *Net Construction Costs*, and in naming his three reasons why he is lower

than Mr. Lea he states first that he had calculated *Overhead Charges* by using a rate 3½ per cent lower than Mr. Lea's. *But in estimating Net Construction Costs, Overhead Charges are not included at all.* This proposition is fundamental. It is only when one is estimating *Reproduction Cost* that one *adds the Overhead Charges* to the *Net Construction Cost.* Now this mistake of the Master is no mere inadvertent use of terms. There is no question that he was talking about Net Construction Costs, because he actually named Mr. Lea's estimate ($529,736), which he compares with his own, and both figures are Net Construction Cost estimates. How can we view this statement of the Master without concluding that he has completely lost his grasp of the situation, and that his figures can not be taken seriously?

He continues:

> "Adding the 12½ per cent Overhead Charge to the Net Construction Cost of $352,192, gives $396,216, the total Reproduction Cost of the Distribution System; and its depreciated value or Present Worth I find to be $351,624" (Transcript, p. 43).

The Master's Reproduction Cost being $396,216 and his Present Value being $351,624, we can, by using the calculations heretofore referred to, determine what he estimates as his present per cent condition. We find that it is 88.75 per cent, whereas Mr. Lea's figure was *79.32 per cent, and Mr. Adams' 74.72 per cent.* In other words, the Master's present per cent condition is 9.43 points higher than the highest estimate in the record.

We again respectfully submit our inquiry: Has the Master based his findings on the evidence?

The Master's findings on Net Construction Costs can be compared to Mr. Lea's rather briefly. The estimates of these costs are $352,192 by the Master as against $529,736 by Mr. Lea. The difference is $177,544. The

Master has expressly refused to allow for the cost of *Paving over Main and Services.* In this he rejected the contention of the Company and upheld the City's position. This elimination accounts for a difference of $125,932. The Master also refused to allow the Company credit for the proportionate value of services represented by the length of said services between the lot-line and the consumers' meters. Although the full length of these services had been installed by the Company, a certain amount, to wit, $30,484, had been collected from the consumers to defray part of the costs. If we deduct both the sums above mentioned as disallowed from the difference between the Master's and Mr. Lea's Net Construction Cost, we still have $21,128 unaccounted for.

The questions raised by the exclusion of these two items are questions of law, and are very serious matters. We will discuss them at length presently.

In the meanwhile we think it well to set forth in a table all of Mr. Lea's estimates on Distribution Systems as follows:

| | Net Constr. Cost | Reproduction Cost | Present Value |
|---|---|---|---|
| Street Mains | $179,814.00 | $208,583.00 | $173,061.00 |
| Passing Over Mains | 111,365.00 | 129,184.00 | 129,184.00 |
| Services | 111,689.00 | 129,559.00 | 99,851.00 |
| Service Boxes and Cocks | 11,068.00 | 12,839.00 | 9,886.00 |
| Paving Over Services | 14,567.00 | 16,898.00 | 13,107.00 |
| Service Governors | 19,902.00 | 23,086.00 | 20,157.00 |
| Meters | 63,444.00 | 73,595.00 | 53,515.00 |
| Distribution Tools | 6,210.00 | 7,204.00 | 5,259.00 |
| Street Main Drips | 1,113.00 | 1,291.00 | 1,046.00 |
| Street Main Valves | 328.00 | 380.00 | 308.00 |
| District Governor | 225.00 | 261.00 | 235.00 |
| Railway Crossings | 6,220.00 | 7,215.00 | 5,844.00 |
| Gas Appliances Loaned | 3,791.00 | 4,398.00 | 2,375.00 |

(Transcript, p. 1370.)

Mr. George L. Campen testified with respect to the Net Construction Cost of the gas mains, not including

the drips and valves (Transcript, p. 528, *et seq.*), and the Net Construction Cost of the Paving over the Street Mains. He gave the Net Construction Cost of Street Mains at $182,417.37 as against Mr. Lea's Net Construction Cost of $179,814 and Mr. A. D. Adams' Net Construction Cost of $130,913. Mr. Campen gave the Net Construction Cost for the Paving over Street Mains at $102,283.90, as against Mr. Lea's Net Construction Cost of $111,365, and Mr. A. D. Adams', $34,518. Mr. Campen gave the total Net Construction Cost for Street Mains, including specials, but not drips or valves, and for Paving over Mains, of $284,701.27, as against the corresponding item by Mr. Lea of $291,179, and of Mr. Adams, $165,431. Mr. Campen was within approximately 3 per cent of the Net Construction Cost as given by Mr. Lea for the Street Mains and Paving over Street Mains (Transcript, p 1801). Mr. Campen's qualifications to speak on the subject of costs for the construction of Street Mains and Street Paving, which he had heretofore considered, must be conceded. Mr. Campen's long experience in the city engineer's office of this city and in actual construction work here and elsewhere makes his testimony of particular importance and value. He has been a construction engineer for a long time, engaged in actual construction work, and knows the local conditions here, and we place his evidence before the Court in confirmation of Mr. Lea's judgment, asking that it be weighed against the testimony of Mr. A. D. Adams, who, without experience in this class of work, bases his claim to competency to speak at all upon the question of these costs on the ground that he has studied certain reports. In spite of the testimony of Mr. Lea and Mr. Campen, the Master saw fit to reduce their Net Construction Cost $21,128. His report is silent as to why he does so.

We will now consider the two questions raised by

the Master through his rejection of the Company's contention that the Master should have allowed in his Net Construction Cost of the Distribution System for the value of Paving over Mains and Services and for the total value of the Services, even though part of the cost of the installation of said Services had been collected from consumers.

*Paving Over Mains and Services.*

The Master gives his reasons for not allowing the above item, as follows:

> "That no allowance can be made in a rate case for the Reproduction Cost of paving over mains and service pipes seems now to be established by the clear weight of judicial and administrative authority. *Cedar Rapids Gas Light Company* v. *Cedar Rapids*, 134 Iowa 426 (correct citation, 144 Iowa 426); *Des Moines Gas Company* v. *City of Des Moines*, 199 Fed. 204; *People* v. *Willcox*, 104 N. E. (N. Y.), 911; *Whitten on Valuation of Public Service Corporations*, chap. VII.
>
> "The better reason, too, seems to be against such allowance. To permit a public service corporation to justify a rate claimed to be excessive by pointing to a costly street improvement made by the public at its own expense hardly accords with good sense. The public would be reluctant to make such improvements if they result not only in increasing taxation, but an increase of gas and water rates as well" (Transcript, p. 43).

The City of Lincoln, through its witness Mr. A. D. Adams, presented but one valuation in this case, and stated conclusively and unequivocally that the estimate was based on the present value of the property, determined by calculating the cost *to reproduce it new*, less depreciation (Transcript, pp. 1113-14). The City insists that its calculations of Present Value were based on the reproduction theory—that is, the cost of reproducing the

entire property just as it stands now—not by substituting another gas plant of equal efficiency, but by completely rebuilding the present outfit as it exists. This also was the method of valuation adopted by the Company's witnesses; so that all parties were agreed as far as the method estimating value was concerned. They all used the reproduction method. It was for this reason that Mr. A. D. Adams refused to be influenced by the Company's records as to what sums in cash had been actually invested in various items of property. He said in substance that he was not trying to figure the actual investment of the Company, but what was the Present Value of the plant, based on the cost to *reproduce* it, less depreciation. It was for this reason that he sought to justify some of his figures, when there was a serious conflict between his estimate of values and the sums which the Company had paid in very recent years for equipment, his explanation being that he was figuring on reproducing the plant as a single job, whereas the Company's records merely proved the cost of piece-meal construction. The City insisted that by re-reproducing the property as one construction job there would be a material saving in the cost than if construction was spread over several years; and the City claimed to be entitled to that difference (Transcript, pp. 1113-14). The City throughout the hearings pressed the point that it was figuring on reproduction at the present time, and as quickly as possible from a given date. It is true, of course, that piece-meal construction would cost more. In the Wisconsin case, *State Journal Printing Company* v. *Madison Gas & Electric Light Company*, 4 W. R. C. R. 546, it was estimated that piece-meal construction would cost 15 per cent more than construction as a single job. The Company admits this proposition, and all the Company's estimates were based on the theory of continuous construction so as to necessi-

tate the lowest possible cost. The City claimed the benefit of the estimated 15 per cent saving by this method of construction, and the Company was willing to accede the point.

But in spite of the City's protestation as to its having adopted the reproduction method of valuation, nevertheless whenever a point arose whereby it appeared that the City might work out a reduction in value by abandoning the reproduction theory, said theory was brushed aside by the City's witness with very little ceremony. One of these instances was the question of Paving over Mains and Services. Other instances were cases where the City sought to substitute a value based on the installation of more modern but less expensive equipment than the Company owned. But the Master stood firm for the reproduction theory of valuation. He said at the beginning of his report:

> "The contention has been made on behalf of the City that there are a number of plant items which ought not to be valued on the basis of reproduction cost, but on the basis of the cost new of more modern and equally efficient substitutes of a different type. I have not adopted this view, but have instead valued all such items as they actually exist. The property whose valuation is here involved is, of course, the aggregation of things owned by the Company and used by it in serving the public. Rates should therefore, it seems to me, be based upon the values of those things rather than upon the value of other things performing like functions with equal or greater efficiency" (Transcript, p. 37).

At the outset, therefore, both parties were agreed on the reproduction method of valuation, and the City only abandoned that theory when it thought it would work out some advantage. The Master adopts the reproduction method in his valuation and has, as we have pointed out, frequently ignored the Company's actual cost of a

piece of equipment substituting a lower figure in making his estimate. But the Master, too, abandons the reproduction theory when it comes to Paving over Mains and Services. Now for the first time in his report he seems to be concerned with *actual investments*, whereas in valuing the rest of the equipment the Company's records as to actual investment seemed to be of small consequence.

The City's witness, Mr. A. D. Adams, admitted that, in logically applying the reproduction method of valuation, there was no escaping the conclusion that the cost of paving subsequently laid had to be included in the valuation of services and mains (Transcript, pp. 1127, 900). As a result he placed an estimate of $34,518 as the additional net construction cost of the mains by reason of the paving over them. But it is interesting to note how he worked out this valuation. He insisted that if he were reproducing the distribution system he would lay the majority of the mains in the parkways of the streets, where there is no paving, and thus avoid the cost of breaking through the pavement to lay the mains (Transcript, p. 1123). He used this method of valuation in spite of the city ordinance compelling the laying of the mains in the middle of the street. Not only is his method of valuation in direct conflict with the city ordinance, but it cannot in any sense of the word be called a reproduction method of valuation. There is no question but that if the Company is to have some of its values reduced by employing the reproduction method of valuing, that it is entitled to a consistent application of that method and that all estimates should be based upon the cost of reproducing the property *as it now stands*.

There can be no question about the proposition that the City and the Master, once having adopted the method of valuing, should consistently apply that method throughout the case, and not abandon it when it ap-

pears to be an occasion where such methods would work out an increase in value for the Company. In all fairness the Master should not strip the Company of values by repudiating its cost of equipment on the ground that it represented piece-meal construction, and therefore was inconsistent with the reproduction theory of valuing, and then refuse the Company the value of Paving over Mains and Services because the Company *had* constructed piece-meal, and therefore laid a good part of its mains and services before the pavements were laid down.

The Master cites four authorities to uphold his decision. We contend, and will endeavor to point out, that they are not authorities at all for the proposition for which they are cited.

The first case is the *Cedar Rapids Gas Light Company* v. *Cedar Rapids*, 144 Iowa, 426. A consideration of that case shows at once that the Court expressly repudiated the reproduction method of valuation. Ladd, J., said in part.

> "The contention illustrates how inequitable would be a rule arbitrarily fixing the value as that for which a system might be replaced. Aside from this being impractical it may safely be said that there is hardly an enterprise of this character, which, were it destroyed, would be restored as it was before. *In ascertaining values in this way, the worth of a new plant of equal capacity, efficiency, and durability, with proper discount for defects in the old and depreciation for use, should be the measure of value rather than the cost of exact duplication.*"

It is clear that the Court rejects the reproduction method of valuation, so that the above decision has no bearing on a case where the value is determined by all parties upon the basis of reproduction cost.

So, too, in the Des Moines Gas Company case, 199 Fed. 204, there is no question that the cost is not esti-

mated by the reproduction method. In fact, Smith McPherson, D. J., uses rather caustic language in criticising the use of this method at all; so if we are to be guided by him remarks in this case we must conclude that we all have been wasting time during these hearings. He says (pp. 207-8):

> "One of these is what is called the 'reproduction theory' as determining the present value. * * *
>
> "In my opinion, those who maintain that what it will cost to reproduce the plant, less depreciation, is the true value, in many instances confound the real question with one of many evidences of the real value. Reproducing cost is an evidence of what the real value is after subtracting the depreciation. *But what is to be done with the value of stocks and bonds on the reproductive theory? And what becomes of the original cost on the reproduction theory? And what becomes of the question of the increase or falling off in numbers of consumers? And the same as to increased or diminished expenses?*
>
> "The theory at first thought in all cases is plausible and attractive, but in the end oftentimes utterly illogical and unreliable, originally *adopted as a mere time-saver by mere theorists, and sought to be enforced as against substantial and unbending facts.* If the plant is to be reproduced, when is it to be done? If, when reproduced, will the streets then be paved, and, if paved, paved with what? *Must it all be reproduced at once, or the same covered by a number of years? If but gradually reproduced, why should not such cost go into either the operating or maintenance accounts?* No one can state when it must be reproduced, and a material question arises: What then, as compared with the present, will be the price of labor, material and freight? * * *
>
> "There are many instances in which the reproduction theory is the best of all methods for getting at the present value, and in other instances the most misleading."

It is evident that the reproduction method of valuing was not approved of at all by the Court in that case, and therefore the case is not in point. But in spite of the above quoted remarks of Smith McPherson, J., in the Des Moines Gas case (decided August, 1912), the same learned Judge used the following language in the Des Moines Water case, 192 Fed., 193 (decided September, 1911) (p. 197):

> "The Master has made one finding that has been the subject of more discussion, perhaps, than any other item in the case. He finds that there are practically 38 miles of pipes that were laid in the streets at a time when the streets had not been paved, but that since the laying of those 38 miles of pipe the streets have been paved. To reproduce the same would require an expenditure of from $108,896, as admitted by the City, to $210,000, as claimed by the Waterworks Company, more than would be necessary to expend to lay such pipes in unpaved streets. Whatever the true sum is, the Waterworks Company claims such sum to be a part of the value of the plant. This proposition the city denies. But it is not pivotal in this case. Much can be said on each side of the question. *This case seems to have been tried before the Master, by both parties, upon the reproduction theory; that is to say, what this plant would cost if it were blotted out of existence, and the City, or some other company, were to undertake to reproduce the plant.* In such an event, as of course, the pipes must be laid under these 38 miles of paved streets at this additional cost. Looking at the question in that light, the question is, What would it cost to-day to reproduce the plant? and from which, to get at the value of the present plant, there would be deducted the value of depreciation, either by functional or physical depreciation."

The Court came to no conclusion on this point, but this much is clear: That although Smith McPherson, D. J., criticises the reproduction theory as a test for

valuation, he at least recognizes that to be consistent there is no escape from the conclusion that the cost of Paving over Mains should be allowed.

Whitten, in his work on Valuation of Public Service Corporations, cites some of the authorities on this point, and admits a conflict, with the Federal authorities favoring the allowance of Paving over Mains.

So, of the authorities cited by the Master, those above considered can scarcely be said to uphold his contention, which, he says, "is established by the clear weight of judicial and administrative authority."

The other case cited by the Master, *People* v. *Willcox*, 210 N. Y., 479, is the only one which supports him, and that case is not binding on this Court, and is opposed to the rule as laid down by the Federal decisions. Furthermore, we submit that the remarks of Miller, J., in that case on the question of Repaving over Mains are not well considered or sound in principle. After discussing the contentions of both sides, Miller, J., says (p. 495):

> "The cost of reproduction, less accrued depreciation, rule seems to be the one generally employed in rate cases. But it is merely a rule of convenience and must be applied with reason. *On the one hand it should not be so applied as to deprive the corporation of a fair return at all times on the reasonable, proper and necessary investment made by it to serve the public,* and on the other hand it should not be so applied as to give the corporation a return on improvements made at public expense which in no way increase the cost to it of performing that service."

Now we have already pointed out that the reproduction method of valuation has been applied by the City and by the Master "as to deprive the corporation of a fair return at all times on the reasonable, proper and necessary investment made by it to serve the public,"

because the Master continually ignored the records of the Company as to its actual investment for various items of equipment, and based his conclusions on an estimated cost of reproduction which in each case was lower than the actual investment. And the City insistently repudiated the Company's records as measures of value on the ground that they represented piece-meal construction, whereas the City figured on reproduction cost on a single job. So if the cost of reproduction rule is going to be used against the Company in depreciating values we insist that justice demands an application of that rule in our favor where the occasion presents itself.

The Company maintains, and is prepared to show, that the Federal authorities on this point uphold its contention as to the propriety of including values of Paving over Mains in estimating reproduction cost.

In the Minnesota Rate Cases, 230 U. S., 352, one of the latest and greatest decisions of the United States Supreme Court on the subject of rates, Mr. Justice Hughes said, p. 454:

> "It is clear that in ascertaining the Present Value we are not limited to the consideration of the amount of the actual investment. If that has been reckless or improvident, losses may be sustained which the community does not underwrite. As the Company may not be protected in its actual investment, if the value of its property be plainly less, so the making of a just return for the use of the property involves the recognition of its fair value if it be more than its cost. The property is held in private ownership and it is that property, and not the original cost of it, of which the owner may not be deprived without due process of law."

It is thus the recognized rule of the U. S. Supreme Court that appreciation in value must be taken into account as well as depreciation. The determination of

the validity of the claim for the cost of repaving rests upon this fundamental basis.

This item was allowed in the case of *Willcox* v. *Consolidated Gas Company*, 212 U. S., 19. It was argued by counsel for the City that the cost of the paving over the mains where the Company had laid its mains in advance of the paving, and so did not incur the expense, was excluded in the Willcox case and the late case from the New York Court of Appeals, *People ex rel.* v. *Willcox et al.*, 210 N. Y., 479, was cited in support of this contention. We contended on the argument that the item for the cost of the paving, whether laid prior or subsequent to the laying of the mains, was included in the valuation of the property in the Willcox case, and that the record in that case disclosed that fact and the issue upon that question. Since the argument we have assembled the proofs in support of our position on that point.

In the Master's report in the Willcox case (original, p. 269; reprint, p. 177 of record), the Master used the following language:

> "The fact that reproduction cost is so greatly in excess of the cost of original construction is due largely to changes in the character of the city's pavements. Formerly when the gas companies had occasion to open the streets for the purpose of laying new mains or repairing old mains or services, it was their custom to replace the pavement at a cost of from 15 to 25 cents per square yard. Now about 88 per cent. of the streets are covered with new styles of pavement, chiefly asphalt. The gas companies are permitted to open the streets only on condition that the pavements shall be relaid by the contractors for asphalt paving. The expense of this work is paid by the gas companies and amounts to from $2.70 to $7.00 per yard, the latter price being for pavement on Broadway. Pavements consisting of granite blocks on concrete are replaced by the

city's employes, and for this work the complainant is charged $8.00 for the first square yard and $4.00 for each additional yard.

"Another source of additional cost is the congested condition of the sub-surface of the streets, in view of the multiplication in recent years of various forms of underground construction. In addition to sewer and water mains there are now conduits for electric light, telephone and telegraph wires, underground trolley ducts and salt water mains, besides, in certain streets, the elevated railroad columns, and structures of the rapid transit railway. The result is that in many streets the entire subsurface is so filled with these structures that the replacement or repairing of existing mains is attended with great difficulty and consequent expense. Taking the testimony on this subject as a whole, the preponderance of evidence is very clearly with the complainant, and its estimate of the replacement value of the mains may be taken as reasonable."

To this finding of the Master in the Willcox case, the city of New York proposed the following amendments:

"In allowing a replacement value on mains at $12,636,000 as against the cost on the books for $7,852,000, the Master has awarded the value of pavements $4,784,000 to the Consolidated Gas Company, although when pavements are laid, they are laid at a cost to the property holders of New York City, and at no cost to the Gas Company. • • •

"Pavements: When the City of New York paved over the existing mains of the Consolidated Gas Company (according to the graphic valuations given in the City's Exhibit '50' by Mr. Marks), it expended for pavements:

| | |
|---|---|
| "Over street mains..... | $4,784,000 |
| "Over house services.... | 766,068 |
| "Making a total of.... | $5,550,068 |

"The Consolidated Gas Company has paid nothing for this, but the Master has added it to the com-

pany's possessions" (Original, pp. 450-1; Reprint, pp. 301-2).

This proposed amendment was not allowed.

To the finding of the Master the Attorney General of the State of New York excepted, as follows:

"Twenty-fifth.—These defendants further except to the said finding that $12,636,000 is the value of the mains upon which the complainant is entitled to earn a return, whereas the evidence shows that the same were carried on the books of the company at the sum of $7,852,000, and that in said finding the Master has allowed $4,784,000 as an estimated increase of cost to relay all the mains of the said company by reason of the changes in the pavements of the streets of the City, and that the same represents no outlay on the part of the company" (Original, p. 497; Reprint, p. 330).

And the City of New York filed the following exceptions:

"Eighteenth Exception.—For that the said Master in his report on pages 38, 39 and 40, has found the value of the mains of the complainant on which it is entitled to a return as against the consumer, to be the replacement value based on the cost of reproduction of the same."

"Whereas said Master should have found said value of the mains to be the actual cost of investment therein by the complainant, less the depreciation, as the only fair basis between the complainant and the consumer, otherwise the consumer is charged with the burden of providing a return on an amount in excess of the actual investment of the complainant due to increased cost resulting from modern conditions, pavement, etc., without the consumer receiving the benefits which replacements, at the present time, under the present conditions, would give. That in no sense can the mains of the complainant, many of which have been in the ground for fifty years, be said to be at the present time of a greater value than the actual cost, merely

because modern conditions would not permit duplication of such identical mains at the same cost at the present time" (Original, p. 546; Reprint, p. 360).

"Twenty-third exception.—For that the said Master on pages 41 and 139 has fixed the value of the services on which the complainant is entitled to a return at $1,994,000, that such amount is based on the cost of reproduction and is excessive in that it capitalizes pavements and allows no depreciation; that the complainant has claimed such services depreciate to the extent of 25 per cent. (p. 99 of report); that the proper present valuation is the cost less depreciation, and such value does not exceed $1,222,228.37, as shown on the books on December 31, 1905" (Original, p. 548; Reprint, p. 361).

But nevertheless, when the Master's report came before Hough, J., it was sustained (157 Fed., 849). He said:

"As to the realty, the values assigned are those of the time of inquiry; not cost when the land was acquired for the purposes of manufacture, and not the cost to the complainant of so much as it acquired when organized in 1884, as a consolidation of several other gas manufacturing corporations.

"It is objected that such method of appraisement seeks to confer upon complainant the legal right of earning a fair return upon land values which represent no original investment by it, does not indicate land especially appropriate for the manufacture of gas, and increases apparent assets without increasing earning power. Analogous questions arise as to plant, mains, services, and meters; the reported values, whereof are the reproductive cost less depreciation, and not original cost to the complainant or its predecessors" (854).

"I think the method of valuation applied by the report to land, plant, mains, services, and meters lawful. (856) * * *

"It results, from these findings, that the value, as of the time of the beginning of this suit, of complainant's tangible property, invested in and representing the business sought to be regulated by the statutes and order in question, is as follows:

| | |
|---|---|
| Real Estate | $11,155,845 |
| Plants | 15,500,000 |
| Mains | 12,636,000 |
| Services | 1,994,000 |
| Meters and Miscellaneous | 4,100,000 |
| Working Capital | 1,616,000 |
| Total of tangible assets | $47,001,845" |

(861)

In the appeal to the Supreme Court of the United States in the twentieth assignment of error on the part of the City of New York, it is alleged:

> "*Twentieth.*—In sustaining the report of said Master in Chancery finding the value of the mains of the complainant on which it is entitled to a return as against the consumer, to be the replacement value based on the cost of reproduction of the same, whereas said Master should have found said value of the mains to be the actual cost of investment therein by the complainant, less the depreciation."

There is no question that the issue raised by the cost of paving over mains came before the Supreme Court of the United States on appeal and was passed upon by that court. These issues were properly presented by exceptions and were urged and discussed by counsel in their briefs and by the Court and counsel in oral arguments. In order not to encumber this case with lengthy quotations from the brief in the Consolidated Gas case, we beg to refer to these briefs and transcripts of oral arguments in the Consolidated Gas case, in order to point out to the Court that this question of paving over mains was actually before the Supreme Court and was covered by its decisions.

The Supreme Court of the United States on the appeal (212 U. S., 19) approved the method employed in determining the value of the tangible property of the company, and say:

"Altering the finding of the Court so far only as to place the value of the franchises at the time agreed upon in 1884, $7,781,000, the total value upon that basis of the property employed by the company would be $55,612,435" (48).

"And we concur with the Court below in holding that the value of the property is to be determined as of the time when the inquiry is made regarding the rates. If the property, which legally enters into the consideration of the question of rates, has increased in value since it was acquired, the company is entitled to the benefit of such increase" (52).

The Federal Court in the decision in the Willcox-Consolidated Gas case, 157 Fed., determined the present value of the company's property by determining the reproduction cost new less depreciation, and included in the value of the mains and services the cost to reconstruct those mains and services under the conditions then existing, and by that process increased the value of the mains and services over the actual cost to the company more than $5,500,000, and the method of determining that valuation was approved by the Supreme Court of the United States on the appeal.

*In re* Appleton Water Works Company, 6 W. R. C. R., 97, the Commission says:

"It is contended on the part of the company that the Commission erred in disallowing the estimated cost of laying mains and services in streets which are now paved, but which were not paved at the time such mains and services were laid (121).

"It was not the intention in such consideration of the subject to deny that the cost of reproducing the plant new, under the existing conditions, should include such estimated cost, but the inquiry was there directed more particularly to ascertaining the cost of reproducing the plant new in the manner of its actual construction. * * * For the purpose of the present inquiry it is conceded that the cost of

reproduction new, including the item of paving, must be regarded as an evidentiary fact in reaching a final conclusion, and it may be added that in no case, either for rate-making purposes or otherwise, has the Commission ever omitted from consideration the item of paving in ascertaining the cost of the reproduction new" (122).

Where there is no issue as to the plant being overbuilt or improvidently built, then the present value of the plant is the basis of valuation and the present value of the plant in such cases and under such circumstances is determined by the reproduction cost new less depreciation. *City of Knoxville* v. *Knoxville Water Co.*, 212 U. S., 1.

The question of the propriety of including in the value of mains the cost of removing and replacing pavement subsequently laid over mains arose in a recent case in the United States District Court of the Northern District of California, Second Division. The case is *Pacific Gas & Electric Company* v. *City and County of San Francisco*. The taking of testimony in this case has been referred to a Master, who has filed his report, but said report has not as yet come before the Court for consideration. The Master in that case treats at some length the question of mains under pavement subsequently laid. He states concisely the reasons advanced by the City of San Francisco why this item of value should not be allowed, as follows:

(1) It (the paving) does not represent property of the company;

(2) It does not represent investment of the company;

(3) It is taxing the rate-payer twice, once for the cast of installing pavement and second in the gas rate;

(4) It is misapplying reproduction theory.

He states that the objections of the City as quoted are identical with those of Commissioner Maltbie of New York Public Service Commission, First District, which were advanced in the case of *People* v. *Willcox*, *supra*.

He considers the Cedar Rapids case and dismisses the opinion of Smith McPherson, J., as not convincing, because the Court there had adopted as the measure of value the cost of a substitute plant, a test which the Master in that case rejects.

He then takes up the objections separately and comments on them. As to objection No. 3 above quoted, he says:

> "The point is made first that if subsequent paving over mains is included in the valuation of those mains, the consumer is in effect taxed twice, once for the paving and again indirectly in an increased gas rate. But this would be the case if the company was established and the mains laid after the paving was done; so that is not an essential objection, if objections properly exist."

As to objection No. 1, that the paving does not represent property of the company, he says:

> "In the second place it is urged that the item should be excluded *because the paving is not owned by the company;* but this misses the point, since no claim of that sort would be made, the gas company's contention being that the *pipe*, which admittedly it owns, is worth more by reason of its location, in the same way that its lands have appreciated in value, by reason of location with reference to the growing community around it. The error of dwelling on the ownership of the pavement itself pervades the whole opinion."

As to the objections that the paving does not represent an investment of the company, he says:

> "Finally, Commissioner Maltbie (and counsel

here), adds as a reason for disallowing that the subsequent paving represents no expenditure or investment on the part of the public service company. This is a logical objection and presents the essence of the decision."

Then he proceeds to consider that objection and considers authorities on the methods of arriving at present value, and concludes that the two theories of valuing a property, one by ascertaining the present value through reproduction, and the other by determining the actual investment, can not logically be applied in the same case. He says:

"We must, in truth, face the fact that present value is one standard of valuation and actual investment is another and quite different standard of valuation. Of course, using the latter standard, we should omit such an item as subsequent paving. * * *

* * * * * *

"The theories come sharply into conflict on this question of paving over mains. The question is, which theory is settled by authority? It will not do for a rate-fixing body or a court to apply cost-of-reproduction where it leads to reduced rates, and to abandon it where it leads to advanced rates. Consistency is essential to justice. It is not at all impossible that the situation as regards paving over mains might be reversed; that mains might originally be laid under asphalt and concrete, and in the course of years improvement in the paving might lead to replacement with pavement of equal or greater efficiency at largely reduced cost. In neither case would the *pavement* belong to the utility. But in the valuing the company's mains would we apply actual investment and thus prescribe high rates, or cost of reproduction, implying reduced rates to the consumers?"

* * * * * *

"Enough has been said to show that 'present value' is not equivalent to 'investment,' 'original

> cost.' I can, at this time, think of no better method to determine present value (market value being eliminated), than the method of cost-of-reproduction less accrued depreciation. If this is not actually established in law as the proper method, it certainly represents the trend of the decisions."

He concludes:

> "I conclude, therefore, both on reason and authority, that the City's claim of deduction of $644,000 for the item of paving over mains, must be disapproved."

We submit that the Master in the Lincoln Gas case was in error when he refused to allow the value of $146,682 as a part of the Reproduction Cost of the Mains and Services. This is a considerable sum, and the Company demands that it should be included in the value of its property. The Master says that "To permit a public service corporation to justify a rate claimed to be excessive by pointing to a costly street improvement made by the public at its own expense, hardly accords with good sense." From this we must conclude that the Master believes it "accords with good sense" to apply the reproduction method of valuation only where such method would succeed in reducing the value of the company's property, and to abandon such methods where the contrary might be the case. We submit that it better accords with good sense and good justice to adopt a method of valuation which is applied consistently throughout the case, and not one which may be employed or ignored, as the Master, in the exercise of his discretion, deems expedient.

On the question of the cost of pavement subsequently laid over mains, there was considerable testimony introduced by the Company and by the City. The net result in dollars between the estimates of the City and the company's witnesses is explained to a considerable

extent by the fact that the City sought to reduce the cost by the theory that in reproducing the Company's property they would save expense by laying mains in the part of the streets known as the "park-ways" instead of under the paved portions of the streets where the mains now are (Transcript, p. 1123).

The ordinance of the City was introduced showing in effect that the gas mains were required to be laid by the Company out in the paved portion of the street, and Mr. George L. Campen, former city engineer, testified that the Company is required to secure a permit for the laying of gas mains, and that the engineering department of the City required the mains to be laid out in the streets so that the mains would be under the paved portion of the street. The position taken by the witness for the City was in effect that he would expect to get the law changed in this respect, and would expect to get permission to lay the mains back in the parkway. Mr. Campen testified that the water department of the City as well as the Gas Company was required to lay its mains out in the paved portion of the streets. The evidence shows that the parkways are plotted and planted with grass, shrubbery and trees, and generally stand up several feet above the paved portion of the street. The evidence shows that the construction of the gas mains in the parkway would be injurious to the trees and shrubbery and in the case of escaping gas from the mains would result in the killing of the trees and shrubbery, and shows that it would be impracticable from an engineering standpoint to place a single main on one side of the street back in the parkway, with the expectation of being able to serve both sides of the street; that there would be additional cost in sinking the mains deep enough in the parkway to carry the services from the main across the street under the paving to tenements on the opposite side of the street or an additional cost

in installing drip pots with each service crossing the streets from the main; that with such additional cost in order to get back into the parkway you would still have to cross the paved intersection of the street with the mains in each block; that practically the paved intersection of the street is equal to one-fourth of the distance across the block, so saving could only accrue the three-fourths in getting back into the parkway. The City presented no computation on the additional cost in placing the mains back in the parkway, and presented no denfiite assurance that the law would be changed to permit it. In this situation, even if his theory were admitted, there is no basis in the record for a valuation of the mains and services except as they are now located.

Mr. Lea's Exhibit "425," subdivision "E" (Transcript, p. 1372), shows the total number of feet of mains under paving to be 190,037, and the City's witness, figuring on the parkway, shows the length of mains under paving to be 68,978 feet, or a saving of 121,459 feet, made up as follows:

Mr. Lea shows 1,740 feet of 1¼-inch mains under paving, and for this amount A. D. Adams, in the reproduction of the property by placing the mains back in the parkway, would show 348 feet under paving. Mr. Lea shows 97,519 feet of 2-inch main under paving and A. D. Adams shows 19,176 feet, or a difference of 78,343 feet. Mr. Lea shows 406 feet of 3-inch main under paving; A. D. Adams by his method shows 81 feet under paving. Mr. Lea shows 61,023 feet of 4-inch mains under paving, and A. D. Adams shows 19,648 feet under paving, or a difference of 41,375 feet. Mr. Lea shows the net construction cost of the paving over the mains to be $111,365, and A. D. Adams by his method for reproduction of the property shows a net construction cost for paving over mains of $34,518. So the difference

in dollars due alone to the method employed by A. D. Adams in placing the mains back in the parkway is $76,847. This is a substantial sum, and it may be well to inquire if there is any authority or precedent justifying the method employed by the City. It seems fundamental in determining the present value of this property by the reproduction cost less depreciation, that you would be compelled to reproduce this property located and situated as it is and not substitute for it some other kinds of property, or property in some other situation. You cannot measure the present value of this property by determining a value of property which in the judgment of the witness may be the equivalent. It is this particular property, situated as it is, that is to be valued, and the reproducion cost of it as situated is accepted as the measure of its present value after deducting depreciation. If the City may place the mains back in the parkway, which the City did not permit the Company to do, and in that way make a saving in cost, then the City might substitute different sizes and kinds of mains, and might work a saving in the reproduction cost of a distribution system equivalent in capacity and service to the one in question. If such a basis were permitted then the Court would have to deal not only with the question of values but with the engineering questions as to whether the proposed substitute was practical or the equivalent, and the engineering problems and opinions upon that subject would probably be more at variance than opinion evidence on value alone. The courts have been careful to restrict the inquiry to the question of the reproduction cost of the present property and have not permitted engineers to speculate on what they would regard as the equivalent. This would seem especially appropriate where the engineer for the city is without experience and his advice limited to a study of statistics.

In the Willcox-Consolidated Gas Company Case, 157 Fed., 849, the Court in considering the proper method of valuation, say:

> "In every instance, however, the value assigned in the report is what it would cost presently to reproduce each item of property, in its present condition, and capable of giving service neither better nor worse than it now does. As to all of the items enumerated, therefore, from real estate to meters, inclusive, the complainant demands a fair return upon the reproductive value thereof, which is the same thing as the present value properly considered" (854).

This method of valuation and of determining the present value of the property was approved by the Supreme Court of the United States on the appeal in this case.

*Kennebec Water District* v. *City of Waterville,* 97 Me., 185:

> "To enter upon a comparison of the merits of different systems—to compare this one with more modern systems—would be to open a wide door to speculative inquiry, and leads to discussion not germane to the subject. It is this system that is to be appraised in its present condition and with its present efficiency."

To the same effect *Brunswick & T. Water Dist.* v. *Maine Water Company,* 99 Me., 371.

*Amount of Cost of Service Pipes Collected from Consumers.*

In his findings as to the value of Service Pipes, the Master eliminated the sum of $30,484, which is the sum collected by the Company from the consumers to defray part of the expense of installing said service. His reasons for so doing are expressed in his report, as follows:

"Whether the reason for excluding the cost of pavement over mains from the valuation requires also the exclusion of the cost of service pipes paid for by the gas consumers, has not, to my knowledge, been adjudicated; but the governing principle is, it seems to me, as applicable in one case as in the other." * * *

"Of course, in valuing a utility, no distinction can be made between property acquired by purchase and property acquired by gift or otherwise. The value of whatever the company owns and devotes to that public service regardless of the means or method of acquisition is a just and proper standard by which to measure reasonable rates. But it can not, I think, be said, looking at the matter broadly, hat the Company is the owner either technically or equitably of the service pipes. It bought and put them in, it is true, but when it was reimbursed by its patrons for the cost, can it be supposed that it still intended to retain title and the right to remove them at pleasure? A more reasonable inference is that in every case both parties to the transaction regarded the pipes when paid for as belonging to the owner of the tenement with the right on his part to use them if so inclined in connection with a service furnished by a rival company or for any other purpose, even though entirely unrelated to the gas business. They can not, it seems to me, consistently with the principle above stated by Justice Harlan, constitute in part the basis for a rate that can be regarded as entirely fair to the public. The gas consumers have paid $30.484 of the amount claimed by the company for putting in service pipes, and this item I have eliminated from the valuation" (Transcript, pp. 43-4).

This is another important item in dispute. The comparatively small portion of the total cost of putting in these services that has been collected from the property owners is shown in Exhibit "89," (Transcript, p. 1826), and is shown to be in the amount of $30,484.43. In the main the costs were borne by the Company, however,

and the services constitute an essential part of the distribution plant. The net construction cost for the services, exclusive of pavement as shown by Mr. Lea, is $111,689, and as shown by A. D. Adams is $69,939.39.

The Net Construction Cost, as found by the Master, is $76,116. The difference between the Master's findings and Mr. Lea's estimate is $35,573, of which $30,484 is accounted for by the Master's refusal to allow, in the value of the Services, the amount repaid by customers.

At this point we shall only consider the claim of the company that it is entitled to have considered here a fair valuation of all of the property used by the Company in the service of the public.

The Court will find it necessary to discard the petty contention of the City, that because these services are laid in private grounds, in part at least, they must be treated as he private property of the consumer, and regarded as a gift or gratuity bestowed by the Company for which it can claim no compensation. Mr. Justice Brewer once answered such a contention, as follows, in *National Water Works* v. *Kansas City*, 62 Fed., 853, 865:

> "The fact that it is a system in operation, not only with a capacity to supply the City, but actually supplying many buildings in the City—not only with a capacity to earn, but actually earning—makes it true that 'the fair and equitable value' is something in excess of the cost of reproduction. The fact that the company does not own the connections between the pipes in the streets and the buildings—such connections being the property of the individual property owners—does not militate against the proposition last stated, for who would care to buy, or at least give a large price for, a waterworks system without a single connection between the pipes in the streets and the buildings adjacent. Such a system would be a dead structure, rather than a living and going business. The additional value created by the fact of many connections with buildings, with ac-

> tual supply and actual earnings, is not represented by the mere cost of making such connections. Such connections are not compulsory, but depend upon the will of the property owners, and are secured only by efforts on the part of the owners of the waterworks, and inducements held out therefor."

The company cannot compel any property owner to lay a service into his house. Neither can the property owner tap the Company's mains. In a sense the pipe imbedded in the private ground and tenement of the consumer may be regarded as private property, just as is the main in the street the property of the company. It is the connection which joins the private service with the Company's main that makes the distributing plant useful. The service which extends into the private tenement is an indispensable part of the Company's distribution system. The drop and the instrument extending into the private tenements are essential parts of the local telephone system. In both cases the equipment installed in private tenements are universally regarded as parts of the utility equipment.

The Gas Company has borne the cost of installation of these services, including the pipe connections to gas stoves and ranges. The money was prudently expended, and is used in giving the public service. It was a public duty of the Company to properly stimulate the sale of the utility's product, and to do so was essential to its profitable operation. From whatever angle the situation is viewed, the services and connections must be valued as a part of the Company's property on which it is entitled to a full return.

The issue here so far as it respects the $30,484 contributed by certain consumers for gas services is not an issue of ownership of property. The services throughout are a part and portion of the distribution system

and are a part and portion of the property being used in the public service. The ownership of that property is not the issue and is unimportant in the matter of valuing the property. There is to be a fair valuation upon all of the property used and useful in the manufacture and sale of gas. If a portion of the consumers have contributed $30,484 towards the construction of the services the public cannot claim the benefit of that investment and cannot claim that that property shall not be valued here as a part of the distribution system. To do so would be to deny any return upon that investment, and give to the public a benefit of that reduction in value without compensation. If these services to the extent of $30,484 have been paid for by certain consumers, then those certain consumers who made that contribution are entitled to look to the Company for an adjustment by reason thereof and it is no concern of the general public. The public or the City in this proceeding is in no position to say that the investment in these services to the extent indicated and contributed by the private consumer shall be a gratuity to the public and the use thereof shall be uncompensated. Those investments in the services which constitute a part and an essential part of the distribution system are to be valued as a part of the property which is to furnish this service. The ownership or the question of payment for the property of the company is not an issue. The situation, however, with respect to these particular services might call for an adjustment by the company with those who contributed the money, but such adjustment could not accrue to the benefit of one who made no such payment.

The authorities heretofore cited are to the effect that in the valuation of the property the Courts or Commissions do not inquire into the manner in which the property of the utility corporation, devoted to the public use,

was obtained, whether by purchase, inheritance or as a gratuity. The ownership of the property is not the question to be determined. It is the valuation of the property and all of the property involved in the manufacture and sale of gas.

*Tighe et al.* v. *Clinton Telephone Co.*, 3 W. R. C. R., 126.

*In re Application Public Service Gas Co.* (N. J.), 1 B. P. U. C., 470.

In this view of the law and under the facts as shown, there can be no serious question or controversy in the matter of valuing all of the distribution system and valuing all the property that is used and useful in the manufacture, sale and distribution of gas in Lincoln.

The testimony on the former hearing showed that the company had expended on account of piping for gas ranges $16,500 (Transcript, p. 116).

Mr. Honeywell testified:

> Q. "How about connections for gas ranges and so on?"
>
> A. "We pipe to the new range the first time without charge; after that we charge the consumer for it." (Transcript, p. 1273.)

The $16,500 for this item represents an actual expenditure by the Company and is a part and portion of the property used and useful in the manufacture, sale and distribution of gas and of course is to be included in the valuation of the property. This amount represents the net amount charged into the construction account of the Company after all credits have been allowed on account of any payments by the consumer or on account of any charges for any part of the labor and material entering into the operating accounts. It is a part of the investment of the Company in that portion of the distribution system and is to be valued as a part

of the distribution system of the Company. No valid objection or good reason can be given for excluding this investment in piping for gas ranges. The gas ranges in stock and the gas fixtures are a part of the Company's property and have been inventoried and valued in this proceeding. The item was allowed upon the former hearing and should stand as allowed by the court.

In *State Journal Printing Co.* v. *Madison Gas & El. Co.*, 4 W. R. C. R. 501, the Commission says:

> "To put in piping or connections between the curb and the house, wholly or partly at their own expense, is a practice that is quite common among public utilities. This practice is undoubtedly quite effective as an aid in extending the business. * * * In order to be a success from a financial point of view, public utilities, the same as other enterprises, must have customers, and these, even for the former, are not always secured without cost. This is especially true in cases where the desire is to secure this business more promptly or with less delay than that which is quite common where the demand for the services is left to take its course and is not stimulated by artificial means. In a general way it can perhaps, be said that the greater the business of such a utility is, the lower are also its rates and the better the services it renders. Extensions in their business, even when secured through the expenditures of money and efforts are therefore in line with sound business principles and in harmony with the best interests of the plant as well as of its customers" (588).

In view of the above authorities and considerations, we submit that the Master erred in refusing to allow that portion of the cost of Services which was paid by the consumer.

**Working Capital.**

The Master in his discussion of the subject of Working Capital in his report concedes the necessity of making some allowance for this item in determining the value of the Company's property, which should be added to the aggregate values of the other items of such property. His only problem, therefore, was to determine the proper amount of said allowance. In the former trial of this action, Munger, J., allowed $50,000 for Working Capital. Mr. Lea's estimate for the proper allowance to cover this item was $72,037.64. (Transcript, p. 418.) Mr. A. D. Adams for the City gave an absurd estimate that $20,000 was a sufficient sum. The Master allowed $60,000, but why he picks out this particular sum is not quite clear. He states in his report:

> "That evidence upon this branch of the case is far more complete than at the former trial, and relates to a different date, but it does not seem to require a very much larger allowance than was then made by the court." (Transcript, p. 46.)

Just what elements the Master took into consideration in calculating his figure of $60,000, is not disclosed by his report.

Mr. Lea in Exhibit "7," section B (Transcript, p. 1300), sets out in full detail the items constituting Working Capital and by his method showed clearly his familiarity with the usual custom in the treatment of this item of plant value. He said:

> "The Company in the conduct of its business has certain amounts owing to it, but on the other hand, it owes other people certain amounts for the current operation of its property, so what we are trying to arrive at here is the difference between those two, which is the amount of money the Company must have for the conduct of its business as Working Capital."

He testified that the amount of Working Capital herein used was reduced to the minimum and considered it to be a reasonable Working Capital for the business being done here by a concern of this size; any additional credit which the Company might be able to get through its purchasing power would be reflected in the value in the property as a whole and not in the present worth of the Working Capital as such (Transcript, p. 418). The net result of his computation is that he has taken as Working Capital the difference between the current assets covering material, accounts receivable, advance payments for insurance and expenses, and cash on hand and in banks, and deducted therefrom the current liabilities of the Company, representing the current credits in the form of bills payable, accounts payable, amounts due for wages and salaries, accrued interest and customers' deposits. His net result, as an amount for Working Capital, is $72,037.63.

Mr. Wettling, speaking with regard to the amount of working capital as set up by Mr. Lea, said:

> "A. The Exhibit '7-B' • • • amounting to $72,037.83 would constitute then the difference between the current assets and current liabilities and is commonly considered working capital, and is in conformity with the usual custom for arriving at the working capital of a concern" (Transcript, p. 1273).
>
> "Q. If these balances are correctly stated, would it indicate that the difference there was the capital actually employed at the time these balances were taken for that working capital? A. Yes, it indicates that as a necessary part of the capital of the Company" (Transcript, p. 1274).

The testimony clearly indicates the necessity for the allowance of this element of value and the exhibits clearly set out the items which make up the amount and a careful analysis of the exhibits will demonstrate that none of the items can with justice be omitted.

Whitten, in his work on *Valuation of Public Service Corporations*, Chap. XIV, cites a number of cases and quotes part of the decisions relative to this matter of working capital from some of the cases at pages 289 to 302, inclusive.

To cite the cases which specifically uphold the propriety of allowance for working capital in arriving at the fair value of a public service corporation would be to cite practically every rate case decided by the Courts and Commissions in the past ten years, but as indicating the reasonableness of the claim in this case we call the Court's attention to the amount and percentages allowed in a few of the well-considered late cases.

In the Des Moines Gas case, Master's opinion and findings, page 60, allowance is made for working capital $140,000 and in addition thereto for meters in stock $6,603. This is equivalent to 7 per cent. on the physical value of the plant. In *Bonbright* v. *Geary*, 210 Fed., 44 the Court raised the allowance of $23,500 made by the Commission to $50,000; the total value of the plant was not in terms definitely determined by the Court, but the allowance is between 6 and 8 per cent. of the value, so near as may be determined.

In *State Journal Printing Co.* v. *Madison G. & El. Co.*, 4 W. R. C. R., 550-554, and page 556, the Commission allowed $49,674 on a total reproduction value of $946,-602, being 5.5 per cent. plus.

In *Pioneer Tel. & Tel. Co.* v. *Westenhaver*, 29 Okla., 429, the Court criticised as inadequate the allowance of the Commission of $2,433.56 and added thereto $7,249.24, making a total allowance for this item of working capital of $9,682.80 on a total plant value of $94,663.69 and being over 10 per cent. In Public Service Gas Company case reports of B. of P. U. Commissioners of New Jersey, Volume 1, 490-493, the Commis-

sion allowed an amount equivalent to 5.3 per cent. of reproduction new value, including going value, which amount was practically 7 per cent. of the reproduction value excluding going value. In the Cedar Rapids Gas case the Court allowed an amount equivalent to practically 9 per cent. of the value for the plant.

In the *Lincoln Tel. & Tel. Co.'s Application No. 1637*, Nebraska State Ry Commission, decided June 26, 1913, the Commission said:

> "Working Capital.—No telephone business can be properly conducted without a certain amount of working capital, in the form of cash in banks and accounts receivable. These latter items will necessarily fluctuate with the size of the plant, with the diligence observed in making collections, and somewhat with the ability of the people to pay promptly, as well as the habits of the communities in paying their bills. In the meantime the corporation must pay the wages of its employes promptly, must also pay promptly for stores and supplies, or, if it does not, must pay interest thereon and funds so employed or so withheld from the use of the corporation for its legitimate needs, must necessarily pay rate of return, as well as funds employed in the actual physical plant placed at the disposal of the public.
>
> "From studies made, the Commission feels that an allowance of about $109,000 for working capital, together with stores and supplies, for a company of this size, would seem reasonably necessary; such allowance would be the equivalent of 6 per cent. on the reproduction value."

Calculating on this same basis, the allowance for this item in this case would have to be considerably in excess of $75,000, and based on the various percentages allowed in the cases above cited, the allowance in this case would vary between $63,000 and 120,000 approximately.

That there can be no question of the propriety and necessity for an allowance in a substantial sum for this item is clearly shown in the printed record in this case, where, on the basis of the value of the plant and business in 1907, the Court allowed $50,000; this amount was insufficient at the time, but assuming it to be proper as of that time and making due allowance for the growth of the business in the interim and the additions to the plant amounting to approximately $250,000, as disclosed in the record, the sum now contended for cannot be questioned and must be determined as reasonable and conservative.

The calculation by which Mr. Lea arrives at his amount of Working Capital is accurate as well as logical. Why the Master deemed it to be too high or why he chose the figure $60,000 or what was the Master's method of arriving at that figure, is not disclosed by the record. We submit that a proper allowance for Working Capital is $72,037.63.

### 1912 Operating Expenses.

The Master next takes up for consideration the Operating Expenses for 1912. There is no question of the actual facts. They are:

| | | |
|---|---|---|
| Cubic feet of gas sold in Lincoln | | 227,297,000 |
| Gross revenue on Lincoln business | | $273,175.93 |
| Operating expenses, as shown by Company's books | $173,689.87 | |
| Plus excessive residual credit | 2,722.23 | |
| Plus depreciation reserve, as estimated by Mr. Lea | 20,865.03 | 197,277.13 |
| Net Revenue | | $75,898.80 |

(Transcript, p. 48.)

The Master limits himself in his discussion of these Operating Expenses for 1912, to two points, to wit:

"(1) To what extent, if at all, were the disbursements made by the Company for Operating Expenses so recklessly or improvidently made that they ought not, in justice and fairness to the public be allowed and considered as legitimate factors in determining what constitutes a reasonable rate for gas in the City of Lincoln; and,

"(2) What amount, in addition to the disbursements for the renewals and repairs shown in the record, should be allowed as a depreciation reserve?" (Transcript, p. 48.)

The first item of so-called reckless and improvident disbursements, which the Master takes up, is the cost of promotion of new business, $19,692. Although admitting that money must be spent to stimulate business, the Master said that this sum is "so extraordinary as to arrest attention and excite inquiry at once." He calls attention to the fact that litigation was pending to reduce the Company's rate; that it was the Company's "paramount duty" to be conservative; and yet he can not discover any "judicious retrenchment or wise economy." He thinks that $12,000 a year is a sufficient sum for this purpose, and that is what he decides to allow, although he admits, "My conclusion upon the point here considered is one in which I do not feel any high degree of confidence, but it is the one that seems, so far as it may exert an influence on the final decision, best calculated to bring about a just result" (Transcript, p. 50).

The Master seems to have overlooked for the moment his language used in discussing the question of Working Capital He was there considering the advisability of the Company's investing money in gas appliances to be sold for the purpose of stimulating the purchase of gas. He there said:

"The company was, in keeping and selling gas appliances, employing what seems to be a well rec-

ognized and perfectly proper means of getting business. Increase of business is, or ought to be, beneficial to the public as well as to the company. * * * The fact that those appliances were perhaps handled at a loss is not at all decisive. *In all lines of business, it is commonly regarded as sound policy to incur a present inconsiderable loss with a view of securing thereby a larger future gain*" (Transcript, p. 46).

But when the Master comes to the question of expenditures for new business, his attitude in regard to such disbursements seems to have undergone a change.

Now there is an implication in the language the Master uses, when considering the operating expenses for 1912, which the Company asserts is entirely without foundation. The implication is that the Company, facing this suit, proceeded to spend money recklessly and improvidently, so as to pad its operating expense account with amounts disbursed for new business, and with excessive executive salaries, with a view to defeat this rate ordinance. This implication is unwarranted by the facts as they appear in the record, and we propose to demonstrate this by a consideration of the testimony.

*As to Amount Expended for "New Business."*

This utility was created in 1873. From that year to 1902 its sale of gas increased from 0 to 75,691,000 cubic feet per annum. In 1902 a "new business department" was formed and a separate account was placed on the Company's books, to which was charged all money disbursed by this department. This department had a dual purpose, one of which is not revealed in its name, *i. e.*, to secure new business and to hold old business. The formation of this department was concurrent with a campaign for new business which the Company decided to institute. The result of the campaign is shown

in the increase of gas sales secured. The actual figures speak for themselves. From 1902 to 1912 the number of cubic feet of gas sold annually increased from 75,691,000 to approximately 230,000,000. In other words, although it took the utility thirty years to bring the annual sales from 0 to 75,691,000 cubic feet, yet through the efforts of the new business department, in ten years the sales were increased from 75,691,000 to 234,386,000. We beg to call the Court's attention to the chart showing in the form of a curve the precise way the increase occurred (Transcript, p. 1358). In 1900 the population of Lincoln was approximately 40,000 as shown by the United States census, while in 1910 it was approximately 44,000, an increase for ten years of only 4,000 inhabitants; so that the increase in gas sales was due solely to the activity of the Gas Company and not to any unprecedented increase in the population of Lincoln.

It must not be supposed that this increase was accomplished without the expenditure of considerable sums of money. The records of the Company show what these disbursements were:

| | |
|---|---|
| 1903 | $5,578.97 |
| 1904 | 16,400.65 |
| 1905 | 15,919.73 |
| 1906 | 13,432.41 |
| 1907 | 13,394.04 |
| 1908 | 11,634.96 |
| 1909 | 14,019.36 |
| 1910 | 16,152.75 |
| 1911 | 18,985.52 |
| 1912 | 19,692.64 |

(Transcript, p. 1386.)

From this table it will appear at once that the Company spent more money in 1904 than it did in any subsequent year until 1910. And yet there was no rate suit

pending in 1904. The rate ordinance was passed in November, 1906, and during the years 1906 to 1908 the expenditures decreased from $13,432.41 to $11,634.96, while this suit was actually in litigation. Does this show any tendency on the part of the Company to needlessly increase its disbursements? We submit that the contrary is the case.

The reasons for the increase from 1909 to 1912 were given by Mr. B. C. Adams, the manager of the plant, in his testimony (Transcript, p. 668). He stated that with the introduction of the Tungsten electric lamp, current could be bought so cheaply for illuminaton purposes that electricity began to supplant gas in the lighting field. The old customers were substituting electric lights for gas lights, and the newer houses were not being piped at all for gas lights. The result was that the use of gas was being confined more and more to cooking purposes, and inasmuch as Lincoln has no large industries using gas, it began to appear that the field of operation for gas sales was being limited to kitchen ranges. That being the case, it was necessary to put forth extraordinary effort to work that branch of the business to the utmost; and this took money, and the Company spent it for that purpose.

Mr. B. C. Adams predicts that electricity may eventually supplant gas for heating and fuel purposes, as well as lighting, and points to the number of electric irons that were bing sold in place of gas irons (Transcript, p. 668-9).

In view of all these circumstances, the expenditure of the amounts appearing in the new business account was an urgent necessity, but the greatest sum thus expended in any one year was $19,692.64 in 1912. Was this excessive? The Master seems to think so. We can determine this in a convincing manner by the Company's experience in the following year, 1913. In 1913 the Com-

pany expended for holding and acquiring business the sum of $10,399.90 (Transcript, p. 2062, sub. G. 14), which is appreciably lower than the year before. What was the result? The sales of gas in the City of Lincoln *fell off* from 227,297,000 cu. ft. to 219,248,900 cu. ft.; the gross returns from gas sales fell off from $273,175.93 to $265,124.17, and the net earnings from $75,898.80 to $63,294.29 (Transcript, p. 2064).

This was the first time the Gas Company's sales had decreased since 1895. We submit it is apparent that the falling off was due in a marked degree to the reduction of the disbursements for holding and acquiring business: And yet the Master sees his way clear to grant an allowance of only $12,000 for 1912 to cover this expense. We insist that his conclusions can not be justified by the evidence.

*As to the Amount of Executive Salaries.*

The other item of expense, which the Master criticises, is the amount of executive salaries. He states that they "in comparison with those paid by other utilities producing and selling about the same amount of gas, are apparently excessive." He fails, however, to make any actual comparison with any other specific utilities, and we are, therefore, at a loss to know the basis of his conclusions.

This matter is such a small one that we would not take the time to discuss it at length, unless it was so obviously an erroneous conclusion, and unless there was not contained in the Master's remarks a rather serious implication. The Master states:

> "A majority of the stock of the Lincoln Gas & Electric Light Company is owned and controlled by Henry L. Doherty & Company, of New York, a copartnership engaged in banking and manufacturing and controlling through stock ownership over

one hundred utilities—gas, water, electric and transportation—which it operates in practically the same manner as it does the Lincoln plant" (Transcript, p. 51).

The statement that Henry L. Doherty & Company own or control a majority of the stock of the Company is quite untrue. The evidence shows clearly that such is not the fact. The point was brought up during the hearings and definitely settled by the evidence (Transcript, pp. 778, 782). There is no foundation for the Master's remarks, and it becomes especially serious because it seeks to convey the impression that Henry L. Doherty & Company, as majority stock owners, are mulcting the Company by means of excessive executive salaries.

The record shows the salaries are as follows:

| | Pres. | V. Pres. | Chr. Bd. Direct. | Mngr. | Sec. and Treas. | Asst. Sec. and Treas. |
|---|---|---|---|---|---|---|
| 1904 | $3,000 | | | $1,000 | $1,000 | $300 |
| 1905 | 3,000 | | | 1,450 | 1,209 | 300 |
| 1906 | 3,000 | | | 1,800 | 2,999 | 300 |
| 1907 | 3,000 | | | 2,325 | 1,083 | 300 |
| 1908 | 3,000 | | | 2,500 | 1,200 | 300 |
| 1909 | 3,000 | | | 2,400 | 1,500 | 300 |
| 1910 | 2,126 | $2,200 | $2,750 | 2,750 | 1,675 | 300 |
| 1911 | 2,266 | 800 | 3,000 | 3,000 | 1,375 | 300 |
| 1912 | 2,400 | | 3,000 | 3,600 | 1,500 | 300 |

(Transcript, pp. 1568-84.)

During the period covered in the above tabulation it appears that the salaries paid the members of the firm of H. L. Doherty & Company were as follows:

From 1904 to 1909 Mr. Doherty was paid $3,000 as President; from 1910 to 1912 he was paid $3,000 as Chairman of the Board of Directors. From 1910 to 1912 Mr. F. W. Frueauff was paid a salary of $2,400 a year, first as Vice-President and then as President. When he ceased to be Vice-President no salary was paid to that office.

The Master evidently thinks that the Company did not get value received for these salaries, but the evidence shows clearly how the Lincoln Company was benefited by its connection with Henry L. Doherty & Company. This was proved quite clearly by Mr. B. C. Adams, the Company's manager, whom the Master describes as "an exceptionally efficient and capable man, having a thorough technical and general knowledge of the gas business." He testified as to the general benefits derived from the connection with Henry L. Doherty & Company as follows:

> "We do not have regular meetings, hardly, but occasional meetings of the managers that operate in consultation with Henry L. Doherty & Company. I attend those meetings, in which all the engineering problems in these utilities are gone over to a large extent; the purpose of these meetings is to discover improvements and modern methods of operation to make improvements in our operation; have endeavored to keep up with the improvements and modern methods and keep myself advised of any new schemes that seem practicable; consult universally with Henry L. Doherty & Company in matters of engineering problems that arise in this company, and regard that as good practice; I don't think anyone operating a property of this size, or any size, should take it upon themselves to give the last word in all the undertakings necessary to develop the property, it wouldn't be fair; it is customary when troubles are developed and schemes for meeting them to submit it to Mr. Doherty and the Doherty Company; Mr. Doherty acts as a consulting engineer for this company, and their own properties; at all times I have the advice and benefit of that engineering company and avail myself of it absolutely. * * * I hardly think it would be justifiable to make one person carry the responsibility in connection with the operation of this business, it has been usual in other companies to employ competent engineers, or consulting engineers,

or firms for the purpose of getting their ideas as to methods of operation and the policy to be established in conducting the business; I hardly think it would be wise for this company to attempt to operate as an isolated property without obtaining consultation from those who are in touch with other properties, other conditions, and various methods of operation. * * * If I were the owner and operator of this gas plant I would be tickled to death to get the services we have gotten and are getting from Doherty & Company, and would make an arrangement with them to pay Mr. Doherty $3,000 a year, and Mr. Frueauff, $2,500 a year, merely for the privilege of having the benefits we now derive from their connection with this company. I feel it would be a proper expenditure of the money and a proper charge to deduct from the operating expenses here and paid by the gas consumers of this community. * * * I feel that the services of Mr. Frueauff's brother are of sufficient value to this company to justify the expenditure of $600 a year, and have used and felt the need of his services in the operation of this plant. He has transacted business in this community in connection with the dollar gas case, has worked on the record some, and outside of that he has rendered services locally in connection with the $500,000 three-year notes and he and Mr. Strode consulted occasionally; I don't think Mr. Strode could have handled all that transaction perhaps, but Mr. Frueauff with his New York City connections was able to handle a good many details that Mr. Strode could have handled by going down there, not with the financial end in New York, but the local end. * * * Doherty & Company negotiated the transaction for the $500,000 notes, which were sold, I think in the Fall of 1911, to take up some of our bonds, they have also taken part by raising funds or financing this company within the past five years, by taking up the one year notes issued in 1907, when they became due and carried them themselves for some time; these notes I think were for $100,000 and were held locally to a certain extent by banks and individuals. * * *

Those notes were taken up by Doherty & Company the year after they were issued, they were one-year notes and were taken up when they were matured, in taking up the notes the holders drew on Doherty & Company with the notes attached and Doherty & Company provided the funds to take care of them. * * *

"As to any other transaction since Doherty & Company have been connected with this Lincoln Company, in addition to the $500,000 note transaction, I think they carried the bond in this dollar gas suit put up by the National Surety Company; in connection with this case the company, by a bond to reimburse the consumers for this extra 20 cents in case the Court should hold against the company, in giving that bond the company had to indemnify the surety company; in addition to this $100,000 note transaction and the $500,000 note transaction and this indemnity bond furnished the Doherty & Company, since they have been connected with this property, have at times paid bond interest and we have reimbursed them for it later. * * *

"Returning to the other subject for a moment I am able to name another transaction since Doherty & Company became connected with the company in which they financed the Lincoln Company, when we bought the five hundred cubic foot holder, Doherty & Company was able to get the Western Gas & Construction Company to take notes that they would not have taken had we been standing on our own ground; I think we gave them notes for one of our water gas machines and that was absolutely due to the connection Doherty & Company had with the property. They have always been able to establish a credit for this company with concerns that might be caused to bear down a little heavily to make us pay up; I remember when I was first manager, we had a big account with the Maryland Motor Company that we couldn't pay, and Doherty & Company were finally able to get the Maryland Company to take our notes; they were also able to get the Detroit Stove Works to take notes for amounts we owed and couldn't pay them.

and they wouldn't have taken them if we had attempted to negotiate that sort of a transaction ourselves; I think they also got the Denver Gas & Electric Company to take notes for amounts we owed for coke we got, and I am sure they wouldn't have taken them had we done it ourselves. * * *

"C. H. Dockery & Company are the people who sell us meters. I imagine that was an additional discount we received from them that was credited on their New York books, the meter transaction was conducted through the New York office in the first instance, but the New York office did not pay for the meters; this is their connection with that transaction, in their purchase of meters for all of their companies they are able to get a lower price on meters" (Transcript, pp. 603, 604, 619-622).

So it appears in a general way that the Lincoln Company profited by its connection with Henry L. Doherty & Company in the following respects:

(1) General engineering advice and supervision on construction and operation.

(2) Financing.

(3) Extending the company's credit.

(4) Securing discounts in the purchase of supplies.

The value of these services as compared with the amount of the executive salaries paid has been amply demonstrated by the testimony of Mr. B. C. Adams himself, who is concededly in a position to know the facts.

The Master makes reference to a comparison of the company's executive expenses with those of other utilities. The City brought up the subject of what was shown by the returns in the Massachusetts companies as regards executive salaries. Eventually an exhibit was introduced showing what the comparison was. The Lincoln Company's expenditures for "salaries, office, distribution and general expenses" showed an average of

26.02 cents per thousand cubic feet of gas sold. Referring to Exhibit "425-V" (Transcript, p. 1392), the Court will note the expenditures of the Massachusetts companies for "salaries, office, distribution and general expenses" in cents per thousand cubic feet of gas sold.

For the year 1911:

Boston, .12367; Brockton, .25321; Cambridge, .13361; Charleston, .11529; East Boston, .20962; Fall River, .16418; Haverhill, .48407; Lawrence, .12062; Lowell, .18419; Lynn, .17054; Malden, .21094; New Bedford, .18362; Newton, .22593; Pittsfield, .24704; Salem, .19547; Springfield, .18330; Suburban, .24633; Taunton, .14671; Worcester, .07172.

For the year 1912:

Boston, .11232; Brockton, .25800; Cambridge, .12730; Charleston, .10391; East Boston, .19153; Fall River, .13380; Fitchburg, .35039; Haverhill, .30054; Lawrence, .12639; Lowell, .20312; Lynn, .10139; Malden, .15879; New Bedford, .18569; Newton, .22812; Pittsfield, .21865; Salem, .19852; Springfield, .19927; Suburban, .24199; Taunton, .14485; Worcester, .08596 (Exhibit "425-V").

In view of the above we inquire the basis of the Master's comments that "the executive salaries, in comparison with those paid by other utilities producing and selling about the same amount of gas, are apparently excessive."

Another point raised with a great deal of persistence by the City was the fact that the account of salaries of the Lincoln Company per cu. ft. of gas sold was increasing during recent years, even though the gross sales of gas were increasing; whereas they contended the proportion of salaries should have decreased as the volume of gas sold increased. But we can very shortly point out where the increase occurred and show that it was

*not* in the salaries paid members of the firm of Henry L. Doherty & Company. The table above given shows that in 1904 the manager was paid a salary of $100 a month, which is obviously small. This was gradually increased until in 1912 he was paid $300 a month. In other words, in eight years his salary was tripled. In 1904 the secretary and treasurer's salary was $100 a month, whereas in 1912 his salary was $125 a month, an increase of 25 per cent.

In view of these facts we submit that the Master's implication that the members of the firm of Henry L. Doherty & Company were receiving salaries in excess of services rendered, is entirely without foundation in the testimony, and the Master's conclusions that the company dispersed money for operating expenses recklessly or improvidently during the year 1912 was entirely erroneous.

There is another matter which the Master seems to have completely overlooked. If the salary of Mr. Doherty ($3,000) and the retainer of Mr. C. A. Frueauff ($600) is to be disallowed, only such proportion should be excluded as the ratio of the company's gas business bears to its entire business. Mr. Lea estimates that the gas business is 80 per cent. of the entire business. The Master's figure is 73 per cent. So that instead of disallowing $3,600 from the salaries account, he can not possibly disallow more than $2,280, if Mr. Lea's percentages are correct, or $2,628, if the Master's percentages are correct. This is a small matter, but, we submit, the Master's report is so full of inaccuracies that we deem it essential to correct them as we proceed in our discussion of the report.

*Depreciation.*

The Master allows the sum of $12,000 to be set aside as a depreciation reserve for the year 1912. Why he selects that particular figure, we are unable to state. He does not tell us. He merely discusses, in the broadest terms, the general subject of repairs and renewals and rejects Mr. A. D. Adams' method of computing the reserve to be set aside for repairs, renewals and depreciation based on the plant output. Mr. A. D. Adams would allow 9c. per M. cubic feet of gas to cover all the items of repairs, renewals and depreciations. This method the Master properly rejects. He says:

> "There is, so far as I can see, no close or constant relation between plant depreciation and plant product, and any estimate based on the assumption that there is, would in my judgment be more or less arbitrary" (Transcript, p. 50).

The only proper method of determining the annuity to be set aside for depreciation is the method adopted by Mr. Lea; that is, by estimating both the age and the life of the property, and having decided its Reproduction Cost, to set aside such a sum annually, as would, at the end of the life of the equipment, reproduce the original cost. The "straight line" basis of figuring depreciation (which the Master says he has adopted), is the simplest method of figuring depreciation and is applied by dividing the number of years of the estimated life of each item of equipment into the Reproduction Cost. However, it is obvious that this method cannot be applied unless one determines the estimated life of the equipment. The Master's report is absolutely silent as to what life he has attributed to this property.

The Supreme Court of the United States, in reversing the former decision in this action and ordering a reference to a skilled Master, said (364-5):

"There should be a full report upon past depreciation, *past expense for reconstruction or replacement, and past operating expenses, including current repairs.* We should be advised as to the gross receipts for recent years, and just how these receipts have been expended. *Then the amount to be set aside for future depreciation will depend upon the character and probable life of the property and the method adopted in the past to preserve the property.* It can be readily seen that the amount to be annually set aside may be such as to forbid rate reductions because of the requirement of such a fund. The matter is one first for a skilled Master *who should make a full report upon the value of the property, the receipts and the expenses of operation and the sums paid out on reconstruction and replacements,* and in dividends in recent years."

Can the Master's report be said to comply to these instructions? He has given no "probable life" at all. He has not even indicated how he arrives at his depreciation reserve of $12,000. As for money expended for reconstruction and replacements, including current repairs, the Master frankly admits that he is unable to make the calculation, although all the company's records in recent years were in evidence. The Master has apparently disregarded the Supreme Court's instructions and for such reason his report is valueless.

By analyzing the ratio between the Master's Reproduction Cost and his Present Value, we can determine that he must have estimated that the property had a present per cent. condition of 88.67 per cent., whereas Mr. Lea estimated 78.54 percentage and Mr. Adams 74.97 per cent. In other words, the Master's present per cent. condition is more than 10 points higher than the highest estimate in the record. Stated in another way, the Master must have estimated the composite age of the property at 5.96 years, whereas Mr. A. D. Adams' estimate was 12.4 years and Mr. Lea's, 10.02 years. This

calculation shows that the Master must have assumed that the property as a whole, had a composite age of 4.07 years lower than the lowest estimate in the record. This again raises the question as to whether the Master's findings were based on the evidence.

**Apportionment of Operating Expenses.**

The matter of apportioning operating expenses is purely a question of sound judgment.

The Master's basis of apportionment is the relative number of consumers in each department. This ratio, however, varies each year, and it is not, we submit, consistent with sound judgment to apportion the operating expenses of any particular year on the basis of the consumers for that year. If apportionment is to be made on the basis of consumers, a fair average for a number of years should be the measure of such apportionment. For this purpose the Company introduced in evidence an exhibit showing the proportion of consumers during a period of ten years prior to 1912. This exhibit ("101") (Transcript, p. 1849) is as follows:

| Year Ending | No. Gas Consumers | No. of Electric Consumers | % Gas | % Electric |
|---|---|---|---|---|
| 1902 | 3224 | 771 | 81 | 19 |
| 1903 | 3859 | 834 | 82 | 18 |
| 1904 | 4658 | 1006 | 82 | 18 |
| 1905 | 5320 | 1214 | 81 | 19 |
| 1906 | 5882 | 1486 | 80 | 20 |
| 1907 | 6244 | 1640 | 79 | 21 |
| 1908 | 6630 | 1855 | 78 | 22 |
| 1909 | 7047 | 2228 | 76 | 24 |
| 1910 | 7587 | 2122 | 78 | 22 |
| 1911 | 7896 | 2389 | 77 | 23 |
| 1912 | 7816 | 2934 | 73 | 27 |

The average per cent. of apportionment for this ten years is approximately 79 per cent. for the gas department and 21 per cent. for the electric department. To

expedite calculations, the Company uses the figures 80 per cent. and 20 per cent. This apportionment is essentially fair. The Master's method of picking out the per cent. for the particular years is not reasonable, and would lead to confusion in calculating and comparing the expenses for the various years. A reasonably constant percentage of apportionment is the customary and more accurate method of calculating results in this matter. Even if, therefore, the Master objects to 80 per cent. and 20 per cent, as a division of customers, he certainly is not justified in using a different apportionment than 79 per cent. and 21 per cent.

**1912 Earnings.**

In this subdivision of the report, headed "Revision," the Master summarizes his findings on valuation, stating the total to be $676,565. We have heretofore set forth our reasons for claiming that these findings on valuation are erroneous, and we will not restate those reasons except to repeat that said total, as shown by the evidence, should be $1,090,913.

The Master then summarizes his findings as to earnings and operating expenses. The gross earnings for the year 1912 at $1.20 per M. cu. ft. were $273,175.93. This figure is conceded by all parties. From these gross earnings the Master would deduct $182,015 as operating expenses. Mr. Lea's figure is $197,277.13. From Mr. Lea's figure for operating expenses the Master has deducted:

| | | |
|---|---|---|
| (1) | Difference between $19,692, amount expended for new business, and $12,000, allowed by Master for such expenditures | $7,692.00 |
| (2) | Difference between $20,865, amount of estimated depreciation by Lea, and $12,000, allowed by Moster for same | 8,865.00 |
| (3) | Salary of Henry L. Doherty and retainer of C. A. Frueauff (full amount) | 3,600.00 |
| (4) | Estimated difference necessitated by Master's reapportionment of operating expenses | 3,300.00 |
| | Total | $23,457.00 |

(Transcript, p. 52.)

This sum the Master cuts off the Company's operating charges for the year 1912. The propriety of so doing we have heretofore considered. After calculating the occupation tax at $8,195, the Master arrives at a net income of $91,165, as against Mr. Lea's figure of $75,898.80. On the basis of the $1.00 rate the gross income would be $227,297. Using the Master's operating expenses of $180,639 and net income of $46,658, he arrives at a figure of approximately 6.9 per cent. of his own total valuation.

If we take the Master's figure of $46,658 for net earnings and calculate the percentage by using Mr. Lea's total valuation, the result shows the net earnings for 1912 to be 4.2 per cent.

If we take the gross revenue at the $1.00 rate ($227,297) and deduct the operating expenses as calculated by Mr. Lea—$197,277.13 (not including the occupation tax)—we show the net earnings to be $30,020, which, with the Master's total valuation of $676,565, would indicate a return of 4.4 per cent; and if we also include the occupation tax the figure would be 3.2 per cent.

In other words, the Master arrives at his figure of 6.9 per cent. return only by greatly reducing the estimated value of the Company's property and by simultaneously reducing the Company's operating charges. Thus the Master's figures cannot be sustained if either of his estimates are erroneous, and we submit they both are.

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VOL. III.

SUPREME COURT OF THE UNITED STATES.

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant, *v.* THE CITY OF LINCOLN, *et al*, Appellees. | October Term, 1917. No. 300. |

**Discussion of the Qualifications of the Witnesses.**

We have heretofore mentioned that the Master in no place in his report gives the Court his views as to the weight which he attaches to the testimony of the various witnesses, expert and otherwise, who were examined before him.

In fact, he expressly states: "To give the names of witnesses together with what I might conceive to be a fair condensation of their testimony upon any controverted point would, as I view it, be altogether valueless." (Transcript, p. 36.) When the fact is considered, however, that the testimony of one of the experts in the case, to wit, Mr. Alton D. Adams, the City's witness, was continually assailed, and his right to speak as an expert denied, we submit it is, to say the least, quite unsatisfactory that the Master does not intimate, even to the slightest degree, what were his conclusions with regard to the weight which should be attached to the testimony of that particular witness.

The only comment on witnesses which the Master makes throughout his report are as follows:

(a) Of Mr. Broadnax, the Company's witness who made the inventory, he says:

> "The property was inventoried by Mr. Broadnax, an employe of the Company, and a gas engineer of long experience. The work seems to have been done with unusual thoroughness." (Transcript, p. 37.)

(b) Of the local witnesses on real estate, he says:

> "The local witnesses were all men of fair intelligence, evident candor and qualified by observation and experience to give evidence entitled to serious consideration." (Transcript, p. 38.)

Here we may again remark that the witnesses for the Company valued certain of the real estate at approximately $12,000, whereas, the witnesses for the City valued the same real estate at $2,625, which the Master states is "obviously too low." (Transcript, p. 38.) And, yet, even though it is apparent to the Master that the estimate of the City's witnesses on real estate was obviously too low. he still thinks they were all men of fair intelligence, evident candor and qualified by observation and experience to give evidence entitled to serious consideration.

(c) In his finding on the value of Works Equipment, he states that the evidence of values which came principally from the witnesses Lea and Adams, "clashes irreconcilably at almost every point." (Transcript, p. 40.)

(d) He characterizes Mr. B. C. Adams, the Company's Manager, as "an exceptionally efficient and capable man, having a thorough technical and general knowledge of the gas business," (Transcript, p. 51.)

Other than as above quoted, the Master gives not the slightest intimation of what value he attaches to

the testimony of the various witnesses, but merely catagorically quotes the estimates which each gives.

In view of the failure of the Master in respect of these matters, we deem it our duty to place before this Court a summarization of the qualifications of the various witnesses, and such of their testimony as tends to bring light upon their standing as experts in respect of the matters upon which they were called to testify.

(*a*) *Alton D. Adams.*

The City placed upon the stand (and in so doing vouched for the correctness of his testimony) Mr. Alton D. Adams as an expert to appraise the value of the gas property owned by the company, and to calculate its proper operating expenses and revenue. Upon the determination of these questions is dependent the decision as to whether or not the City by its ordinance is confiscating the property of the company. The outcome of the suit is of vital importance to the company.

What are Mr. A. D. Adams' qualifications to testify as an expert in respect of value and operation of gas property? On his own admission the following is true:

(1) He has never built or assisted in any way in building a gas plant or distribution system.

(2) He has never constructed or assisted in any way in the construction of any building of any kind whatsoever.

(3) He has never been engaged in the manufacture or sale of gas in any capacity whatsoever.

(4) He has never managed a gas property or been connected or associated with any company so doing.

(5) He has never manufactured, bought or sold gas equipment, mains, services, meters or appliances, or any

of them, or been connected or associated with any firm or corporation so doing.

(6) He has never had one day's practical experience in the art or trade of manufacturing or selling gas or in the business of manufacturing or selling equipment or appliances useful in the gas business (Transcript, pp. 1053, 1264).

Bouvier, in his Law Dictionary, says that the word expert is derived from the Latin word "experti," and means "skilled by experience." The definition of the term requires knowledge derived out of experience. If the witness who presents himself has had no experience, or has not been instructed out of experience, he is not an expert, and if he testifies it will be for some other reason and in some other capacity.

In *Soquet* v. *State* (Wis.), 72 Wis., 659, it was held that on a trial for murder by poisoning, a medical witness is not qualified to give an opinion that the symptoms of the last sickness of the deceased indicated poison by arsenic, when he had never seen a case or had any experience whatever in cases of arsenical poisoning, and all that he knows on the subject is derived from medical or scientific books and medical instructors.

In *Luning* v. *State* (Wis.), 2 Pin., 284, 288, the Court said:

> "it is manifest that the purpose of the question and proposition was to extract from the witness evidence of facts derived from his 'scientific,' not his personal knowledge; or, in other words, that he was to swear to facts, the existence of which he only knew from his reading; and this, upon no principle of evidence, could be admitted."

In addition to the above authority we have a direct ruling of a Federal Court on the competency of so-

called experts who have no practical experience. The case we refer to is the Des Moines Gas case, and the witness was Prof. E. W. Bemis. The record in this case shows that Prof. E. W. Bemis was a witness for the City of Lincoln upon the former hearing, and his qualifications are shown in the printed record. Prof. Bemis testified that he was one of a committee of five of the National Civic Federation, which made a special study of private and municipal gas works in this country and in Great Britain, and that he wrote a series of reports for that committee which were published; that he did a large amount of work in New York, Boston, Syracuse, Buffalo, Saginaw, Cedar Rapids, Montreal and other cities, and that he had charge of the water works for the City of Cleveland some seven years; but that he had not been connected with gas works in a practical way. The evidence shows that Prof. E. W. Bemis was a witness in the Des Moines Gas case, and that Mr. A. D. Adams was present there, but did not participate as a witness; that Bemis was put forward as possessing superior qualifications. The Special Master in the Des Moines case disposed of Prof. Bemis' testimony as follows:

> "There are very few men, who, through investigation, have gained more information in relation to the operation of public utilities of the character in question, than Prof. E. W. Bemis, and he is an experienced man in water works. He is undoubtedly a very valuable man to assist in a case like the one at bar, but he is not a qualified expert upon values.
>
> "There is a very great difference between information gained by investigation and from statistics, and that gained by actual experience in the business.
>
> "It is evident that for some time his efforts have been directed in the work of securing lower rates for the public, who are patrons of public utilities, and his efforts in that direction are laudable, and in

this work he has gained a large amount of general information, but any man in so doing will have his eyes open for everything bettering his side of the case. Much of his evidence was purely argumentative and incompetent, unless made so by the extensive cross-examination by complainants.

"He has gone quite extensively into statistics and in a very intelligent and comprehensive manner, but, granting that such evidence is competent, it became evident to me that they are not reliable when accuracy becomes necessary. They may very properly be consulted when we are simply seeking approximate results, but not when accuracy is required.

"Similarity of conditions must exist, and similar results are required. It is very doubtful if the same results can be produced each day with the same plant at the same cost. But granting that it can be done, then we must compare the conditions of the plant from which statistics are derived, with the plant in question before they can be regarded as reliable and accurate. The matters involved in the present case demand as great accuracy as possible, and to get it, we must look to the conditions involved in the plant in question, rather than resort to statistics, which involve conditions of which we have but little, if any, knowledge, without opportunity to investigate beyond what little is given in that various tables submited."

What does Mr. A. D. Adams say of himself with regard to his own qualifications in posing as a gas expert?

"I have resorted extensively to these returns (of Massachusetts companies) in the office of the Massachusetts Gas Commissioners to aid me in forming an opinion, among other things, as to the amount of cost, to the Lincoln Company, for the various salaries, office, and distribution and general expense of the Lincoln Company, apart from its cost of materials and labor involved in making gas, and apart from its taxes. I have also resorted to these Massachusetts returns very considerably for many

> years, as a basis of forming an opinion on the subject of necessary amounts for repairs, renewals and depreciation, so that my opinion on both of these branches runs back largely to the facts disclosed by the returns in the hands of the Massachusetts Gas Commissioners" (Transcript, p. 992).

The witness was asked:

> "Q. What experience, if any, did you ever have in the manufacture of gas such as this company furnished here? A. Why, I have watched and analyzed" (Transcript, p. 1264).

And again:

> "Q. Did you ever have any actual experience on a job of putting up a building? A. I say I did; yes, a great many.
>
> "Q. I don't mean putting them on paper; I mean helping put them up. A. No, I never helped put up a building" (Transcript, p. 1264).

He testified, further, that he prepared some general plans once for a gas plant at Ypsilanti, but that the plant was never built, and the evidence in the case fairly discloses that it was not the purpose of Ypsilanti to build a gas plant, but was part of a plan to acquire the plant in service there, and the City needed a showing of low cost as a means of depressing the values of the plant of the company that was being forced to sell (Transcript, pp. 1053, 1059).

Counsel for the Lincoln Company pressed the inquiry as to the actual experience of this witness, until the Master stated in the record the following:

> "It seems to me that this has gone far enough to show that Mr. Adams has had no practical experience in the sense you use the term. You and he don't agree on the definition, but the evidence is very plain" (Transcript, p. 1053).

On his own admission, therefore, Mr. A. D. Adams is

not a practical gas engineer of experience, but merely a statistician in respect of the returns filed by Massachusetts gas companies with the Commission of that commonwealth. As such a statistician he bases his sole right to be heard as a gas expert in this case.

This brings up the immediate question of what value the Massachusetts gas companies' returns have in aiding a student of them to qualify as an expert in valuing and operating gas properties.

In the first place, the testimony and the exhibited copies of the returns to the Massachusetts Commission show that these returns in no way disclose information concerning the cost of any particular item of gas equipment; they do not show the cost of water gas sets, coal gas equipment, gas holders or other items of gas appliances. So that a skilled statistician of these returns would be just as much in the dark as to these items or units of cost as if he had never seen a Massachusetts return.

But Mr. A. D. Adams gives us a better insight as to the value of these Massachusetts returns in equipping one who has studied them to testify as an expert on gas properties. Mr. A. D. Adams first admits that the returns are never checked by the Commission to see if the returns have been properly, accurately or honestly made, but these matters are left largely to the discretion of the particular companies. He testified:

> "Q. If you think they haven't time down in Massachusetts to see that those companies make proper reports as to the money expended for repairs and renewals, or expended for expense, do you think they have time to check over and determine whether the items expended for the operation of the plant are properly entered and applied under the classification they assume to apply them under? A. Not generally by any means. * * *
>
> "Q. It is left very largely to the company to

make up its own reports about in its own way, excepting they must fill out the standard form? A. The Company, as a matter of fact, exercises a good deal of discretion in making out its report; there is no doubt about that" (Transcript, p. 1265).

But later on in the hearing Mr. A. D. Adams went further into this matter. Because the Massachusetts returns did not bear out certain conclusions which Mr. A. D. Adams deducted as a result of his study of them, he turned on the reports and attaacked them very frankly, asserting that they were falsely and fraudulently prepared by the companies in a dishonest attempt to cover up their earnings. And he further states that this corrupt practice is known to and acquiesced in by the Honorable Commission of the Commonwealth of Massachusetts. His testimony is as follows:

"Q. You have indicated that you thought the commission knew of this practice that you referred to as existing in Massachusetts? A. I know they know; it is brought up repeatedly in the hearings there, there is no 'think' about it, it is just as well known as any practice could be and the commission can't help it.

"Q. They can't help it? A. No, sir.

"Q. They can not change or direct that item to be entered as it should be entered in the returns to the Commission? A. The trouble would be that it would require an army of accountants and engineers to chase up the fifty companies to see what they entered as a repair or as a renewal was in fact an extension; it is the practical enforcement of a regulation of that kind, on a matter involving as much judgment, engineering and skilled judgment as that does, that makes it impossible and impracticable for the Commission to enforce a rule on that matter (Transcript, p. 1265).

"Q. Now, if you think they haven't the time down there in Massachusetts to see that those companies make a proper report as to whether the money expended is for repairs and renewals or ex-

pended for extensions, do you think they have sufficient time to check over and determine whether the items expended for operation of the plant are properly entered and applied? A. * * * Not generally, by any means. * * * (Transcript, pp. 1265, 1288.)

"Q. Now you referred to the matter of repairs and renewals in Massachusetts and said that some of the companies in Massachusetts were in the habit of covering up their earnings by entering as renewals or repairs what were in fact extensions, I think you said? A. Well, that may be a fair summary of what I said.

"Q. Now, do you think the Commission in Massachusetts knows that this is being done? A. "Oh, it is notorious" (Transcript, p. 1265).

Here we have from the witness's own lips a true estimate of the value of the Massachusetts returns, which leaves the witness in this position: He has been a statistician for many years of inadequate and corrupt returns of some gas companies in the State of Massachusetts. It is on this basis that his testimony is offered in a suit to determine whether the City of Lincoln is confiscating the property of Lincoln Gas & Electric Light Company. We confess in all seriousness that the introduction of the testimony of such a man in the capacity of an expert in a suit of such vital importance is a shock to our sense of fairness and justice, and we claimed repeatedly throughout the hearings that the testimony of Mr. A. D. Adams was inadmissible because he was not qualified to speak as an expert.

But we have more serious charges to make against Mr. A. D. Adams and his testimony in this case. We have spoken heretofore only of his qualifications as an expert, and the question of the admissibility of his testimony as a matter of law. But we must now speak of the weight to be attached to his testimony as an expert in

this suit, and point out his attitude and bearing throughout the hearing. We maintain that the bearing of the witness before the Master was such as to warrant the Court in completely disregarding his testimony as untrustworthy and not entitled to consideration.

The evidence shows (Exhibit "414") (Transcript, p. 2036) that on December 25, 1912, Mr. A. D. Adams gave the city attorney the following opinion:

"Lincoln, Neb., Dec. 25, 1912.

"Fred C. Foster, City Atty.,
"Lincoln, Neb.

"Dear Sir:

"The following complies with your request for a statement as to the profit of the Gas Company:

"If the gas sold in Lincoln during the year of 1907 had been at the net rate of $1.00 per thousand feet, the Gas Company would have earned more than 9 per cent. on the value of its plant above necessary operating expenses, including depreciation.

"Since 1907 the gas output has increased constantly, being 26 per cent. greater in 1911 than in 1907, and this implies still larger profits.

"Yours respectfully,
"ALTON D. ADAMS."

This opinion was given to advise the City of Lincoln against a settlement of this controversy with the Company. Mr. Adams testified:

"Q. Did you make any estimate before Mr. Lea testified and furnished his report? A. Why, no, sir; no direct estimate of my own, I looked at the estimates your men made in the case in the United States court and did a little thinking about that, but I didn't make an estimate of my own" (Transcript, p. 1280).

Mr. Lea testified in March, 1913, about three months after the report had been given by Mr. A. D. Adams in

the letter above quoted. Three months after he had written that letter he had yet made no direct estimate of his own. It is clear, therefore, that Mr. A. D. Adams had a motive for testifying so as to sustain his opinion irrespective of the facts of the case and irrespective of what his honest belief may have been concerning those facts. The record discloses what effect this circumstance had upon Mr. A. D. Adams' bearing during all the hearings before the Master. He was straining every nerve and using every means to sustain his opinion. The result was seen in the early stages of the hearing before the Master, when it was requested by the City that Mr. A. D. Adams be permitted to cross examine Mr. Lea. This was consented to at the time by the company, and Mr. A. D. Adams thereupon entered upon the duties of an advocate in addition to those of an expert witness. He claimed to be a graduate of the Harvard Law school, so that perhaps this role was not unfamiliar to him. If the matter had stopped with the cross examination of Mr. Lea we would not deem it of sufficient importance to direct the Court's attention to it; but the witness continued in the service of an advocate throughout all the hearings and persistently cross examined every witness presented by the Company. His cross examination shows that he was not seeking in a broad way to lay before the Court all the facts in a calm, dispassionate manner, but he proceeded to exhibit such signs of vindictiveness toward the Company's witnesses as to call for comment from the Master. The Master interrupted the cross examination, and said:

> "Mr. Adams, I think you inject into your questions comments that are unnecessarily irritating, an irritating vein of sarcasm; I don't want to criticise you but I can see the effect on Mr. Lea and I think we would be better off if you would eliminate that, and if you do that I think Mr. Lea will endeavor to

give you direct and responsive answers to your questions."

Mr. A. D. Adams' cross examination of Mr. Schmidt, the young man from the water department of the City, who kept the records showing the cost of laying the water mains, is full of cunning, and his cross examination of Perry Hahn is an example of the effort of an unscrupulous advocate endeavoring to minimize evidence of important facts.

The courts have quite generally condemned the practice of counsel furnishing through their own evidence the testimony upon which the case is to be tried. Lord Chief Justice Campbell once said in an early case:

> "It is, in my opinion, indispensable to the administration of justice that a witness should not be turned into an advocate nor an advocate into a witness."

In *Wilkinson* v. *People* (Ill.), 1226 Ill., 135, the court said:

> "In the English courts, in several cases, it was held that an attorney can not appear in the same cause in the double capacity of witness and advocate, and it has been so ruled in Pennsylvania and in Iowa, on the circuit. In Indiana it was held by Judge McDonald, now United States district judge, that an attorney in a cause could not be permitted to testify to the general merits of the case. In *Frear* v. *Drinker*, 8 Penn. 521, the court said that it was a highly indecent practice for an attorney to cross-examine witnesses, address the jury, and give evidence himself to contradict the witness; that it was a practice to be discountenanced by court and counsel; that it was sometimes indispensable that an attorney, to prevent injustice, should give evidence for his client. It, however, leads to abuse, but at the same time, there is no law to prevent it. All the court can do is to discountenance the prac-

tice, and, when the evidence is indispensable, to recommend to the counsel to withdraw from the cause. The subject has engaged the attention of other courts and of this court, and, however indecent it may be in practice for an attorney, retained in a case and managing it, to be a witness, also, we can not say he is incompetent, and must leave him to his own convictions of what is right and proper under such circumstances."

Mr. A. D. Adams testified as follows:

"Q. Of course, you feel that the City is your client in this matter? A. I centainly do.

"Q. That you are in the service of the City and you represent the City in this controversy and that you are giving the City the best service you have? A. Yes sir.

"Q. And in its interest? A. Yes, sir.

"Q. But you do not feel free to volunteer information or opinions or judgments to this company for its benefit in this controversy? A. I do not think I am called upon to do that; no, sir.

"Q. Especially in view of the fact that you have participated in pursuing a vigorous cross-examination of witnesses you would hardly be expected to turn around the next day and render assistance, even though you felt that the facts, if fully disclosed, would be to the benefit of the Company? A. Well, I haven't considered any facts that I thought were necessary to the Company, if that is what you are driving at." (Transcript, p. 1266.)

The above testimony not only bears on the weight to be given to the witness' testimony, but it bears on the question settled by the rules of court that an expert witness must retain a position in the case to speak fully and freely of opinions which he is qualified to give. As said in one of the cases, "Expert testimony should be the colorless light of science brought to bear upon any case where it is summoned. It should be impartial, unprejudiced. There should be no half-truths uttered

and supression of the whole truth is in the nature of false testimony.'

That the court may see clearly that the testimony above quoted is a correct expression of the conception that Mr. A. D. Adams had of his connection with this case we will cite a few examples of his testimony to illustrate the point that the witness was at all times biased in extreme; that he was controlled by no principles of fairness whatsoever in estimating value, and that he deliberately sought to utter half-truths and to suppress testimony regarding the whole truth of matters under consideration.

(1) Mr. A. D. Adams estimated the cost of laying 4 and 6-inch water mains in Lincoln at 12.07c per foot. It appears that the water department of the city laid 20,376 feet of such mains during the year 1913 (Exhibit "405"), (Transcript, pp. 2032-2036), in the very streets and under the very same conditions as the Gas Company had laid its own mains. The City's actual cost of laying said water mains was 25.74c per foot, or more than double the estimate of Mr. A. D. Adams. Similarly the total water pipe laid by the City, as shown by its record. (Exhibits "402-405," inclusive), (Transcript, pp. 2032-2036), for the years 1910 to 1913, inclusive, was 85,610.8 feet, at a total cost for labor, trenching, laying and cartage of $27,790.22, or an average cost per foot of 32.46c. For the same pipe for the Company's gas mains, applying the unit cost applied by Mr. A. D. Adams for the particular sizes of mains making up the total of 85,610.8 feet, Mr. A. D. Adams would estimate the cost for trenching, laying and carting at $13,459.85, or below the actual cost paid by the City in the amount of $14,330.37. The average price per foot for labor for the pipe applied by Mr. A. D. Adams to the Gas Company was 15.72c,

as against the City's cost of 32.46c. It would be necessary to add to Mr. A. D. Adams' estimated cost 106.5 per cent to bring it up to the actual cost incurred by the City. Mr. A. D. Adams cut the value of the Company's property in two and returned a valuation of about one-half the actual value of the Company's property by the same method employed by him in reducing the estimated value of the distribution system to one-half of its actual value.

Now it appears that when the Company produced the cost record of the City for laying water mains and introduced them in evidence it developed in the examination of Mr. Schmidt (Transcript, p. 827), the young man from the water department, that Mr. A. D. Adams had been furnished a copy of this cost record about *one year* before he testified; so that at the time Mr. A. D. Adams took the stand and presented his estimated valuation of the Company's property and introduced in evidence his tabulations and exhibits on the cost of gas mains, he had had in his possesion for one year the data from the water department showing the *actual cost* for laying mains to be over twice the amount of his own estimate. Instead of alluding in some way to this data of the water department and explaining why he had not followed it, he ignored it completely in his testimony and failed to mention that he even knew of its existence. But, on the contrary, he produced in support of his estimated cost for mains certain contracts for two concrete reservoirs and a contract for water mains in the town of De Witt. But he maintained a discreet silence as to the fact that he had in his possession the labor costs incurred by the City of Lincoln in laying its water mains on the opposite side of the street from the company's gas mains. If this is not suppressing evidence we confess we do not know the meaning of the phrase. But furthermore, after the

company had procured and introduced these City records in evidence and had brought out the fact that copies of them had been in Mr. A. D. Adams' possession during his testimony, he admitted the fact, but pleaded that he had not had time to analyze the cost and prepare an exhibit (Transcript, p. 1088). However, if the Court will examine Exhibits "402-5" (Transcript, p. 2032 *et seq.*), inclusive, which are copies of the summary in the record of the water department, it will appear at once that a correct analysis can be made of the labor cost as carried separately and the unit cost *in five minutes* for each year. And yet Mr. A. D. Adams had this data in his possession for one year before he testified, and still had not time to make such an analysis. This fact alone stands as an impeachment of his testimony, and when we also consider the fact that this data from the water department showed the exact cost of laying mains under the precise conditions in which the gas mains are laid and that such cost is more than twice as large as Mr. A. D. Adams' estimated figure, we must conclude that there is no moral responsibility behind his estimates.

(2) Mr. A. D. Adams produced what he deliberately labeled a statement of the labor cost for trenching in sewer construction "as compiled by Adna Dobson, City Engineer" (Transcript, p. 1201). This exhibit upon cross examination was shown to be without any value and misleading, if not a deliberate attempt to deceive. The City, during the period covered by the exhibit, did all of this work under contract for the completed job. The contracts were let by the City for the construction of the sewers complete and there was nothing in the contract to tell how much was paid by the contractor for labor or how much for materials. The witness when confronted with this situation said that the labor cost

in his exhibit was his estimate and that he used the contract showing the total cost for labor and materials as a guide to him in estimating the cost of the labor (Transcript, p. 1223). He testified that he did not inquire of the contractors who did the work to learn of their experience or concerning what proportion of the total cost was incurred for labor in constructing the sewers. The exhibition of those estimated costs as coming from the city engineer's office under the label of labor costs for sewer construction, as shown by the records in the city engineer's office, was misleading, until there was written all over those exhibits by the testimony, the fact that they simply represented the estimates of Mr. A. D. Adams for labor costs basd upon contracts for completed work in which the labor costs were not segregated. The exhibits were absolutely without value. The witness could have estimated the labor costs on the sewers with or without those contracts before him equally well. His purpose was to give weight to his estimate by labelling them as something from the City Engineer's office.

(3) As to the value of real estate, on which a gas plant is situated, Mr. A. D. Adams states that he takes 2½ cents per square foot as a true measure of value irrespective of the market value. His testimony is as follows:

> "I may have said that, taking cities of somewhere near this size, that 2½c. a square foot is more than has been paid in recent years for land occupied by gas plants. The answer previously given by me being read—I testified to that. I know about 2½ cents generally is the price." (Transcript, p. 1077.)

The witness stated that the value of real estate for gas plant purposes had been the subject of long observation and study on his part and particularly in the Commonwealth of Massachusetts; that he found from such observation and study that 2½ cents per square

foot was a fair price for such real estate; his attention was directed to his testimony in the Haverhill case on the same subject, in which, basing his knowledge upon like observation and study, the witness stated that he found 15 cents a square foot to be the fair price (Transcript, pp. 1078, 1080); that the value of the land on which the Haverhill plant was located was from $1.00 to $1.50 a square foot—that is the market value, and notwithstanding this fact he concluded to allow the Company 15 cents a square foot as the value of real estate, and undertook to justify a valuation of 15 cents a square foot as against a market value of from $1.00 to $1.50 a square foot (Transcript, p. 1078).

(4) It developed in the course of the hearing that Mr. A. D. Adams had previously testified in valuation cases at Racine, Wisconsin, and Cedar Rapids, Iowa, before he testified at Lincoln. That he had given in his testimony at Racine the assumed life of brick buildings at 100 years; at Cedar Rapids, 80 years, and at Lincoln, 66.6 years (Transcript, p. 1266). That he had given the assumed life at Racine of gas holders at 100 years; at Cedar Rapids, 80 years, and at Lincoln, 66.6 years; that he had given the assumed life of coal gas benches at Racine at 50 years; at Cedar Rapids, 40 years, and at Lincoln, 33.3 years; condensers and scrubbers at Racine at 50 years; Cedar Rapids at 40 years; Lincoln, 33.3 years (p. 3717); mains, Racine, 100 years; Cedar Rapids, 80 years; Lincoln, 50 years (Transcript, pp. 1101-7). Similar differences on other corresponding items of equipment were shown to exist between his testimony in Racine, Cedar Rapids and Lincoln. He testified:

> "Q. Do you recall now where you got the information upon which you based or assumed the estimated life of the equipment at Racine? A. I got it mainly from plants in Massachusetts" (Transcript, p. 1266).

* * * * * * *

"Q. In Cedar Rapids case you brought the buildings from 100 years in Racine to 80 years in Cedar Rapids and in Lincoln you brought it to 66.6 years? A. Oh, yes; which shows that it is consistent" (Transcript, p. 1266).

When these facts were brought to the attention of the witness he insisted that he was growing more conservative in his assumed life of gas plants and equipment and that these variances showed that he was consistent and conscientious. But it was then made to appear that he testified in Cedar Rapids in 1907, Racine, 1909, and Lincoln, 1913. So that his assumed life for a gas holder, for instance, increased from Cedar Rapids, 80 years, to Racine, 100 years, and then fell off again in Lincoln to 66.6 years; and the same was true of his life assumption as to other equipment. Of this he said:

"Q. Is there any standard recognized by engineers as the normal life of equipment such as is found here? A. I haven't been able to discover any uniformity in that regard.

"Q. The engineers don't agree? A. I think that is true.

"Q. Some engineers don't even agree with themselves? A. That might be true, a conscientious engineer sometimes changes his opinion.

"Q. And the oftener he changes his opinion the greater the indication that he is conscientious? A. I should want to know all the facts in regard to that.

"Q. Suppose a gentleman who is an expert testified in Racine, Wisconsin, and gave the life of equipment materially different from what he has given it here, and also testified in Cedar Rapids, Iowa, and gave the life of the equipment the same as this here different from the life he gave for this equipment, would you assume that to be an indication of conscientiousness? A. It might or might not be; I should have to know more of the facts" (Transcript, p. 1266).

Is the testimony of the witness—an expert witness, whose conclusions are subject to such unaccountable variations, entitled to be considered seriously by any Court or Judge?

(5) In Exhibit "210" (Transcript, p. 1419) Mr. A. D. Adams purports to show the weight of pipe, as shown by certain pipe bills of the Company, and, as a result of his tabulations of picked bills for pipe since 1901, shows 4-inch pipe in the amount of 55,788 feet with an average weight of 18.8 pounds; 6,408 feet of 6-inch pipe with an average weight of 31.4 pounds; while he used 17 pounds per foot for the 4-inch pipe and 30 pounds for the 6-inch pipe (Transcript, p. 1110). And parallel in time Mr. A. D. Adams testified in Haverhill, Massachusetts, to a weight of 17.5 pounds per foot for the 4-inch pipe prior to 1901 and 19.4 pounds per foot for the 4-inch pipe subsequent to 1901 (Transcript, p. 1133). In view of the fact that the witness testified to one weight here and another at Haverhill, and both within the same period, we are unable to determine which of the two weights given by the witness he believed to be correct, if either. Time intervened in respect of his testimony as to the life of equipment at Racine, Cedar Rapids and Lincoln, which fact he used as an excuse for the variation. But this is not the case in respect to the weight of pipe. As to this variation he does not even attempt to give an explanation. It is apparent that the attempt to save on the weight of the pipe is an attempt to save in the cost. The pipe in stock in the Company's possession was weighed on the scales, tested by the City's weighmaster before the witness testified. Notwithstanding such weight, the witness estimated the 4-inch pipe at 17 pounds a foot, when it actually weighed 19.7 pounds. And the 6-inch pipe at 30 pounds per foot, when it actually weighed 31.17 pounds; and he estimated the 55,788 feet of 4-inch pipe, shown in the bills included in

his Exhibit "212" (Transcript, pp. 1110-11), purchased since 1901; weighing 18.8 pounds at 17 pounds, and estimated the 6.408 feet of 6-inch pipe, shown in the same exhibit, weighing 31.17 pounds, at 30 pounds. If the witness was unwilling to accept the statement of the U. S. Cast Iron Pipe & Foundry Company, the Sheffield Cast Iron Pipe & Foundry Company, and the Massillon Iron & Steel Company as to the weight of pipe, at least he ought to have accepted the weights shown by actual test. We have no doubt that if the witness had estimated the weight of the pipe above that shown by actual weight or by the statement of the pipe companies, that he would have been satisfied upon that evidence of weight to have instantly reduced the amount of his estimate, or, in other words, that an error so apparent in his estimate would have been corrected by him immediately and brought into harmony with his estimate of 19.4 pounds for the same size of pipe at the same time at Haverhill. The net saving in his estimate by reducing the weight of the pipe per foot, as determined by an extended computation, is 353,556.26 pounds, or about 177 tons of cast iron pipe.

(6) It will be remembered that the greatest source of Mr. A. D. Adams' knowledge of gas properties comes from the Massachusetts returns. He so testifies himself:

> "I have resorted extensively to these returns in the office of the Massachusetts Gas Commissioners to aid me in forming an opinion among other things as to the amount of cost to the Lincoln Company for the various salaries, office and distribution and general expenses of the Lincoln Company apart from its cost of materials and labor involved in making gas and apart from its taxes" * * * (Transcript, p. 992).

Let us see what the record discloses as to how Mr. A.

D. Adams applied the information so gathered from the Massachusetts returns.

He estimates as the proper amount of expenditure for salaries, office, distribution and general expenses for the period 1907 to 1912, inclusive, an average of .1254 per thousand cubic feet of gas sold (Exhibit "342," Transcript, pp. 1592, 1152); as against an actual average expenditure of .2602.

This difference in cents per thousand cubic feet for the period of 1907 to 1912, inclusive, amounts in dollars to $168,592.42. We challenged the competency of this estimate as against the actual expenditures, as shown by the company's books, and we directed the Master's attention to a consideration of the Massachusetts returns, from which Mr. A. D. Adams says he reached his estimate.

Referring to Exhibit "425-V" (Transcript, p. 1392), the Court will note the expenditures of the Massachusetts company for "salaries, office, distribution, and general expenses" in cents per thousand for the year 1911, as follows:

> "Boston, .12367; Brockton, .25321; Cambridge, .13361; Charleston, .11529; East Boston, .20962; Fall River, .16418; Haverhill, .48407; Lawrence, .12062; Lowell, .18419; Lynn, .17054; Malden, .21094; New Bedford, .18362; Newton, .22593; Pittsfield, .24704; Salem, .19547; Springfield, .18330; Suburban, .24633; Taunton, .14671; Worcester, .07172."

For the year, 1912, as follows:

> "Boston, .11232; Brockton, .25800; Cambridge, .12730; Charleston, .10391; East Boston, .19153; Fall River, .13380; Fitchburg, .35039; Haverhill, .30054; Lawrence, .12639; Lowell, .20312; Lynn, .10139; Malden, .15879; New Bedford, 18569; Newton, .22812; Pittsfield, .21865; Salem, .19852; Springfield, .19927; Suburban, .24199; Taunton, .14485; Worcester, .08596" (Exhibit "425-V").

Assuming that Mr. A. D. Adams made a study of the expenditures of the Massachusetts companies, as shown by their returns, for salaries, office, distribution and general expenses, would a study of that item of expense qualify the witness to substitute an estimate of his own, or would his qualifications be limited to producing the results as shown by the reports of the Massachusetts companies with respect to this item? We have taken the burden of producing here in this brief the item of expense involved by the various Massachusetts companies for salaries, office, distribution and general expenses for two years, 1911 and 1912. The court will find in Exhibit "425-V" the abstract showing the expenditures of the Massachusetts companies for this item for the years 1909 to 1912, inclusive. A reference to the item for those years and for all of these companies will show that Mr. A. D. Adams disregarded the experiences of the Massachusetts companies and produced an estimate in this case which does not represent the experience of a single one of the Massachusetts companies. For instance, Haverhill for the year 1911 expended for salaries, office, distribution and general expenses, .48407 per thousand cubic feet of gas. Mr. A. D. Adams in the face of that showing estimates 12 cents per thousand for the Lincoln Company, and criticises an average expenditure of the Lincoln Company for this item since 1907 of .2602. Newton expended .22593 for this item in 1910; Pittsfield, .2704; Brockton, .25321; East Boston, .20962; Malden, .21094; Lynn, .17054. In 1912 Haverhill expended .30054; Fitchburg, .35039; Newton, .22812; Pittsfield, .21865; Surburban, .24199; Brockton, .2580; East Boston, .19153. No expert calculator can take the results of the Massachusetts companies and reach the average figure of .1254 or the figures for 1912 of .12. There is no amount of calculation or no combination of results of the different Massachusetts companies on this

item that will sustain any such absurd estimates. If Mr. A. D. Adams has undertaken to give the results of the experiences of the Massachusetts companies then his conclusions are disproved by an abstract of the returns of those companies offered here in evidence. Why say that 12 cents for this item is proper, based on a study of the Massachusetts companies, when for the same years Haverhill expended over 30 cents and the witness was fresh from testifying in the Haverhill case? It requires more than an expert witness or calculator to approximate 12 cents as a result of the experience of the Massachusetts companies. It takes one who deliberately misinterprets the experiences of those companies to arrive at a figure of 12 cents. The actual figure for that item from the Massachusetts reports completely destroys Mr. A. D. Adams' estimate. It is clearly shown in this record that Mr. A. D. Adams does not know what would be the proper amount for such expenditures except as he may have learned it from a study of those returns. And a study of those returns, which were before the Court so that opportunity for an unbiased and honest inspection was offered, proves that his estimate could not possibly have been based upon said returns.

We submit that as a statistician or otherwise his estimates are discredited by the experiences of the Massachusetts companies; and this fact explains the attempt of the witness near the close of the hearing to impeach the value of the Massachusetts reports and allege that they were dishonestly prepared as the result of corrupt practices on the part of the Massachusetts companies.

If these returns are as valueless as the witness claims them to be, we maintain that the attempt of Mr. A. D. Adams to support his estimates by reference to those returns at the outset of the hearing was a deliberate attempt to deceive the Court.

(7) But in spite of all we have said about Mr. A. D.

Adams, the City's expert witness, nothing he said or did at the hearing can be compared, in consummate absurdity, with the final result he reached. After all his figuring and estimates, his half-truths and concealment, his biased attitude and vindictive cross examination, his deliberate misrepresentation of the Massachusetts returns, and his utter lack of experience as a practical engineer, he reaches a result which brands his entire testimony as unworthy of serious consideration. He concludes that the total present value of the company's investment is $415,208. Now, the city, whose witness Mr. A. D. Adams is, has continued to demand from the company a return of 20 cents per thousand cubic feet of gas sold since January 1, 1907, the date the rate ordinance went into effect, and the company has been compelled to put up a bond for the return of said amount pending the outcome of this suit. The City has also levied an occupation tax against the company, judgment for which had already been entered in the state court. Calculating interest and penalties to July 1, 1914, the City was demanding from the Company the total sum of $430,296.27. In short, the City demands $430,296.27 from the Company, which since 1907 has not paid a dollar in the way of dividends or profits to stockholders, and whose net earnings have been devoted entirely to the cost of manufacturing and distributing gas and making payments of its interest charges. Coincident with this demand for the sum of $430,296.27, the City presents a witness who says the present value of the Company's property is $415,208, so that the net result of the operation of the company for seven years, from 1907 to 1914, is that the entire value of the Company's property will be wiped out and the Company will still owe the City $15,088.27. This is the conclusion of the witness whom the City asks the Court to believe.

The net results of the City's claim is so astounding

that a Court cannot fail to be impressed by the fact that this entire proceeding seems to be a deliberate attempt to confiscate the Company's property.

Now the Master does not make clear in his report how he treats the testimony of Mr. A. D. Adams, or how much weight he attaches thereto. He failed completely to express himself on that point. However, in many instances in his report he quotes Mr. A. D. Adams' figures, which would seem to indicate that he has taken Mr. A. D. Adams' estimates into consideration. Furthermore, practically all of the Master's values are placed (haphazard, it would seem) somewhere between the values submitted by Mr. Lea for the Company and the values given by Mr. A. D. Adams. In consequence it is impossible to aviod a conclusion that the Master must have been influenced by the testimony of the City's witness, and that he must have attached some weight thereto.

(*b*) *Henry I. Lea.*

The Company placed upon the stand as its expert witness-in-chief, Mr. Henry I. Lea, of Chicago, Illinois. We do not think it essential to discuss in great detail Mr. Lea's qualifications as a gas engineering expert, because such qualifications were practically unquestioned by the City. We will content ourselves, therefore, in giving a short summary of the experience from which his knowledge of the gas business is derived (Transcript, p. 389 *et seq.*).

Mr. Lea's first experience was obtained with the gas company at Madison, Wisconsin, beginning in the year 1896. The first year his duties were largely of a clerical nature, although he was at the works all the time. The second year he was works foreman and the third year works superintendent of the manufacturing plant. He was at Madison a little over three years. From there he went to Peoria, Illinois, as superintendent of construc-

tion of the new gas plant there. It appears that an opposition company was invading the field at Peoria and tore down some old buildings to provide a site for the new gas plant. Some of the old buildings had to come down and others had to be modified before beginning laying the foundation for the new plant. Mr. Lea was in charge of that work until the new works were installed and the plant was actually making gas. This was a coal gas plant with a capacity of about 650 M cubic feet per day. In connection with that property it was necessary to install all the machinery for the manufacture of the gas and everything in connection with the installation of a plant new. A distribution system was also installed, but Mr. Lea did not have charge of that work. From Peoria Mr. Lea went to Fon du Lac, Wisconsin, in the employ of the same people (Dawes Syndicate) as were interested in Peoria. They bought the Fon du Lac plant and sent Mr. Lea there as superintendent and manager of the property. The plant was a coal gas plant with a capacity of about 100,000 or 200,000 cubic feet per day. Mr. Lea was at Fon du Lac about four or five months and was then sent by the Dawes Syndicate to Ottumwa, Iowa, to extend a distribution system and do some remodeling of the plant. He was at Ottumwa about eight or nine months during which time he took trips to Keokuk, Iowa, to take charge of some minor alterations there that would enable them to make coal and water gas at the same time. After Ottumwa, the Dawes Syndicate then sent Mr. Lea to Evanston, Illinois, as superintendent of distribution the first year, as general superintendent the second year, and as manager the third year, until the Evanston property was purchased by the parties interested in the Peoples' Gas Company of Chicago. The capacity of the Evanston plant was approximately 650,000 cubic feet per day. After the

purchase of the Evanston plant, Mr. Lea, at his own request, was employed by the Division Street Station, one of the plants operated by the Peoples' Gas Light & Coke Company of Chicago. That plant was sending out between nine million and ten million feet a day, which was all water gas. When Mr. Lea left the Division Street Station he went to Ft. Wayne, Indiana, as assistant to the president and chief engineer of Western Gas Construction Company, which was devoted exclusively to building gas works apparatus in the nature of condensers for coal and water gas and coke oven gas plants, and the like. This company has shops in Ft. Wayne, employing 450 men, consisting of pattern shops, foundry, forge, blower and machine shops. The company manufactured gas holders, purifiers, condensers, washers, scrubbers, both rotary and static, and in fact practically everything that goes into gas works equipment, except small steam engines and blowers. Mr. Lea remained at Ft. Wayne about a year and a half or two years and then went to Pittsburg for Mr. George Westinghouse in an experimental gas works which had been put up for the purpose of developing gas producers for developing power to be used in the place of steam engines. Of this, Mr. Lea said:

> "This plant had not reached any successful commercial stage, and I was placed in charge of the work; I had to build my own organization and had no limit on men, methods or money. While there, I brought out three types of producers that are now being sold by the Westinghouse Machine Company. When I left Pittsburg, we had eleven producers gas plants, of my design in successful operation outside of Pittsburg" (Transcript, pp.. 389-90).

After Mr. Lea left the Westinghouse people he opened an office as consulting engineer in Chicago, which is his present business. When asked his experience in valuing

gas properties and determining the rates of sale or purchase, Mr. Lea testified:

> "I have made valuations for banks, bond houses, gas companies and individuals of properties having reproduction cost today of more than $110,000,000. My work has been in something over seventy different cities. I have also made other examinations for companies who were having operating difficulties; the difficulties in their plants; and I have made examination of properties to determine whether changes in method of equipment would be advisable." (Transcript, p. 390.)

Mr. Lea is a man of unquestioned integrity and widespread reputation in the gas business. His authority to speak as an expert on all matters connected with the gas business is unquestioned.

(*c*) *W. F. Brodnax.*

Mr. Brodnax (Transcript, p. 497) is a gas engineer who made a detailed inventory of all of the company's property. Mr. Brodnax enjoys a high reputation in the gas business. His qualifications as an expert fitted to make this inventory were not questioned at the hearing before the Master. In fact, his inventory was used alike by both parties to the suit. He is one of the two witnesses concerning whose qualifications the Master comments on. The Master said:

> "The property was inventoried by Mr. Brodnax, an employe of the company and a gas engineer of long experience. The work seems to have been done with unusual thoroughness" (Transcript, p. 37).

The Master then makes another statement, which is not quite in accordance with the facts. He said, referring to the inventory of Mr. Brodnax:

"The only error discovered in the course of the long trial was one of inclusion; there were none of exclusion" (Transcript, p. 37).

In order that this misstatement of the Master may be corrected without further misunderstanding, we beg to point out this so-called "error of inclusion" was not such, but was merely a mathematical error in addition occasioned by incorrectly carrying a balance from one page to another in footing the figures representing the length of mains.

Mr. Brodnax's qualifications as an expert may therefore be deemed to be admitted.

(*d*) *Witnesses on Real Estate Valuation.*

The Company introduced the testimony of the following witnesses on the question of real estate valuation: Mr. E. W. Reed, Mr. William A. Green, Mr. C. J. Culbertson, Mr. J. R. Purbaugh.

*Mr. Reed* is employed by the State Railway Commission as right-of-way valuer and statistician. He has handled real estate for ten or fifteen years, particularly at Holdredge, Nebraska, and for the last three and a half years has been employed by the Railway Commission exclusively on right-of-way valuations (Transcript, p. 556). He states further, concerning what study of real estate values he has made in the City of Lincoln:

"I have made an exhaustive study of real estate values in Lincoln and obtained my information from going over very carefully the existing values of property in all parts of the city; by talking with the county assessor and city tax commissioner and real estate men and by observing closely the property which is listed for sales and the prices which are asked and the prices which are obtained upon real estate sales in the city." (Transcript, pp. 556-7.)

* * * *

"I have made returns to the commission upon all the land owned by the various railroads and occu-

pied by them as their terminals in this city." (Transcript, p. 1267.)

* * * *

"I made an appraisal of the real estate, the land or lots owned by the Lincoln Telegraph & Telephone Company."

* * * *

"Q. Have you appraised any portion of block 77? A. Yes, sir; there is .11 of an acre which belongs to the Burlington railroad in block 77." (Transcript, p. 1267.)

"Q. Have you appraised any property adjacent to block 79? A. I have appraised blocks on three sides of it, I think." (Transcript, p. 1267.)

*Mr. William A. Green* is in the real estate business in Lincoln and has been for about 25 years. He swears that he is acquainted with the fair market value of real estate throughout the city and has been so acquainted with those prices during the last six or seven years. (Transcript, p. 559.)

*Mr. C. J. Culbertson* is in the real estate business in Lincoln and has been for more than 20 years. He swears that he is acquainted with the market value of real estate throughout the city. (Transcript, p. 560.)

*Mr. J. R. Purbaugh* is in the real estate business in Lincoln and has been for four years. (Transcript, p. 561.)

All of these men are, we submit, qualified by actual business experience to give the court the closest approximation to the actual market as is possible in estimating real estate values; and their figures are so nearly in accord that the conclusion must necessarily be drawn that they are speaking with knowledge of the facts.

Opposed to these men the City has introduced the testimony of the following witnesses, who are, the City claims, experts on real estate values in Lincoln. They are:

John Lebsock, Henry J. Amen, George Hagensick and

George P. Monagan. The qualifications of these men as experts on real estate valuation can best be determined by an examination of some of the material portions of their testimony, from which will be disclosed that they knew very little about the value of real estate in Lincoln and their values were found by the Master as "obviously too low."

(c) *Witnesses on Rate of Return.*

The Company introduced the following witnesses, whose testimony was given relative to the market value of securities of the same general nature as the securities of Lincoln Gas & Electric Light Company and as experts regarding the rate of return demanded by investors in such securities.

*John E. Miller,* director of the First National Bank, and for some years a director in the City National Bank, who is engaged in the general merchandise business. (Transcript, p. 585.)

*Frank H. Woods,* president of the Lincoln Telegraph & Telephone Company, which company has total assets of about six million dollars. Mr. Woods is also one of the owners of Woods Bros. Silo & Manufacturing Company, a director of the First National Bank, and a stockholder in many industrial corporations. (Transcript, p. 578.)

*M. W. Folsom,* president of the Nebraska State Bank, and at one time secretary of the Nebraska Central Building & Loan Association. Mr. Folsom owned for a short time the Capital Beach & Milford Railroad Company, which operated a street railway between the city and Capital Beach. (Transcript, p. 576.)

*C. B. Towle,* vice-president of Curtis, Towle & Payne Company, a firm which does between $500,000 and $1,000,000.00 worth of business annually. (Transcript, p. 579.)

*E. B. Sawyer,* president of the Cushman Motor Works, whose business extends to all parts of the world (Transcript, p. 580).

*J. D. Lau,* secretary and treasurer and general manager of the H. P. Lau Company, a corporation engaged in the wholesale grocery business and transacting over a million dollars of business annually (Transcript, p. 581).

*P. L. Hall,* president of the Central National Bank, and formerly cashier of the Columbia National Bank (Transcript, p. 581).

*C. H. Beaumont,* cashier of the Nebraska State Bank (Transcript, p. 583).

*Silas H. Burnham,* president of the First National Bank; formerly cashier then president of the American Exchange National Bank of Lincoln (Transcript, p. 587).

*Frank W. Frueauff,* member of the firm of Henry L. Doherty & Company, New York City, public service financiers and operators, president of Denver Gas & Electric Light Co. and president of Lincoln Gas & Electric Light Company (Transcript, p. 777 *et seq.*).

The Company has introduced the testimony of the witnesses above enumerated with a view to place before the Court the average opinion of men engaged in large utility, commercial and banking enterprises, so that the Court in reaching its decision should have at its command ample information with regard to the rate of return demanded by investors in securities such as those of the Lincoln Gas & Electric Light Company.

The City introduced no testimony whatsoever on this subject, except that of Alton D. Adams.

(f) *Witnesses on Valuation of Buildings.*

Beside Mr. Lea, the Company placed upon the stand the following witnesses, whose testimony was introduced as to the valuation of the company's buildings:

*C. P. Hahn,* of Lincoln, a general contractor who has been in that business in Lincoln since 1881. He is the man who built three of the company's buildings, one of them, the generator house, since 1907, and who could testify as to the actual cost on the very buildings in question, as well as give his opinion based on experience (Transcript, p. 1272).

*Ellery Davis,* of Lincoln, an architect, of the firm of Berlinghoff & Davis, which firm has under contract and under construction buildings approximating $2,000,000.00 in value (Transcript, p. 539). As to his qualifications, he testified:

> "Q. Where did you recive your technical education? A. At Columbia University in New York City.
>
> "Q. About what experience have you had in estimating the cost of buildings here in the City of Lincoln? A. It is our custom to make guaranteed estimates of the cost of the work for which we prepare plans.
>
> "Q. To about what extent have you done that sort of work since you have been with this firm? A. For the past six years I have been with Mr. Berlinghoff in his employ and later as a partner and we have estimated beforehand all the buildings we have built, and our estimates in the main have been verified by the figures for the actual cost" (Transcript, p. 1271).

*George K. Abel,* of Lincoln, of the firm of Abel & Roberts, contractors and excavators, who do a great deal of paving for the City and have had large experience in removing dirt in connection with that work (Transcript, p. 547).

*Robert Malone,* of Lincoln, a contractor engaged for some years in the business of public construction, railroading, dirt removing of all kinds and concrete moving (Transcript, p. 538).

In opposition to these men the company offered as wit-

nesses as to the valuation of buildings the following persons: W. J. Assenmacher and James G. Matthews.

Mr. Assenmacher was called as a witness for the City and testified (Transcript, pp. 1230-1242, 1243-4, 1246) that he spent about eight hours in taking measurements and checking up the buildings; that he had no plans and specifications and did not refer to the details as shown in the Brodnax inventory. Mr. Perry Hahn, the contractor who built portions of the Purifying House and portions of the Generator House, was a witness for the company. He had been a public contractor in the City of Lincoln since 1881, and for about thirty-two years has been actively engaged in constructing buildings in the City. He refers in his testimony to the fact that he had built from 75 to 80 important buildings in this City, including the Burlington freight house, Missouri-Pacific station and the Orphanage Home for Bishop Bonacum. His testimony is not referred to in the record of the Master. Mr. Assenmacher had lived in Lincoln about eight years, and during the last seven years had been a general contractor. Mr. Assenmacher did not agree with Mr. Brodnax in the matter of the dimensions of the Purifying House, the thickness of the brick walls, thickness of the stone walls, the number of cubic yards of excavation, the number of brick in the building, or the quantities of other materials. The same is true with respect to the Generator House, Retort House, Booster House, Oil Tank House and Meter Shop.

The Broadnax inventory, which contained the quantities of materials in the buildings, was found by the Master to be correct. The Assenmacher estimate of quantities of materials were at great variance with the Brodnax inventory, and must have been found to be incorrect by the Master.

In his first figure on the Purifying House, Assenmacher had 1,000 cubic yards in excavation; stone wall, 10

feet, 6 inches in height, and had no figure for cost of stairways, gutters, down spouts, plastering, electric wiring, or for the cost of plans and specifications, which he subsequently estimated at 3 per cent of the cost of the building; no details of any steel in the roof, indicating that there were just a few rods, which he had included in the lumber item. On a re-examination of the building, at the request of the Company, he found steel trusses in the roof; found the excavation to be 1,463 cubic yards; found the stone wall to be 11.3 feet high, but refused to change his figure as originally given. In his estimate for the Retort House, he figured a shingle roof, giving the number of M. shingles, but discovered later that the building did not have a shingle roof. In his original figure he had not taken into account the concrete floor in the basement, and did not know that there was one, but refused to change his original figures. In the Generator House he originally estimated 12 cubic yards of concrete in the footings. On discovering that there was 410 feet of wall, he increased the number of cubic yards of concrete for the footings, but stood by his original estimate of cost. He produced a figure of $3,308 net construction cost for the Generator House, as against an actual cost shown by the records of the Company of $4,551.51. The Generator House was built in 1907. Mr. Assenmacher estimated 45 cubic yards of excavation for the Oil Tank House. The house was 35 ft. 3 in. by 24 ft., and was 10 feet from the top of the ground to the bottom of the pit. The roof came down to a level with the ground. Notwithstanding this situation, Assenmacher testified to a flight of six or seven steps leading up to the door entering the Oil Tank House (2191). He refused to make any change in his original estimate of the cost after a re-examination and after being advised as to the character of the structure involved. He estimated the cost of the Booster House at

33d street without being able to get inside of the house. He testified that he looked through the window and could see down into one corner of the basement. He had no brick in the foundation, while the Brodnax inventory showed 5,829 brick. He showed a net construction cost of his original figure of $471.25, as against $721.00 shown by Lea, and refused to make any change in his figures. In none of the buildings did he estimate any cost for piping for water, and his estimated cost of the brick in the Generator House, built during the pendency of this suit, was $7 a thousand, as against an actual cost to the contractor of $7.50. The testimony of Assenmacher as to the cost of these buildings was on a par with the testimony of the witness, Matthews, presented by the City for the purpose of showing the cost of excavation. It was valueless and ought not to have found its way into the report of the Master. The contractor, who constructed the brick portions of the buildings and the record of the actual cost of the buildings to the Company, should have been shown in the Master's report, if the cost of the buildings was to be considered as a factor showing present value.

Mr. Matthews proved, upon examination, to know so little about the subject on which the City attempted to qualify him as an expert, that the weight of his testimony was, to say the least, negligible. Whatever of value there was to the evidence introduced through him, merely tended to corroborate the Company's witnesses; and this fact was so obvious that the Master, upon the completion of Mr. Matthews' testimony, remarked that the expense of introducing said testimony ought to be charged to the Company.

(g) *Witnesses on Valuation of Works Equipment.*

Besides Mr. Lea, the company placed upon the stand the following witness, whose testimony was introduced

as to the valuation of the company's works equipment:

*Edward M. Steinmueller* (Transcript, pp. 516 *et seq.*), who is at present connected with the Western Gas Construction Company. That company manufactures and installs everything for a gas plant. He testified as to his own qualifications that he has been connected with the gas business for twenty-five years. For eighteen years he had been with the firm of Bartlett, Haywood & Company, who are manufacturers of the larger equipment used in gas plants such as gas holders and appliances for the manufacture of coal gas. They are the only concern who manufacture for instance the larger gas holders from five to fifteen million feet capacity. Mr. Steinmueller was connected with said firm from 1889 to 1906. He commenced as assistant to the general manager and afterwards took care of the estimating and part of the sales; that is, estimating the value of the different apparatus entering into the construction of the plant. In 1906 he became associated with Cruse-Kemper, of Philadelphia, manufacturers of plate metal works, connected with gas works, such as gas holders, steel purifiers, oil tanks and works of that character. The witness was the manager of that plant during which time he did the designing for the construction of the equipment that firm manufactured. In 1908 Mr. Steinmueller went with the Kerr-Murray Manufacturing Company of Ft. Wayne, Indiana. This firm built, designed and installed coal gas equipment, gas holders, condensing apparatus, purification apparatus, iron works for benches, etc. In fact, they are practically the oldest manufacturers of gas works equipment in this country. Mr. Steinmueller was the assistant to the general manager and had charge of the engineering department designing equipment. In 1909 he went with the Chicago Bridge & Iron Works, which firm decided

to enter into manufacture of gas holders. During his connection with this firm he provided them with designs and details of every description and secured contracts and equipped and installed during his stay with them about eleven holders. In 1911, he became associated with his present company, the Western Gas Construction Company, and was at the time he testified the manager of their eastern territory with headquarters in New York City. This company supplies the entire North American continent and is in competition with all the manufacturers of gas equipment therein.

This witness has so equipped himself by his long training to qualify as an expert in valuing gas equipment that there can not be the slightest question as to his qualifications as such. As to his attitude and bearing during the taking of his testimony at the hearing it is worthy to comment that counsel for the City personally remarked upon his perfect fairness.

Beside the testimony of Mr. Lea and Mr. Steinmueller, on the valuation of the Company's works equipment, the company introduced, through the witness O. R. Mallat (its purchasing agent) evidence of the actual price which the Company had paid for its equipment in recent years.

The City introduced no testimony on this subject except that of Mr. A. D. Adams.

(h) *Witnesses on the Valuation of the Distribution System.*

Beside Mr. Lea, the Company placed on the stand the following witnesses, whose testimony was introduced as to the value of the Company's distribution system:

*George L. Campen,* whose qualifications to testify as an expert are as follows (Transcript, p. 527): He has held the office of Assistant City Engineer, City Engineer, Sewer Engineer, Sewer Inspector, Plumbing In-

spector, Building Inspector and Superintendent of Public Works of the City of Lincoln. This was all between the years 1891 to 1898 and 1901 to 1906. He was the Superintendent and Water Commissioner for the canal zone on the Isthmus of Panama, and Assistant City Engineer of the City of Omaha for three years. As City Engineer of Lincoln he had charge of the construction of the paving. The greater portion of the business district of the city was paved while he was City Engineer. During his service in these various capacities he had acquired accurate knowledge as to the values and weights of mains.

*Wilber C. Sunderland* (Transcript, p. 564), who has been connected since 1907 with the Western Supply Company, engaged in the business of wholesale plumbing, steam supplies and water goods, which includes pipe fittings and steam valves of all sorts.

Robert Malone and George K. Abel, above referred to, testified as to the cost of excavation.

The City introduced no testimony on this subject except that of Mr. A. D. Adams.

(i) *Witnesses on Amount of Overhead Charges and "Going Value."*

Beside Mr. Lea, the Company placed upon the stand the following witnesses, whose testimony was introduced as to overhead charges and "going value."

*L. E. Wettling*, a public accountant, who has been in the employ of the Nebraska State Railway Commission and the Attorney General of Nebraska since 1906 (Transcript, p. 793). He testifies:

> "I have had much experience with the analysis of accounts of public utilities and an analysis of valuation figures and contentions generally that come in litigations and hearings on matters of that nature before the Nebraska State Railway Commission and

before the courts in several rate cases and tax cases" (Transcript, p. 1271).

In connection with his profession he has had access to the original records, accounts and vouchers of public utility companies as well as the exhibition of that information in hearings before the commission and the courts.

"I have had occasion to refer to tax books, law books and reports of commissions in various states in the Union generally" (Transcript, p. 1271). * * *

"Q. Outside of your specific duties for the Railway Commission proper, have you had occasion to examine the testimony offered in railroad rate cases and the like of that? A. I have; and have assisted in the analysis and writing of briefs in several cases.

"Q. Does that include the famous case of *Shepperd* v. *The Great Northern* in the circuit court of Minnesota, the so-called Minnesota-Missouri rate case? A. I wrote an *Amicus Curia* brief in the Missouri rate case" (Transcript, p. 1271).

* * * * * * * *

"Q. How long have you followed the vocation of a public accountant? A. For most of all the time since 1885 * * *" (Transcript, p. 1271).

While associated with the Farmers & Merchants Insurance Company, which company had been an investor in the securities and stock of the Lincoln Gas Company, he had, as representative of the insurance company, become a member of the board of directors of the Lincoln Gas & Electric Light Company, and in his capacity as a director had kept in touch in a general way with the affairs of the Gas Company.

In conjunction with his work for the Railway Commission of Nebraska, he kept in close touch with the engineering department of said commission.

"Q. You are entirely familiar with the practices of the companies and different theories which obtain

in matters of valuing a company? A. Yes, sir.

"Q. As held by engineers, courts and commissions? A. Yes, sir.

"Q. And as experienced by public utility companies in actual practice? A. Yes, sir" (Transcript, p. 1271).

*E. C. Hurd,* who is in the business of engineering, for the past five years has been in charge of the valuation of the utility properties for the Nebraska State Railway Commission, but at the time he testified he was engaged in private practice along similar lines with the firm of Hurd, Gerber & Wettling (Transcript, p. 812). As to his practical experience he said:

> "I have erected several hundred miles of steam railroad, about 50 miles of electric railway, and have engineered four separate electric light and fuel plants and two hydro-electric plants, and have taken part in the business management of an electric property and have done some little work on gas plants, but I don't make any pretense of being a gas engineer, and I have acted in various capacities in the handling of such properties for bankers and brokers" (Transcript, p. 813).

As to his valuation experience he testified:

> "We (the commission) valued the entire railway properties in Nebraska, except street railways; practically all of the telephone properties, and express company properties; and the interurban railway properties; in valuing the steam railroad properties you are valuing almost every conceivable class of property that you can think of, everything connected with the steam railway, even electric light plants, gas plants and all kinds of things" (Transcript, p. 813).

The City introduced no testimony whatsoever as to the method of calculating "going value." Mr. A. D.

Adams was the only witness whose testimony was introduced by the City as to "overhead charges."

(j) *Witnesses on Operating Expenses and Revenue.*

Beside Mr. Lea, the company placed upon the stand the following witnesses, whose testimony was introduced as to operating expenses and revenue and gas properties:

*Frank W. Frueauff*, a member of the firm of Henry L. Doherty & Co., of New York City, and president of the Denver Gas & Electric Light Company and the Lincoln Gas & Electric Light Company. (Transcript, p. 778.) In addition to the qualifications which these positions naturally afford, he testifies as follows:

> "I am a member of the firm of Henry L. Doherty & Company, whose business is the operation, ownership and financing of gas, electric and street railway properties. (Transcript, p. 778.)
>
> * * * *
>
> "We operate about 108 different properties covering from 150 to 175 towns in the United States and Canada." (Transcript, p. 778.)
>
> * * * *

*B. C. Adams*, who, at the time he testified, was general manager and vice-president of the Lincoln Gas & Electric Light Company, and had been connected with that Company since 1906 in various capacities.

The Master describes Mr. B. C. Adams as "an exceptionally efficient and capable man having a thorough technical and general knowledge of the gas business." (Transcript, p. 51.)

*George A. Montgomery*, who was at the time he testified, the manager of the Lincoln Gas & Electric Light Company, and was formerly superintendent thereof. (Transcript, p. 739.)

Aside from Mr. A. D. Adams, the City introduced the testimony of no witnesses whatsoever on operating ex-

penses and revenue, the City's testimony in this regard being confined largely to tabulations of the supposed results of operation as alleged to have been shown by the Massachusetts returns.

We have gone, with some care, into the above discussion of the qualifications of the more important witnesses who testified in this case, and we justify ourselves in taking the Court's time to do so because the Master's report notably fails to enlighten as to the Master's view of the qualifications of the various witnesses or the weight which he attaches to the testimony of each. In a suit of this importance the personal equation is so essentially a consideration that we would not feel that we had fulfilled our duty in aiding the Court in considering the matter by this brief, unless we had summarized the qualifications of the opposing witnesses. It seems to us a fundamental proposition that where experts disagree, the first inquiry of the court should be: Who of the testifying witnesses is best fitted to speak on the matters concerning which he purports to be an expert and on whose opinion is the court justified in relying? Since the Master, in his report, has completely failed to enlighten the Court on this matter we deem it our duty to assist the Court in reaching its own conclusions.

The only inkling which the Master gives in his report as to the general effect which the evidence has on his conclusions is contained in the following language under his heading, "Preliminary Observations":

> "The evidence, which is for the most part opinion evidence and generally unreconcilable, makes my conclusions in regard to values, at best, nothing more than fair approximations." (Transcript, p. 36.)

We submit that, in view of the admission of the Master as above quoted, it is doubly important for him to

have stated whose opinion of all of the witnesses had weight with him. It surely could not have been that the Master struck out blindly in the dark at some valuation between the two expressed by the opposing witnesses. And yet, for all that is contained in the report, we can only conclude that this was the precise method that the Master adopted. We submit that the Master's own statement conclusively establishes the vital importance of discussing the testimony, a duty which the Master has signally neglected. We deem it a self-evident proposition that if two witnesses posing as experts give valuations which are widely divergent, and it appears that one of the experts is grossly incompetent, that any judge of the fact must completely disregard the testimony of the incompetent witness and adhere strictly to the values submitted by the other, or else give good reason why the latter witness' estimated values were not convincing. But merely to pick out at random some figure between the two submitted values, *without explanation*, especially where the competency of one witness is so directly and insistently assailed, is, we submit, a method of determining value difficult to justify.

**It is respectfully submitted that the decree of the Court below should be reversed.**

Respectfully submitted,

EDMUND C. STRODE,
CHARLES A. FRUEAUFF,
Solicitors for Appellant.

ROBERT BURNS,
Of Counsel.

[redacted]

[redacted]

[redacted]

LINCOLN GAS & ELECTRIC LIGHT COMPANY,

Appellant,

vs.

THE CITY OF LINCOLN et al.,

Appellees.

# BRIEF OF APPELLANT

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Journal Printing Company, Law Print

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IN THE

# Supreme Court of the United States.

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant, *against* THE CITY OF LINCOLN *et al.*, Appellees. | No. 744. |

**Brief of Appellant on Petition for Leave and Right to File Bill of Review and on Defendants' Motion to Advance Cause.**

## Statement of Case.

This case is here pending upon appeal from a final decree upon the merits affirming the master's report and denying an injunction against the enforcement of an ordinance of the City of Lincoln, Nebraska, fixing a charge to consumers of gas of one dollar net per thousand cubic feet.

The decree of the lower Court was absolute in its terms, giving no opportunity to the appellant to reopen the case or to submit to the Court any further evidence or facts as to what the result would be upon an actual trial and test of the rate fixed by the ordinance.

As shown in appellant's petition for leave to file a bill of review, the rate of one dollar per thousand cubic feet, being the rate per thou-

sand cubic feet required by the ordinance in controversy, has been in effect since May 1, 1915, and the practical and important question now involved in said litigation is whether the company should be required to return to consumers, funds collected while the injunctive orders herein were in force, and which question hinges upon the confiscatory character of the ordinance. Realizing that the best test of the confiscatory character of an ordinance was its practical operation, it was the desire of appellant to produce to this Court, for its consideration, at the time of its consideration of the record herein, the actual operations under the ordinance for as long a period of time as could be presented. Appellant was advised that the said cause would not be reached for consideration in this Court for a considerable time, and if the time should be shortened by an order from this Court advancing said cause for hearing, appellant would not be able to present to this Court the actual conditions of operation as above mentioned, in the event that this Court were willing to permit the same to be presented. If, in the opinion of this Court, this hearing involving the repayment to individuals, is one which should be advanced, the appellant does not desire to object to such advancement provided that this Honorable Court will set such advanced hearing for such a time as will, in the event appellant's petition be granted, permit the taking of the testimony involved therein.

This brief is respectfully submitted by appellant on appellees' motion to advance this cause and in support of a petition of appellant for leave to file a bill of review or a supplemental bill in the nature of a bill of review for the pur-

pose of bringing upon the records of this cause, and for a proper determination and decision of this Court upon appeal, a showing of its receipts and earnings and other matters involved in the actual experiment under the one dollar rate placed into effect by the appellant upon the 1st day of May, 1915.

Approximately two years have elapsed since the one dollar rate was placed in effect and this appeal is about to be submitted on the record now on file in this Court, but there is no evidence in the record, as it now stands, as to the effect of the reduced rate upon the sales, revenue and earnings of the company. All evidence and findings of fact in the record, upon that question, being purely hypothetical and not based upon the actual facts as they can be made to appear from the trial and test of said rate since the date of placing it into effect.

The appellant feels under the circumstances and in light of the decisions of this Court in cases involving a reduction in rate, wherein the remunerativeness of the reduced rate was in question, that it is its duty at this time and before the submission of the appeal in this case on the record as it now stands, to call the attention of the Court to the said trial and test and of the results which the period of test shows, and the bearing which the experiment under the reduced rate has had upon the revenue of the appellant for the following reasons:

1.—Such actual knowledge and evidence is now in the possession of the appellant.

2.—The failure or neglect on the part of the plaintiff to call the Court's attention to the said

facts at this time might subject appellant to a charge of laches, neglect and bad faith toward the Court if the decree of the Court below should be affirmed without instructions for further proceedings and thereafter this appellant should petition this Court for leave to file a bill of review in the Court below.

3.—The result of said trial rate would materially aid and assist this Court in its consideration and review of the decree of the Court below.

4.—The review of this case below on such new matter may result in a modification of said decree and avoid the necessity of this Court reviewing the same.

5.—The result of said trial of the one dollar rate is new matter in the nature of newly discovered evidence arising since the decree below and the appeal to this Court, which the appellant could not have produced on the trial of the said cause because the same was not in existence.

6.—The actual trial and test of said rate is the best, most satisfactory and convincing evidence that the reduction in the price of gas per thousand cubic feet did not result in increased consumption sufficient to render the appellant a reasonable return upon its investment, and was not compensatory and would not render a return to this appellant which is compensatory.

7.—It is the established practice of this Court to have before it evidence of the actual operation of a rate ordinance before passing upon its validity, if possible to secure the same.

8.—In view of the master's findings as to the company's earnings in 1907 (the first year in

which the rate ordinance was to be effective) it is particularly important that evidence of the actual operation of the one dollar rate should be before this Court.

9.—The granting of the leave prayed for will not hinder or delay the hearing of this cause in its due and orderly course.

## POINT I.

**Petition for leave to file bill of review should be made to the Appellate Court.**

When new matter in the nature of newly developed or newly discovered evidence has arisen since the decree, and after appeal has been taken, the proper practise is to petition the Appellate Court for leave to file in the Court below a bill of review or supplemental bill in the nature of a bill of review:

> "The Appellate Court has power to allow its own decree to be reviewed in the Court below and in causes pending on appeal it has the power to send the record back so that the cause my be reviewed on newly discovered evidence in the Court of original jurisdiction. But it is absolutely necessary in every case that leave of the Appellate Court should first be obtained. The application for such leave may be made in the Appellate Court while the cause is there pending or even after it is finally adjudicated and the mandate of the Appellate Court has been returned to the lower Court and entered as its own decree."
>
> Street's Federal Equity Practice, Vol. 2, page 1284, Paragraph 2179.

In Southard *v.* Russell, 16 How., 546, 569-570, the Court said:

> "As already stated, the decree sought to be set aside by this bill of review in the Court below was entered in pursuance of the mandate of this Court, on an appeal in the original suit. It is therefore the decree of this Court, and not that primarily entered by the Court below, that is sought to be interfered with. The better opinion is, that a bill of review will not lie at all for errors of law alleged on the face of the decree after the judgment of the Appellate Court. These may be corrected by a direct application to that Court, which would amend, as matter of course, any error of that kind that might have occurred in entering the decree. Nor will a bill of review lie in the case of newly discovered evidence after the publication, or decreee below, where a decision has taken place on an appeal, unless the right is reserved in the decree of the Appellate Court, or permission be given on an application to that Court directly for the purpose. This appears to be the practice of the Court of Chancery in the House of Lords, in England, and we think it founded in principles essential to the proper administration of the law, and to a reasonable termination of litigation between the parties in Chancery suits."

*In re* Gamewell Fire Alarm Tel. Co. *et al.*, 73 Fed., 908, at page 911, the Court says:

> "In some of these cases before us it was so clear that the application had no equity that we refused it; but in none of them has the rule, or the proper practice under it, been fully stated. First, we will observe that the Supreme Court has made no distinction arising out of any question whether the application is made before or after judgment, or be-

fore or after mandate issued, or before or after the close of the term at which the judgment is rendered. In some of the cases to which we have referred, it is stated that the application may be made after judgment; and, unless it can be made after a mandate has gone down, and even after the term has adjourned at which the judgment was entered, there would evidently arise instances of the grossest injustice for which there could be no relief. We have no doubt that an application may be made, as in this case, after the judgment, after the issue of the mandate, and after the close of the term at which the judgment was entered, subject to certain limitations as to time arising out of the equitable doctrine of laches, and other possible exceptional limitations" (Ricker *v.* Powell, 100 U. S., at p. 109).

In Society of Shakers v. Watson, 77 Fed., 512, 513, in which case a petition for rehearing was denied, a petition for certiorari denied and the decree of the lower Court affirmed, and finally on the ground of new matter and newly discovered evidence, a petition for leave to file a bill of review in the Court below was filed in the Appellate Court, Justice Lurton delivering the opinion of the Court said:

"As the decree sought to be reviewed is in fact the decree of this Court, the application for leave to file a bill of review is properly made here. (Southard *v.* Russell, 16 How., 546; Kingsbury *v.* Buckner, 134 U. S., 650, 671; 10 Sup. Ct., 638; Bank *v.* Taylor, 4 C. C. A., 55, 53 Fed., 854.) On a mandate from this Court the Circuit Court can only record our decree and proceed with its own decree as affirmed, or upon the decree it was directed to enter, and has no power to alter, rescind or modify such decree unless leave to

> do so is reserved, or first had and obtained by application to this Court. The decrees and mandates of this Court have precisely the same finality as the decrees and mandates of the Supreme Court" (Bissell Carpet Sweeper Co. *v.* Goshen Sweeper Co., 19 C. C. A., 25, 72 Fed., 545).

In Sheller *v.* Alexander, 211 Fed., 544, 546, the Court said:

> "(3) While the cases are not fully in accord as to the proper procedure to be followed when an application is made for a rehearing on account of newly discovered evidence, it is apparent from the decisions that if a decree has been entered in the lower Courts, and an appeal has been taken therefrom to the Circuit Court of Appeals, so that the Appellate Court has jurisdiction, the proper proceeding is for the petitioner to file a petition duly verified and addressed to the Appellate Court, and praying for leave to file in the lower Court a supplemental bill in the nature of a bill of review" (*In re* Gamewell, 73 Fed., 908, 20 C. C. A., 111; Westinghouse Co. *v.* Stanley, 138 Fed., 823, 71 C. C. A., 189; Bliss *v.* Reed, 106 Fed., 318, 45 C. C. A., 304; Boston Railroad Company *v.* Bemis Co., 98 Fed., 121, 38 C. C. A., 661).

In Watson *v.* Stevens, 53 Fed., 31, 34, the case which had been heard and decided upon September 6th, 1892, upon appeal, and new matter and newly discovered evidence was discovered before the mandate went down, and upon the 28th of September, the appellees filed in the Circuit Court of Appeals a petition supported by affidavits and showing the new matter and newly discovered evidence, the Court ordered as follows, *per curiam*:

"Ordered, that whereas, it appears from the suggestion of the counsel for the appellees made in open Court, and accompanied with a verified petition and affidavits, that the appellees conceive that they will have just cause for application for leave to file a bill of review and to proceed with such bill, this Court reserved to the appellee's liberty to file such application, and proceed thereon and on such bill of review in the Circuit Court, as the Circuit Court may determine; and this order shall form a part of the mandate in this cause, which shall issue forthwith."

In Kimberly *v.* Arms, 40 Fed., 548, the Court at pages 550-551 says:

"The bill of review, which defendants now apply for leave to file, seeks to open, vacate, and set aside that decree. But before making said application the defendants, during the term of Court at which said decree was rendered, prayed an appeal to the Supreme Court which was allowed upon their giving bond, with sureties, to be approved by the Court. Such appeal-bond was duly executed and approved, and said appeal, so far as this Court is concerned, was thereby perfected before defendants presented this application for leave to file a bill of review. It is, however, stated in the bill of review which defendants asked leave of this Court to file that it is not the purpose of defendants, as at present advised, to perfect their said appeal by filing the record and docketing this cause in the Supreme Court, as required by the rules of practice of that Court. This averment does not, of course, amount to an abandonment of said appeal, nor to a definite purpose or intention to do so, but leaves the question of its further prosecution to the option of appellants. No new proceedings

having been had in this Court between the mandate of the Supreme Court and the decree based thereon, said appeal by defendants was no doubt improvidently taken and allowed. Still it has the effect of transferring the cause, and the decree sought to be reviewed, into the Supreme Court, where it will remain until heard and disposed of on the merits, or dismissed, under the provisions of the ninth rule of said Court, for appellants' failure to file the record and docket the cause. * * * With said appeal pending in the Supreme Court whether rightly or improvidently, this Court clearly has no authority or jurisdiction to entertain a bill of review to impeach said decree, over which it has, for the present, at least (no jurisdiction)."

See also the following authorities:

*In re* Potts, Petitioner, 166 U. S., 263;
Fuller *v.* U. S., 182 U. S., 566;
Gaines *v.* Rugg, 148 U. S., 228;
McClintock *v.* City of Pawtucket, 180 Fed., 320;
Hawkins *v.* Cleveland C. C. and St. L. Railroad Co., 99 Fed., 322.

## POINT II.

**The petitioner has asserted his right at the earliest possible moment and is free from negligence and laches.**

While the time within which a bill of review should be filed is not fixed by statute or rule, the Courts have stated that the bill may be filed so as to present the matters involved at the time of hearing on the merits.

In Clark *v.* Killian, 103 U. S., 766, the syllabus reads:

> "A bill of review is the proper mode of correcting errors apparent on the face of the record and it was in this case filed in time, less than two years having elapsed since the original decree was passed."

In this case, decrees were rendered, upon February 17th, 1875 and June 18th, 1875, adjudging certain conveyances null and void. Upon January 4th, 1877, a bill of review was filed for the purpose of setting aside the decrees for errors of law apparent on the face of the record.

Mr. Justice Harlan, page 783 said:

> "Taking all the circumstances to be as they are set out in the pleadings, it is perfectly clear that the Court in adjudging the conveyances of the lots above named null and void and ordering them to be sold in satisfaction of Clark's judgment erred in point of law. Consequently, a bill of review was the proper mode of remedying that error. The present bill was filed in time. Thomas *v.* Harvie, 10 Wheat, 146."

In Jorgenson *v.* Young, 136 Fed., 378, the Court says in its opinion, at page 381:

> "The rule is well settled in courts of equity of the United States that a bill of review must ordinarily be filed within the time limited by statute for taking an appeal from the decree sought to be reviewed where the review sought is not founded on matters discovered since the decree."

In Thomas *v.* Harvie's Heirs, 10 Wheat, 146.

Mr. Justice Washington delivered the opinion of the Court, and said, pages 150-151:

"It must be admitted that bills of review are not strictly within any act of limitations prescribed by Congress; but it is unquestionable that courts of equity acting upon the principal, that laches and neglect ought to be discountenanced and that in cases of stale demands its aid ought not to be afforded, have always interposed some limitations to suits brought in those Courts. It is stated by Lord Camden in the case of Smith *v.* Clay (Ambl., 643, 3 Bro. C. C., 639, note) 'that as the court of equity has no legislative authority it could not properly define the time of bar by a positive rule, but that as often as Parliament had limited the time of actions and remedies to a certain period in legal proceedings, the Court of Chancery adopted that rule and applied it to similar cases in equity.' * * * These principals seem to apply with peculiar strength to bills of review in the Court of the United States, from the circumstance that Congress has thought proper to limit the time within which appeals may be taken in equity causes, thus creating an analogy between the two remedies by appeal and a bill of review so apparent that the Court is constrained to consider the latter as necessarily comprehended within the equity of the provision respecting the former."

And further, at page 151, said:

"Whether a bill of review founded upon matter discovered since the decree is in like manner barred by the lapse of five years after such decree is a question which need not be decided in the present case, since we are all of the opinion that it is in the discretion of the Court to grant leave to file a bill of review for that cause, and that such leave ought not to be granted in a case where it appears that the plaintiff is not aggrieved

by the decree on account of the error so assigned."

In Westinghouse Electric and Manufacturing Company *v.* Stanley Instrument Co., 138 Fed., 823, the syllabus reads:

> "Where it is claimed that a patent in a suit, and against an infringement of which an injunction is sought, expired pending an appeal because of the expiration of a foreign patent for the invention, the facts in relation thereto should be presented to the Appellate Court on or before the hearing on the merits, and the defendant is charegable with laches if he fails to so present them, which will warrant the Court in denying him leave to file a supplemental bill in the nature of a bill of review to enable him to present the question, after the case has been finally determined on the merits, unless on terms named in the opinion."

At page 825, the Court in its opinion, says:

> "Under the circumstances, it was the duty of the petitioner to have brought these facts to our attention at or before the time the appeal was argued on its merits, and it failed in its duty in allowing us to proceed to hearing an issue with regard to an injunction which from the standpoint of the petitioner had ceased to involve anything except moot questions."

In Novelty Tufting Mach. Co. *v.* Buser *et al.*, 158 Fed., 83-84, the Court says:

> "if upon the case made, we have a strong impression that the decree which we have directed to be entered in the Circuit Court ought to be reopened and reviewed in that Court, we will release the lower court

from its obligation to observe our mandate to the extent of allowing it to entertain the application and decide upon its merits, but not otherwise. The decree entered upon the direction of the Appellate Court though in form it is the decree of the lower court, yet it is in substance its own decree, and it ought not for light reasons be allowed to be disturbed.

Nevertheless, if it is seen from circumstances coming subsequently to light that the decree is probably contrary to the justice and right of the case and there has been no negligence or other fault on the part of the aggrieved party the Appellate Court ought not to permit its mandate to stand in the way of the correction of the decree which it has caused the lower court to enter."

Mr. Justice Story, in Section 423 of his Equity Pleadings, says:

"It seems to me to be a general rule that a supplemental bill for newly discovered matter should be filed as soon after the new matter is discovered as it reasonably may be. If, therefore, the party proceeds to a decree after a discovery of the facts upon which the new claim is founded he will not be permitted afterwards to file a supplemental bill in the nature of a bill of review founded on those facts, for it was his own laches not to have brought them forward at an earlier stage of the cause."

In Hill *v.* Phelps, 101 Fed., 650, Sandburn, J., citing Justice Story, approvingly says:

"If, therefore, the party proceeded to a decree after the discovery of the facts upon which the new claim is founded, he will not be permitted afterwards to file a supplemental bill in the nature of a bill of review founded on those facts, for it was his own laches not

> to have brought them forward at an earlier stage of the cause."

As hereinbefore stated appellant was desirous of producing to this Court the actual operations under the reduced rate for as long a period as possible, in order that the said rate might be given a fair trial, and appellant, therefore, believes that it has not been guilty of laches or negligence in not before calling the attention of this Court to the said experiment under the one dollar rate.

And appellant in this case feels that as it has knowledge of the result of a trial and test of the one dollar rate for approximately a period of twenty months, it might be possibly open to a charge of laches and bad faith if at this time it did not call this Court's attention to the facts and if thereafter it should petition for leave to file a bill of review or endeavor to bring before the Court in some other subsequent proceeding such facts.

## POINT III.

**The granting of leave to file a bill of review or supplemental bill in the nature of a bill of review is within the sound discretion of the Court, but is granted in all equity cases where justice requires and no mischief is done to adverse parties.**

In the case of Hopkins *v.* Hebard *et al.*, 235 U. S., 287, Mr. Justice McReynolds said, page 291:

> "The function of a bill of review filed for newly discovered evidence is to relieve a meritorious complainant from a clear mis-

carriage of justice where the Court is able to see, upon a view of all the circumstances, that the remedy can be applied without mischief to the rights of innocent parties and without unduly jeopardizing the stability of judicial decrees. The remedy is not a matter of absolute right but of sound discretion. Thomas *v.* Brockenbough, 10 Wheat, 146; Ricker *v.* Powell, 100 U. S., 104, 107; Craig *v.* Smith, 100 U. S., 226, 233; 2 Dan. Ch. Pr., 1577; Story Equity Pleading, Paragraph 417, Street Federal Equity Practise, Paragraphs 2143, 2156, 2159; Gibson suit in Ch., Paragraphs 1058, 1062."

In Wiggins Ferry Company *v.* Ohio & Mississippi Railway Company, 142 U. S., 396, Mr. Justice Brown said, at page 413:

"When the facts of the case show the plaintiff to have an equitable title for relief, this Court, while it may be unable to afford such relief upon the case made by the bill, has in several instances asserted its power to remand the case to the Court below for an amendment of the pleadings, and such further proceedings as may be consonant with justice."

And further upon page 416 he said:

"Rules of pleading are made for the attainment of substantial justice and are to be construed so as to harmonize with it if possible. A mistaken view of one's rights or remedies should not be permitted wholly to defeat a claim founded upon principals of equity and justice and if the pleadings can be so amended as to admit proof of such claim and such amendment does not introduce a new cause of action, though it may set up a new measure of damages or work a real hardship to the party defendant, it is within the discretion even of the Appellate Court to permit such amendment to be made."

And again in the case of U. S. *v.* Coe, Chief Justice Fuller, citing Wiggins Ferry Company *v.* Ohio & Mississippi Railway Company, 155 U. S., 76, said at page 84:

> "* * * And in respect of allowance of amendments when the ends of justice require it, the course has been to remand the cause with directions."

In Hardin *v.* Boyd, 113 U. S., 756, Mr. Justice Harland, at page 761, said.

> "In reference to amendments of equity pleadings the Courts have found it impracticable to lay down a rule that would govern all cases. Their allowance must, at every stage of the cause, rest in the discretion of the Court; and that discretion must depend largely on the special circumstances of each case. It may be said, generally, that in passing upon applications to amend, the ends of justice should never be sacrificed to mere form, or by too rigid an adherence to technical rules of practise. Undoubtedly, great caution should be exercised where the application comes after the litigation has continued for some time or when the granting of it would cause serious inconvenience or expense to the opposite side. And an amendment should rarely, if ever, be permitted where it would materially change the very substance of the case made by the bill, and to which the parties have directed their proofs."

In the case of Ballard *v.* Searls, 130 U. S., 50, Mr. Justice Bradley, at page 52, said:

> "These facts, however, are of such a character that the appellant may be subjected to great injustice if the cause should go to hearing on the appeal in the present condition of the record; and as they have

occurred since the appeal was taken, there seems to be no mode of affording relief to the appellant except by sending the cause back to the Circuit Court for the purpose of allowing supplementary proceedings to be had in that Court."

And further, upon page 56, the Court proceeds:

"Our decision is that the cause be remanded to the Circuit Court with instructions to allow the appellant, defendant below, to file such supplemental bill as he may be advised in the nature of a bill of review, or for the purpose of suspending or avoiding the decree, upon the new matter arising from the reversal of the decree in the former case of Anson Searles *v.* Alva Worden and John S. Worden, and that such proceedings be had thereon as justice and equity may require. And it is so ordered."

In Seymour *v.* White County, 92 Fed., 115, in the Seventh Circuit, the Court declares the better practice to be for the Appellate Court to grant leave as a matter of course to file a bill of review in the Court below. The Court said, page 115:

"For the necessity of obtaining such leave reference is made to Bank *v.* Taylor, 9 U. S. App., 406, 4 C. C. A., 55, and 53 Fed., 854, in which Southard *v.* Russell, 16 How., 547, 570, and Kingsbury *v.* Buckner, 134 U. S., 650, 671, 10 Sup. Ct., 638, and other cases, are cited. A copy of the bill which it is proposed to file accompanies the petition, but, without consideration of its merits, it is deemed the better practice, unless for special reason to the contrary, to grant the petition as of course. To the extent, therefore, that the leave of this Court is necessary and may be granted, it is ordered that the petitioner have leave to file in the Court below the bill

> proffered, or such other or amended bill or petition as he may be advised, and that the costs of this proceeding be taxed against the petitioner."

In Novelty Tufting Machine Co. *v.* Buser, 158 Fed., 84, *supra*, on a petition for leave to file a bill of review in the Court below before Lurton, Severens and Richard, Circuit Judges, it was said:

> "Nevertheless, if it is seen from circumstances coming subsequently to light that the decree is probably contrary to the justice and right of the case and there has been no negligence or other fault on the part of the aggrieved party, the Appellate Court ought not to permit its mandate to stand in the way of the correction of the decree which it has caused the lower Court to enter."

We respectfully submit that justice requires that the appellant should be allowed the right to bring upon the records of this case the evidence of the effect that the reduction in rate has had upon the earnings and revenue of the appellant, and that by the bringing of the said facts upon the records of this Court no injustice or mischief or inconvenience will be done to the City of Lincoln, appellee, or to any consumer of gas or inhabitant within the City of Lincoln. In the event that the ordinance as passed by the Council of The City of Lincoln should be declared to be operative and binding, the City of Lincoln and the consumers of gas within that City entitled to refund in that event, are fully protected and have been protected at all times by a bond filed in this cause with approved sureties, so that whatever the effect of a refund to the consumers might

have upon the appellant, Lincoln Gas & Electric Light Company, the consumers will not suffer. However, in the event the ordinance at this time should be sustained, and the appellant required to refund such excess charges to the consumers, that refund will be made in small amounts to many hundreds of different persons, and it would be practically impossible for this appellant or for the sureties upon the said bond to later recover the amount so paid to the individual consumers, in the event that at a later date the ordinance was held to be confiscatory. We, therefore, say that no injustice or injury can be suffered by the appellee, the City of Lincoln, or any consumer of gas within the said City, in any manner or form, if the leave prayed for be granted, and that the only injury which may be sustained by anyone would be to your appellant, if the leave be denied, and that equity and justice are with the appellant in this matter, and the Court should in its sound discretion grant the leave as petitioned.

## POINT IV.

**The Court below, if it dismissed the bill, should have dismissed it without prejudice to reinstate the case for subsequent hearing after the one dollar rate had been put to actual trial and test.**

All the evidence submitted as to the effect of a reduction in rate upon the earnings of the appellant and the effect of the said reduction in the consumption and additional sales of gas within the City of Lincoln were based solely upon conjecture. The ordinance had not been put into operation and the conclusion of the master and

the Court below was based solely upon evidence and theories projected into the future. We submit that the best and most satisfactory evidence as to the effect of a reduction in rate is an actual trial and experiment under the reduced rate.

The master in his findings reported to the Court that the appellant would receive, with gas selling at one dollar per thousand cubic feet, a return of 5.12% upon its investment in 1907. He found "a considerable number of witnesses testified with respect to the return upon capital invested in banking, merchandising and other businesses in the City of Lincoln, and from their testimony I find that eight per cent. is the lowest rate sought and generally obtained in such businesses." But that "I cannot believe that a rate not lower than six per cent. upon their invested capital could be regarded as confiscatory."

The actual return to this appellant as found by the master was at that time confiscatory, but he found that: "All human experience has shown that increased consumption follows quickly a reduction in the price of commodities, and the evidence in this case satisfactorily shows that gas is no exception to the rule. I find that with gas selling at one dollar per thousand cubic feet, plaintiff would have received since December 1st, 1906, when the rate ordinance was to be effective, not less than six per centum per annum upon the value of the property employed by it in serving the people of Lincoln."

Therefore, finding as he did that the return which appellant would receive upon its investment in 1907, was confiscatory, or at least there was grave doubt as to whether or not it was compensatory, and as the value of the property was

an estimate and is greatly disputed, and much less as found by the master than the value as shown by the appellant by competent testimony, the Court, if it dismissed appellant's bill and dissolved the temporary injunction, should have dismissed it without prejudice to a rehearing, and given the appellant an opportunity to place before the Court below the actual facts resulting from an experiment under the reduced rate. We respectfully submit that this is the accepted doctrine and rule as laid down by this Court in confiscatory rate cases.

Mr. Justice Moody, in delivering the opinion of the Court in the City of Knoxville *v.* Knoxville Water Company, 212 U. S., 1, at page 15, said:

> "The precise subject of inquiry was what would be the effect of the ordinance in the future. The operations of the preceding year, or of any other past fiscal year, were valueless if the year was abnormal, and were only of significance so far as they foretold the future. If as in this case sufficient time has passed so that certainty instead of prophecy can be obtained, the certainty would be preferable to the prophecy. In this case there could be no absolute certainty, because the ordinance had never been put in operation. But evidence of the operation of the years succeeding to the ordinance is relevant and of great importance, and by a consideration of such evidence a much greater degree of certainty could be obtained. Suppose, by way of illustration, that before bringing suit the company had put the ordinance into effect and had observed it for a number of years and the result showed that sufficient net income had been realized, is it possible that a suit could be brought and the evidence

confined to a period prior to the ordinance and by a process of speculation the conclusion reached that the ordinance would be confiscatory? Some evidence regarding the income of the company after the passage of the ordinance is in the record, but it subsequently was excluded from consideration. It showed an increase of gross and net earnings, but also an increase in the property devoted to the public use. We are unable to say what the effect of the evidence excluded would be; all we can say is that the inquiry was unduly limited by the exclusion of the evidence of the operation of subsequent years."

The Court further says upon page 17:

"Where the case rests, as it does here, not upon observation of the actual operation under the ordinance, but upon speculation as to its effect based upon the operations of a prior fiscal year, we will not guess whether the substantial return certain to be earned would lack something of the return which would save the effect of the ordinance from confiscation. It is enough that the whole case leaves us in grave doubt. The valuation of the property was an estimate and is greatly disputed. The expense account was not agreed upon. The ordinance had not actually been put into operation. The inferences were based upon the operations of the preceding year; and the conclusion of the Court below rested upon the most unsatisfactory evidence, the testimony of expert witnesses employed by the parties."

Upon page 18, the Court proceeds:

"The slight gain to the consumer which he would obtain from a reduction in the rates charged by public service corporations is as nothing compared with his share in the ruin

which would be brought about by denying to private property its just reward, thus unsettling values and destroying confidence. On the other hand, the companies to be regulated will find it to their lasting interest to furnish freely the information upon which a just regulation can be based.

If hereafter it shall appear under the actual operation of the ordinance, that the returns allowed by it operate as a confiscation of property, nothing in this judgment will prevent another application to the Courts of the United States or to the Courts of the State of Tennessee. But as the case now stands, there is no such certainty that the rates prescribed will necessarily have the effect of denying to the company such a return as would avoid confiscation. For these reasons:

*The decree is reversed and the case remanded to the Court below with directions to dismiss the bill without prejudice."*

In the case of Willcox *et al. v.* Consolidated Gas Company, 212 U. S., 19, Mr. Justice Peckham delivered the opinion of the Court, filed upon January 12th, 1909. On January 4th, 1909, Mr. Justice Peckham made an announcement and in that announcement, as shown in a foot note upon page 23, he said:

"Where as in this case in an action brought before the rate takes effect, complainaint fails to sustain the burden of clearly showing that a rate act is confiscatory, the bill should be dismissed without prejudice to the right of the complainant to bring another action after the rate goes into effect, if it then proves to be confiscatory."

Upon page 42, of the opinion, the Court said:

"The value of real estate and plant is to a

considerable extent matter of opinion and the same may be said of personal estate when not based upon the actual cost of material and construction. Depreciation of the value of the plant, mains and pipes is also to some extent based upon opinion. All these matters make questions of value somewhat uncertain, while added to this, is an alleged prospective loss of income from a reduced rate, a matter also of much uncertainty, depending upon the extent of the reduction and the probable increased consumption, and we have a problem as to the character of a rate which is difficult to answer without a practical test through actual operation of the rate. * * * But where the rate complained of shows in any event a very narrow line of division between possible confiscation and proper regulation as based upon the value of the property found by the Court below, and the division depends upon opinions as to value, which differ considerably among the witnesses, and also upon the results in the future of operating under the rate objected to, so that the material fact of value is left much in doubt, a court of equity ought not to interfere by injunction before a fair trial has been made of continuing the business under that rate, and thus eliminating as far as is possible the doubt arising from opinions as opposed to facts."

And the Court proceeds upon page 48, saying:

"There is no particular rate of compensation which must in all cases and in all parts of the country be regarded as sufficient for capital invested in business enterprises. Such compensation must depend greatly upon circumstances and locality; among other things, the amount of risk in the business is a most important factor, as well as the locality where the business is conducted, and the rate

expected and usually realized there, upon investments of a somewhat similar nature with regard to the risk attending them."

And on page 51, the Court said:

"* * * but it is equally true that a reduction in rates will not always reduce the net earnings, but, on the contrary, may increase them. The question of how much an increased consumption under a less rate will increase the earnings of complainant, if at all, at a cost not proportioned to the former cost, can be answered only by a practical test."

Upon page 54 of the same opinion the Court proceeded, saying:

"It may possibly be, however, that a practical experience of the effect of the acts by actual operation under them might prevent the complainant from obtaining a fair return, as already described, and in that event complainant ought to have the opportunity of again presenting its case to the Court. To that end we reverse the decree with directions to dismiss the bill without prejudice and it is so ordered."

In Northern Pacific Railway Company *v.* North Dakota 216 U. S., 579, Mr. Justice Holmes said, page 581:

"It seems to us that the nearest approach to justice that can be made at this time is to follow the precedent of Willcox *et al v.* Consolidated Gas Co. 212 U. S., 19, as nearly as may be, and affirm the decree but without prejudice to the right of the Railroad Company to reopen the case by appropriate proceedings, if after adequate trial it thinks it can prove more clearly than at present the confiscatory character of the rates for coal."

*In re City of Louisville*, 231 U. S., 639, a petition for a writ of mandamus to compel the Judge of the District Court of the United States for the Western District of Kentucky to vacate a supplemental order retaining the case for an actual experiment after the Federal Supreme Court had reversed without prejudice a decree of the District Court enjoining as confiscatory the enforcement of a Municipal ordinance fixing telephone rates, Mr. Justice McKenna in delivering the opinion of the Court said, pages 645-6:

> "* * * The Court considered the opinion and decree of this Court permitted a discretion to retain the case for an actual experiment of the rates. * * * We think the discretion was properly exercised. * * * An actual experiment of the rates had been voluntarily undertaken and had been in effect for more than eight months before the order under review was entered, and the Court conceived that observation of the experiment might secure greater accuracy and confidence in the result and besides inform the Court of matters as they progressed. We repeat, we think the Court did not exceed the discretion permitted."

In the case of the City of Louisville *v.* Cumberland Telephone & Telegraph Co., 231 U. S., 652, a case decided upon the same day as *in re* City of Louisville, the decision was governed by the principles announced *in re* City of Louisville, *supra*.

In Des Moines Gas Co. *v.* City of Des Moines, 238 U. S., 153, Mr. Justice Day said, page 173.

> "While we agree with the Court below that it was right to confirm the Master's report and dismiss the bill, we think in view of the

> fact that the attack upon the rates was made before the ordinance went into effect and before actual application of the rates could demonstrate whether they were remunerative or not, that the Court should have followed the recommendation of the Master and dismissed the bill without prejudice. We think this is particularly so in view of the fact that ordinarily time alone can satisfactorily demonstrate in a case like this whether or not the rates established will prove so unremunerative as to be confiscatory, in the sense in which that term has been defined in rate making cases. The Master's suggestion has the support of the judgment of this Court in Knoxville *v.* Knoxville Water Co., 212 U. S., 1, and Willcox *v.* Consolidated Gas Co., 212 U. S., 19.
>
> "With the modification that the bill be dismissed without prejudice instead of as the Court below directed, with prejudice, the decree is affirmed with costs."

In the light of the law as it has been established by the Supreme Court of the United States in confiscatory rate cases, and in view of all the circumstances of this case, and especially of the fact that the rate herein questioned has been in effect for approximately a period of two years, and that at this time and before the final submission of this case to this Court upon appeal the results of the actual trial and experiment are in existence and can be placed in the record for further enlightenment of the Court, and are the best, most satisfactory and convincing evidence of the remunerativeness of the rate, we respectfully submit that equity and justice permit this appellant to file the bill as it has herein requested to file, or such pleading or bill as it may be advised by its counsel or this Court.

## POINT V.

**In view of the master's finding as to the company's rate of earnings in 1907, it is of particular importance that evidence of the actual operation of the one dollar ($1) rate should be before this Court upon the final hearing of the merits of this appeal.**

The master came to the following conclusion in regard to the rate of return upon the Company's invested capital in the City of Lincoln: "I cannot believe that a rate not lower than 6% upon their invested capital could be regarded as confiscatory."

The master also determined, according to his own figures of valuation, that the company actually earned in the year 1907 (the first year when the rate ordinance was to have been effective), only 5.12% upon its investment as he found it. But the master justifies sustaining the validity of the rate ordinance on the ground that if the $1 rate had been put into effect, an increased consumption of gas together with an increase in earnings, would follow the reduction in price, and he concludes that if gas had been offered for sale at $1 per thousand cubic feet during the year 1907, the company would have received not less than 6% upon the value of its investment. He said:

> "All human experience has shown that increased consumption follows quickly a reduction in the price of commodities and the evidence in this case satisfactorily shows that gas is no exception to the rule. I find that with gas selling at $1 per thousand cubic feet, plaintiff would have received since De-

> cember 1st, 1906, when the rate ordinance was to be effective, not less than 6% per annum upon the value of the property employed by it in serving the people of Lincoln."

It would seem, therefore, that the entire value of the master's decision depends upon the correctness of his hypothesis that a reduction in the rate would have resulted in an increase of consumption thereby increasing the earnings.

But now that the $1 rate has been in effect for a period of twenty months there is no further necessity for estimating the effect of the reduction on the company's earnings as it is now possible to secure direct evidence on this point and place the exact facts before this Court at the time the merits of this bill come on for final hearing.

For these reasons the appellant deems it particularly important in this case that a bill of review be granted because it contends that the evidence with regard to the actual operating effect of the $1 rate should be before this Court in order to enable it to properly pass upon the questions involved in this bill.

## POINT VI.

**The master failed to report and find as instructed by the Supreme Court of the United States.**

In Lincoln Gas & Electric Light Company *v.* The City of Lincoln, 223 U. S., 349, Mr. Justice Lurton, in delivering the opinion of the Court, said, at page 364:

"There should be a full report upon past depreciation, past expense for reconstruction or replacement and past operating expenses, including current repairs. We should be advised as to the gross receipts for recent years and just how these receipts have been expended. Then the amount to be set aside for future depreciation will depend upon the character and probable life of the property, and the method adopted in the past to preserve the property. It can readily be seen that the amount to be annually set aside may be such as to forbid rate reductions because of the requirement of such a fund. The matter is one first for a skilled master, who should make a full report upon the value of the property, the receipts and the expenses of operation and the sums paid out on reconstruction and replacements and in dividends in recent years.

For the reasons indicated we direct that the decree be

*Reversed*, and the cause remanded to the District Court to refer the case to a competent and skilled master to report fully his findings upon all questions raised by either party separately, and with leave to both parties to take any additional evidence they may wish within a time to be fixed by the Court, and that that Court upon such report proceed as equity shall require."

The master in his report failed to make a full report upon past depreciation, past expense for reconstruction or replacement and past operating expenses, including current repairs. He says:

"In computing depreciation I have, so far as reliance has been placed upon arbitrary hypothesis, used what is known as the straight line method as being the most ap-

> propriate to the actual situation and condition with which we have to deal and the one best calculated to bring about a right result."

And cites in support of this position Hayes on Public Utilities and Foster Engineering Valuation of Public Utilities and Factories, quoting from each authority.

It will be noted, however, that in the quotation as used by the master, Mr. Hayes, in Section 162, says:

> "If there is plant alone as representative of the property of the undertaking, the straight line method *when age and life have been determined with accuracy* will show the absolute loss in value and consequently this loss in value gives the true depreciation of the property."

And Mr. Foster in his work as quoted by the master, says:

> "By far the most commonly used method of depreciating machinery and plant is that known as the straight line. By this method *a length of life of the particular apparatus under consideration is estimated and determined by the best experience and judgment available, then this length of life divided into one hundred will give the rate at which the depreciation is to be computed."*

While the master says in his report:

> "The life, age, present condition, fitness and scrap value of the various portions of the plant as shown by the evidence should be taken into account and given due consideration, and as far as practicable that is what has been done in this case,"

yet his report is entirely silent as to the character

and probable life of the property. There are no definite findings on these matters even though both the company and the City placed numerous witnesses on the stand and through them introduced evidence as to the character, age, and probable life of each item of the company's equipment so that the master had abundant material upon which to base and set forth a finding as to these matters, in accordance with the direction of this Court.

Likewise, his report is entirely silent as to the method adopted in the past to preserve the property, in that he has failed throughout his entire report to show the past expense of reconstruction and replacement and current repairs. Although he has dealt at some length with the past operating expenses of the company, he has in all respects failed to in any way separate or show so that the appellant may be informed, or the Court in this case can ascertain, the length of life as assumed by the master in arriving at his depreciation.

Covering the item of money expended for reconstruction and replacement, including current repairs, the master frankly admits that he is unable to make the calculation, although the company's records in recent years were in evidence. In arriving at his amount of depreciation to be allowed for future years he merely sets forth an arbitrary amount of money, without, as is above stated, showing in any way the probable life of the property or the method he has used in arriving at said arbitrary amount. This certainly cannot be said to be in accordance with the instructions of this Court, and is no more enlightening to this Court than the previous decree in this case which was reversed by this Honorable Court. The previ-

ous decision allowed $8,000 per annum and the master's present findings allowed $10,000 per annum, but there are no more facts given this Court for its review than previously.

These questions were raised separately by the parties and a full report was asked of the master in respect to those details. The report as affirmed by the Court below can certainly not be said to be in accordance with the instructions of this Court which stated that there should be a *full report upon past depreciation*, past expense for reconstruction or replacement and past operating expenses, including current repairs, and that the amount to be set aside for future depreciation will depend upon the character and probable life of the property and the method adopted in the past to preserve the property.

The master has failed to make a full report upon the value of the property and a complete summary of the evidence and his deductions therefrom and his reasons therefor, and frankly states:

> "A summarization of this evidence is quite impossible and would, as far as I can see, aid neither Court nor counsel in testing the correctness of the conclusions which I have reached."

## POINT VII.

**The granting of the leave prayed for will not hinder or delay the hearing of this cause in its due and orderly course.**

At the time this case was placed on the docket the appellant intended to petition this Court for leave to file a bill of review or supplemental bill in the nature of a bill of review, for the purpose

of showing this Court the actual operation of the one dollar rate over as long a period as possible. There was ample time to file such petition and to have the evidence taken pursuant thereto, before the hearing of the appeal of this case would be reached in the ordinary course of the docket. Appellant is making the motion at this time because of the motion made on behalf of the appellee to advance the hearing of this cause.

If the petition of the appellant is granted and appellant is given leave to file a bill of review or supplemental bill in the nature of a bill of review, the taking of the evidence pursuant thereto will be completed and the record thereof will be returned to this Court before the hearing of this cause is reached in the ordinary and usual course of the docket. Appellant, therefore, submits that the granting of its petition by this Court will not hinder or delay the hearing of this cause in its due and orderly course.

## POINT VIII.

### Conclusion.

From the foregoing authorities it is clear that this Court has jurisdiction at this time to grant appellant the right to file a bill of review in the Court below. That the appellant has made timely application to this Court for such leave. That regardless of the disposition this Court shall make of this case on its merits, leave should be granted. That in the event this Court affirm the decree of the Court below without taking into consideration the facts as result from a trial and test of such reduced rate, great injustice will

be done to the appellant. That while the filing of a bill of review is within the discretion of the Court to which it is addressed under chancery practice, such right is never denied where no mischief, inconvenience or injustice is suffered by the adverse party and where substantial justice will be accomplished.

Wherefore, we respectfully submit that this Honorable Court should remand the case to the Court below with such instructions as to further proceedings as may be proper to enable said Court to take the proofs and bring upon the record of this cause, the result of the actual trial and test of said one dollar rate.

Respectfully submitted,
CHARLES A. FRUEAUFF,
E. C. STRODE,
Solicitors for Appellant.

Office Supreme Court, U. S.
FILED
MAR 26 1917
JAMES D. MAHER
CLERK

# SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1916.

No. 744. 52

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
*Appellant,*

*vs.*

THE CITY OF LINCOLN *et al.*,
*Appellees.*

## Supplemental Brief of Appellant.

CHARLES A. FRUEAUFF,
*Solicitor for Appellant.*

DEWEY C. BAILEY, JR.,
ROBERT BURNS,
*Of Counsel.*

APPEAL PRINTING COMPANY, NEW YORK

IN THE

# Supreme Court of the United States.

| | |
|---|---|
| LINCOLN GAS & ELECTRIC LIGHT COMPANY, Appellant, *against* THE CITY OF LINCOLN *et al.*, Appellees. | No. 744. |

## SUPPLEMENTAL BRIEF OF APPELLANT.

### POINT I.

### Effect of Stipulation.

It has just been brought to our attention by telegraphic communication from local counsel in Lincoln that the appellees have set up in their brief in opposition to the petition for a bill of review (which at the time of the preparation of this brief, we have not had an opportunity to examine), the fact that a stipulation was entered into by the parties at the time the one dollar rate for gas was put into effect. This stipulation was entered into on approximately May 1st, 1915, at the time the one dollar rate was put into effect by Lincoln Gas and Electric Light Company.

We submit that this stipulation, construed in the light of the circumstances under which it was entered into, and the intention of the parties at

the time, has no bearing whatsoever upon the present petition of the company for leave to file a bill of review.

When the stipulation was entered into, the Master had filed his report containing his findings, but the report had not come before the District Court for hearing on the objections of the Company to the report, although it was expected that a hearing on the Master's report would be shortly held. As a matter of fact, this hearing on the Master's report was held in the following month, to wit, June, 1915.

The stipulation was entered into with the intention that the fact that the one dollar rate had been put into effect would not be taken to be an admission as an acceptance of or compliance with the ordinance of 1906; and furthermore, that neither party would bring to the attention of the Court upon the hearing on the Master's report the fact that the one dollar rate was then effective.

We submit that this intent clearly appears from the stipulation itself. It is entitled in the Court below, and reads, "The action of the Gas Company in establishing such new rate shall not be shown in evidence or presented to *the Court* in the above entitled cause, or used in any way by either party to influence the action of the Court in the disposition of the case involving the validity of said 1906 gas ordinance." "The Court" referred to in the stipulation was the District Court, and the particular proceeding which the parties had in mind in drawing up the stipulation was the hearing before the District Court on objections to the Master's report.

We submit that it is idle to now argue that this stipulation was intended to bind the com-

pany from ever showing the effect of this one dollar rate at any time in the future; because it is apparent that even if the decision of the Court below should be affirmed by the Supreme Court of the United States upon the hearing of the appeal, this Honorable Court would not dismiss the bill without prejudice, but in conformity with its established policy, would permit the company, at any time in the future, to bring further proceedings to test the compensatory character of the rate fixed by the ordinance after an actual trial and test of the rate showed what its effect was upon the company's earnings. These further proceedings would be supplementary to the present case, and its object would be to obtain an amendment at the foot of the decree modifying the decree to such extent as would be justified by the showing made after the actual trial and test of the rate. According to the construction now attempted to be put upon this stipulation by counsel for the City, it would seem that they are trying to prevent the company from ever raising the question of the actual operation of the rate ordinance. This is, we submit, clearly erroneous and quite foreign to the intention of the parties when the stipulation was entered into.

Confirming our view that the intention of this stipulation was merely to cover the hearing before the District Court on objections to the Master's report, we beg to point out that counsel for the City in the proceedings to determine the amount of the bond on appeal after the District Court had confirmed the Master's report, called the attention of the District Court to the fact that this one dollar rate had been put into effect and used this fact as one of the factors to be con-

sidered in determining the amount of the bond. At that time under date of November 17th, 1915, they wrote a letter to the Hon. Page Morris, who was considering the amount of the appeal bond, they said:

> "In addition to the matters submitted in the oral statement to Judge Elliott, one important element should be submitted, namely, while the company has voluntarily reduced its rate to approximately the rates prescribed by the ordinance, it is to be remembered that as a matter of law the ordinance is not recognized by the company, and in the event that the company should so desire they could advance the rates again any time they choose to the old figure of $1.20 in which event even a $600,000.00 bond would be wholly inadequate."

Counsel for the company at that time raised no objection to the mention of this matter by counsel for the City to the District Court, because it was so thoroughly in accordance with the view of the company's counsel that the stipulation was merely intended to affect the hearing on the objections to the Master's report; and we submit that the action of counsel for the City in bringing to the attention of the District Court at the time of fixing the amount of the appeal bond the fact that the one dollar rate had been placed into effect by the Company, shows conclusively that it was their construction of the stipulation that it was merely so intended to affect the hearing before the District Court on the objections to the Master's report.

This stipulation was entered into by local counsel at Lincoln on behalf of the company, and if this Honorable Court deems the matter of the

stipulation to be of such serious moment that it would affect the company's petition for leave to file a bill of review, we request that decision be left open until the company has an opportunity to file another brief prepared by local counsel who is thoroughly familiar with the circumstances surrounding the stipulation, in order that he may present fully his views in respect of this matter.

## POINT II.

**Bill of review or supplemental bill in the nature of a bill of review is the proper method of procedure in this case.**

The Master found that while the ordinance rate would have been confiscatory at the time, he presumed there would be an increase in use of gas because of the reduction in rate. This point was, therefore, one of those in direct issue in the original proceedings, but the character of evidence which could then be produced was entirely speculative. However, now through the actual trial of the reduced rate, exact evidence can be produced which will rebutt the Master's presumption, therefore, this evidence is newly discovered and properly presentable through the medium of a bill of review or supplemental bill in the nature of a bill of review, and does not require the filing of a new bill or supplemental bill.

Respectfully submitted,
CHARLES A. FRUEAUFF,
Solicitor for Appellant.

DEWEY C. BAILEY, Jr.,
ROBERT BURNS,
Of Counsel.

IN THE

# SUPREME COURT

OF THE

# UNITED STATES

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LINCOLN GAS & ELECTRIC LIGHT COMPANY,
APPELLANT,

V.

THE CITY OF LINCOLN, ET AL., APPELLEES.

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## SUPPLEMENTAL BRIEF OF APPELLANT.

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Counsel for the City of Lincoln filed two supplements to their brief on the oral argument, and by the consent of the counsel on behalf of the City, this additional or supplemental brief is filed by the Company.

### I.

### THE MASTER'S VALUATION AS OF JANUARY 1, 1907.

The valuation of the Company's properties as of January 1, 1907, and the net earnings of the Company for the year 1907 are of first importance in testing the validity of the ordinance in question.

The Master found a total present value of $436,565.00 as of January 1, 1907, and found that the Company, at the $1.00 rate would earn 5.12 on that valuation for the year of 1907.

The valuation of $436,565.00 found by the Master includes (1), working capital, (2), going value, and (3), presumably twelve and one half per cent (12½%) over-head on the net construction cost as of January 1, 1907. It is impossible from the Master's findings to determine (1), the present value of the physical properties of the Company as of January 1, 1907, or (2), the reproduction cost of such properties, or (3), the amount of the accrued depreciation considered, and the depreciation by the Master from the replacement costs new to reach the present value, the basis employed by the Master in his valuation as of January 1, 1913. It is also impossible to determine from the Master's valuation of 1907 the amount included, (1), for working capital and (2), for going value, and (3), the amount of overhead expense added to the construction costs of the physical properties.

Judge W. H. Munger, upon the former hearing, found the replacement costs of the Company's properties excluded going value and interest during construction and certain other items of properties and values claimed by the Company, but included working capital of $50,000.00 in the amount of $616,073.59, and found the accrued depreciation to be $49,688.17, leaving the present value as of January 1, 1907, at $566,073.59 (Trans., p. 25). To this valuation so found by Judge Munger, should be added going value and interest during construction. With these two elements properly included in Judge Munger's valuation it will be seen that the Master's valuation for 1907 is approximately $200,000.00 below the figure fixed by Judge Munger.

The Company submitted a detailed valuation of the physical properties including working capital, upon the hearing before Judge Munger in the former trial, showing a valuation of $904,000.00 for the physical properties, including working capital, but excluding going value (Trans., p. 263). That testimony, as well as all testimony submitted to Judge Munger upon former trial was submitted to the Master.

The Company offered, upon the hearing before the Master, the testimony of Mr. Lea, whose testimony was largely the basis for the Master's findings, in the Des Moines Gas Case reviewed by this Court, showing a reproduction cost as of January 1, 1907 in the amount of $904,141.00 and a present value of $784,682.00.

The Master's lump sum figure for 1907 is clearly $200,000.00 below the then present value of the Company's properties as shown by the conclusive and overwhelming weight of the evidence and the net earnings of 5.12 per cent. upon such low valuation as fixed by the Master is clearly confiscatory.

TheMaster's valuation for 1907 utterly fails to comply with the order and direction of this court in the reversal of the case upon former hearings, to the effect that the Master should (1), report fully his findings upon all questions raised by either parties separately and that (2), he should make a full report upon the value of the properties, (3), the receipts and expenses of operation, (4), the sums paid out upon reconstruction and replacement, and the depreciation in past years and (5), a full report upon past depreciations, past expense for reconstruction and reproduction and past operating expenses, including current repairs. A lump sum valuation for 1907 of $436,565.00, including both tangible and intangible properties without any separation or segregation, and without any indication as to the amount of depreciation or the replacement costs new in the properties or any portion of the properties and without any findings as to how much the Company had expended for reconstruction or repairs prior to 1907, or how much the properties had depreciated at that time is a total and utter failure on the part of the Master to comply with the directions of this court.

The Company in its exceptions to the Master's report, pointed out specifically the above failure on the part of the Master (Exc. 1, Trans. p. 70). The Company also filed an application to recommit the case to the Master in order that specific findings should be made in the above matters (Request No. 17, Trans. p. 73).

*Construction Account:* The construction account of this Company shows a net amount of $784,307.49 at the close of the year of 1912, and $589,887.84 at the close of the year of 1906 (Trans. p. 1896).

The question was asked by Justice Brandeis on the oral argument as to whether the construction account showed the total investment of the Company undepreciated in 1912. The evidence referred to in the City's brief and also in our brief, page 100, shows that in case of replacements the new equipment taking the place of the old equipment was charged in the construction account with the difference between the cost of the new and the cost of the old, so by that process all completed depreciation was charged off, the new equipment by this method absorbed the depreciation in the old in the deduction in which it was charged in the construction account. The construction account to the extent of such completed depreciation does not reflect the total investment, but reflects the total investment less the total completed depreciation. The effect of deducting from the new equipment the original cost of the old is to charge the new equipment with all of the depreciation in the old. Further the evidence shows (Trans. pp. 2037-2061) deductions in addition to the deductions covering depreciation in the construction account as above indicated, further credits or deductions, in the amount of $59,754.15. These credits in the construction account have been deducted, leaving a balance in 1912 of $784,307.49, and at the close of 1906 the amount of $589,887.84. The construction account does not include working capital which the Master fixed at $60,000.00 in 1912 nor the twelve and one-half per cent overhead allowed by the Master, nor anything for going value.

## II.

## MASTER'S VALUATION FOR 1912.

With respect to the Master's 1912 values of $676,565.00 including working capital and going value, the difference between

the Master's present value on the physical properties including working capital and the present value of such properties as determined by Mr. Lea, exclusive of paving over mains and services is $68,859.00, as follows:

| | Master. | Lea. | Difference. |
|---|---|---|---|
| Real Estate | $16,250.00 | $18,350.00 | $2,000.00 |
| Buildings | 29,381.00 | 30,967.00 | 1,586.00 |
| Work Equipment | 179,310.00 | 196,759.00 | 17,449.00 |
| Distribution System | 351,624.00 | 387,445.00 | 35,821.00 |
| Working Capital | 60,000.00 | 72,038.00 | 12,038.00 |
| Total Difference | | | $68,859.00 |

The Master excluded from the value of the distribution system $30,484.00, representing payments made by consumers on house services, which is included, however, in Mr. Lea's figure and which if deducted from Mr. Lea's valuations would leave a net difference of $38,411.00 in the valuation of the physical properties, including working capital.

The error in the City's tabulation submitted at the close of the argument showing a net difference of $11,000.00 in the values of the physical properties results from deducting from the present value undepreciated, going value and overhead items in Lea's valuation, and by including and deducting as a separate item $33,000.00 organization expense which is a portion of Lea's overhead. By its deducting as a separate item, after deducting overhead, a double deduction for this item occurs.

## III

## THE MASTER'S 1912 OPERATING EXPENSES.

The Company complains of the Master's 1912 finding more particularly because of the deductions made by the Master in the operating expenses for 1912, amounting to $23,000.00, which represented money actually expended by the Company in the operation of its properties.

The exclusion of more than $7,000.00 from the operating expense in the new business department we believe was not justified and particularly in view of the fact that a large portion of the total expenditures of the new business department would be incurred by the Company necessarily if there was no new business department.

Expenditures of the Company in holding and getting business under serious competition on the part of the City should be considered with some degree of liberality in a contest with the City and the Company should have considerable latitude in the exercise of its judgment as to necessary expenditures to preserve, protect and extend its business, and should not be held to limitations or restrictions proposed by the City. The Master's restrictions on such expenditures would have been unnecessary in the absence of such competition since it is fair to assume that such expenditures would not have been incurred in the absence of competition. The Master we believe attached too much importance to the results in getting new business, and not enough importance to the efforts of the Company to hold old business. The Company would be doing well to hold its volume of business by such expenditures in view of the growth of the City of 4,000 in ten years, and in view of the aggressive competition on the part of the City and Traction Company in the electric field. The field for expansion by reason of the small increase in growth in City was very limited and the Company was doing well to hold its own even with the expenditures in the new business departments.

Further expenditures of the character in question would necessarily belong either to the operating expenses or capital account of the Company. They were either an operating expense or a capital investment. The Master excluded the amount so expended to the extent indicated in his report from both accounts. In this the Master clearly was in error.

An analysis of the new business department account is found in the record (Trans. pp. 1537-1559), showing that the expenditures charged to this department include portions of

the (1), rent, heat, lighting, telephone charges, (2), barn expenses, (3), labor expenses in connection with setting and resetting meters and connections and (4), rebates and allowances. The appliance account standing alone (Trans. pp. 1543-1551) shows a gain of more than $1,000.00 in 1912, and more than $5,000.00 in 1913 (Trans. p. 2062, Sub. G 15). The City's contention that the handling of appliances in 1912 was at a loss of $7,301.93 is reached by charging alone the appliance account with the expenditures of the new business department, which expenditures were incurred not in the sale of appliances alone, but in getting and holding business, including certain salaries for the new business department, wages, labor, advertising, etc. It is apparent that if the total expenses of the new business department is charged against the receipts from the sale of appliance which is only a subdivision of the new business department the profits on the appliance account would have to be sufficient to carry the total expenses of the new business department or a loss would be shown. A fair comparison would be to consider the appliance account standing alone showing the amount of money paid by the Company for the appliances purchased, and showing the amount of money realized upon appliances sold and the expenses involved in making the sale, and if the appliances were sold for more than the Company paid for them, plus such expenses, to the extent of such difference a profit would result from the handling of appliances which in turn could be used by the Company in defraying other expenses of the new business department.

In 1912 the expenditures of the Company to the extent of $19,692.64 were charged to the new business department. In 1913 this amount was reduced to $10,399.90. This reduction, however, was due in part to the fact that the sale of the appliances standing alone resulted in a profit of more than $5,000.00 (Trans. p. 2062, Sub. G 15). The sales of gas in Lincoln, however, dropped from 227,297 M. cu. ft. in 1912 to 220,000 M. cu. ft. in 1913.

The manager of the Company, found by the Master to be competent and skilled approved the expenditures of the Company charged to the new business department. The Master eliminated $7,692.64 of the $19,692.64 expended in the year of 1912 in that department. There is, we believe, no fair basis or justification for the elimination of $7,692.64 of the expense of the Company so incurred in 1912. The Master may as well have eliminated all of it as any part of it so far as having any basis in the record for his action is concerned.

The Master also eliminated an expenditure in 1912 of $3,000.00 paid the chairman of the board of directors, and $600.00 paid New York counsel, a total of $3,600.00. The total executive salaries of the Company, including president, vice-president, chairman of the board of directors, manager, secretary, assistant secretary and treasurer for the year 1912, chargeable to the gas department was $8,917.30. This expense was approved by the manager. There is no testimony in the record showing the amount to be excessive or unreasonable or unnecessary. The exhibits compiled from the Massachusetts companies show the total executive salaries to have been moderate and in fact low and there is nothing in the record to support the elimination or any part of it. We have already pointed out that the Master eliminated the whole of the particular salaries in question when only a portion was charged to the gas department, in which the Master clearly erred.

*Electric Department General Expenses:* The table set out in the City's brief, page 142, purporting to show the general expense in the electric department for the years 1903 to 1912 inclusive, is for the purpose of showing that certain expenditures of the Company in common between the gas and electric departments had increased in the gas department and decreased in the electric department. The Master found that certain expenses in common between the two departments should be apportioned on the basis of the relative number of consumers in the two departments.

The record shows that prior to April, 1908, the expenditures in question were apportioned and charged, fifty per cent. to the gas department and fifty per cent. to the electric department (Trans., pp. 137 and 769). But it developed upon the former trial that this apportionment of the common expenses should be readjusted upon the basis of the relative number of consumers in the two departments which at the time stood eighty per cent gas and twenty per cent electric. Prior to that time no particular attention had been given to the matter of proper division of these common expenses and too great a portion of such expenses were being charged to the electric department. The result of making the change in April, 1908, from a basis of one-half to the gas department and one-half to the electric department to eighty per cent. to the gas department and twenty per cent. to the electric department necessarily increased the amount charged to the gas department and decreased the amount charged to the electric department. The basis for charging these common expenses as made in April, 1908, was approved by the Master. The net result of the table set out in the City's brief is to show the decrease in the electric department between 1908 and 1912, which at first thought appears important but with the fact in view that the decrease was due to a readjustment between the two departments on a proper basis, the result is neither important nor unexpected.

With respect to the increase of the expenditures of the legal department referred to in the City's brief, it should be borne in mind that all claims such as personal injury claims or claims on account of injuries to property were charged to this department (Trans. p. 163).

The evidence shows that in 1907, $1500.00 of a personal injury judgment was charged to the account of legal expenses (Trans. pp. 163 and 2062, Sub. G 14), and in 1913 settlements in the amount of $2200.00 were charged to this account; in other words it is an acocunt that does not represent simply the

salaries paid for legal services, and in so far as it represents settlements or judgments against the Company neither the increase nor the decrease of the amount could be controlled by a rate ordinance. The evidence shows that in 1906 the total legal expenses in this account chargeable to the gas department was $757.43 (Trans., p. 1386, Sub. 483), while in 1907 the amount was $2,160.31 (Trans., p. 1386, Sub. 487), and in 1912 it was $7,954.73 (Trans., p. 1386, Sub. 492). The evidence shows important litigation outside of personal injury suits, claims and settlements and outside of this gas rate ordinance. The Company has pending a suit brought on behalf of the City of Lincoln to terminate its right to do business and to furnish gas at any price, claiming that the Company's franchise has expired. Such a suit is of great importance to the Company and involves practically the total investment of the Company, and the Company would necessarily be required to pay for the services of competent counsel. The City also brought suits against the Company involving occupation taxes in which judgments were recovered against the Company in the amount of something over $80,000.00, which were appealed to the Supreme Court by the Company and presented there with the results as indicated by the City in its brief. The record shows that the expenses of the preparation and hearing before the Master on this rate ordinance are not a part of the expenses involved in any of the years from 1907 to 1912, inclusive, but that a special account carrying all such expenses was opened January 1, 1913 (Trans., p. 1559) so that such expenditure are not involved in the expenditures considered by the Master in his 1912 valuation or his 1907 valuation.

*Working Capital:* It is argued in the City's brief that the Master allowed too much working capital and that the proper amount would be represented by the average monthly pay-rolls plus the average monthly vouchers. The argument being that if the total amount paid for labor and material,

including supplies, for twelve months should be divided by twelve the result would represent the necessary working capital.

The record shows that the Company was required and did keep on hand a large amount of supplies ($16,000, Trans. p. 1300), including pipe, meters, etc., and also was required and did keep on hand a large amount of coke and coal and oil. The record shows that in 1907 at the time the inventory was taken the Company had on hand more than three thousand tons of coal. It was necessary that the Company protect itself at all times against traffic conditions, weather conditions and trade conditions and was obliged to keep ample supplies of all of its materials on hand so that in case of temporary delays or shortage from any cause, the Company could go on for a considerable period and serve the public. The City's basis of determining the working capital would limit the Company to the amount necessary for one month and where the Company had three thousand tons of coal on hand the City would consider only that part on hand as a part of the working capital which would represent the average monthly consumption of coal for the year, which would not represent the amount the Company had invested in coal and had on hand during any of that time, but would represent about one-third or one-fourth of it.

*Depreciation:* It is argued in the City's brief that Mr. Lea presented the sinking fund method of taking care of the depreciation for the purpose of gaining some advantage for the Company in this case. The fact is that the City on the former hearing presented Professor Beemis as its expert, who came into the case for the purpose of advocating for the City the sinking fund method of determining and providing for depreciation (Trans., p. 217). The Company through Mr. Lea's testimony presented in detail throughout the valuation of the Company's property both the straight

line depreciation and the sinking fund annuity (Trans. p. 1304, Sub. 1 to 22). The two methods are completely and definitely set out in Mr. Lea's valuation. Depreciation is an operating expense and the Company took the position that if the straight line method was employed then it would be necessary to provide a larger amount in operating expenses to take care of it than if the sinking fund method was employed and we were indifferent as to which method was used. The operating expenses would be increased or decreased according to the amount of the depreciation. The City first used the sinking fund method and urged its adoption (Trans. p. —) on the former hearing and before this Court as is shown by a reference to the brief presented to this Court by the City, but later upon the hearing before the Master adopted the straight line method. Its expert witness applied the straight line method of depreciation to the physical property, assuming a life and accepting the Company's statement for the ages of the property so far as past depreciation was concerned, but as to future depreciation and for the years of 1907 to 1912 attempted to measure it by a certain number of cents per thousand feet of gas sold, which method the Master found to be improper, bearing no direct relation to the subject of depreciation. It is evident that neither the straight line method nor the sinking fund method can be properly applied without qualification to past depreciation in reaching present value. Either the straight line method or the sinking fund method would be proper in measuring past depreciation in so far as it applies to service value. Either method would be proper in measuring depreciation in the future, because you have an established value, which represents the actual present value, and we assume that the actual present value less depreciation will continue during the time the prescribed rate based upon that value continues. But as to past depreciation either method cannot be applied without qualification. If we assume the water gas set has a life of twenty years, and was purchased ten years ago at a cost of $20,000.00 and would cost

new at this time $10,000.00, applying the straight line method of depreciation to the present cost, we would have a result of $5,000.00, whereas if applied upon a rate fixed at the time the equipment was purchased, we would have a value of $10,000. If the same water gas set ten years ago cost $10,000.00 and has a life of twenty years, and at this time would cost $20,000.00, then by the application of the straight line method of depreciation the present value would be $10,000. The straight line method or the sinking fund method in measuring future depreciation assumes because the rate is established on the present value, that the rate will continue in effect as long as the present value continues less the depreciation and for that reason may be properly applied to future depreciation, but the courts and commissions in determining past depreciation accrued prior to the rate in question determine the actual depreciation, not theoretical depreciation. Judge Munger upon the former hearing found that the property in 1907 as a whole had depreciated in the amount of $49,688.17 which was ten per cent of the value of physical property new exclusive of real estate and working capital. This $49,688.17 did not represent either the straight line or the sinking fund depreciation but represented the actual accrued depreciation as found by the court.

The amount of the depreciation should not fluctuate with market changes in the cost of equipment, but rather should measure the exhaustion in the equipment which should be compensated for in the operating expenses for depreciation based upon the original investment so that the original investment will remain unimpaired. The Company's property revalued as today would probably be fifty per cent greater than the valuation as of January 1, 1913, with depreciation deducted for the four years intervening because of the advances in the cost new equipment. The City valued the Company's gas mains in 1912 from $24.00 to $26.00 per ton and applied the straight line depreciation for the time the mains had been in use to the $24.00 to $26.00 per ton whereas

the mains cost the Company from $30.00 to $36.00 per ton and if the straight line depreciation had been applied to the $30.00 to $36.00 per ton, a much higher present value would have resulted. The cost at this time would probably be from $40.00 to $50.00 per ton and if the straight line depreciation was applied to that value covering the time the mains had been in use, the result would approximate the original cost notwithstanding the depreciation. The original investment when properly and fairly made should not be subjected to impairment by such radical changes as have occurred in the market value of equipment by making such market value the basis for the application of either the straight line or sinking fund depreciation without some qualification.

## IV.

## VALUATION AND RATE OF RETURN FOR THE YEARS 1907 TO 1912 INCLUSIVE.

The sales in 1912 in cu. ft. were 227,297 M. cu. ft. The actual operating expense with depreciation added as determined by Mr. Lea and exclusive of the occupation tax was $197,277. From this total operating expense the Master made the following deductions:

1. The expense of the new business department for the year 1912 was $19,692.64. The Master allowed $12,000.00 for this item of expense actually incurred by the Company or a reduction of $7,962.64 from the $197,277.00 total operating expenses, including depreciation.

2. The Master deducted $3,300.00 because of expenditures of the Company in common between the electric department and the gas department wherein certain expenditures in common were apportioned between the gas department and the electric department on the basis of eighty per cent to the gas department and twenty per cent to the electric department. The Master apportioned these expenses on the basis of seventy-three per cent to the gas department, and twenty-seven per

cent to the electric department, resulting in a deduction of $3,300.00. The number of consumers in the two departments varied somewhat from year to year, and in 1907 stood in a ratio of eighty per cent gas and twenty per cent electric consumers, and for the ten years 1902 to 1912 inclusive, the average was seventy-nine per cent gas and twenty-one per cent electric, which we assume to be the fair basis of apportioning the common expenses (Trans. p. 1849). If the seven per cent deduction resulted in $3,300.00 then one per cent would result in one-seventh of that amount or $471.42 and the one per cent would represent the difference between eighty per cent and twenty per cent and seventy-nine per cent and twenty-one per cent so that the deduction in any event should not have been for more than $471.42 in place of $3,300.00.

It is evident the Master considered the common expense which he apportioned on the basis of seventy-three per cent to the gas and twenty-seven per cent to the electric departments in the amount of $47,142.00 upon which amount seven per cent reduction would result in $3,300.00. It is impossible to determine from the report or the record what constitutes the $47,142.00 of common expenses.

In 1907 the common expense was apportioned on the basis of fifty per cent electric department and fifty percent gas department, but the Master made no correction in the apportionment for 1907 and in this his report was clearly in error if his basis for apportionment was correct in 1912. And had the correction been made by the Master, the common expense in 1907 would have been increased in the gas department thirty per cent, which would have decreased the net earnings $14,142.60 and would have reduced the Master's net earnings for that year from $27,179.00 with the occupation tax eliminated to $13,036.40 considering the common expense in the amount of $47,142.00 assumed by the Master in 1912, and would have rseulted in the net earnings on the Mas-

ter's valuation of 2.7%. If it was proper for the Master in 1912 to apportion the common expense upon the basis of the relative number of consumers in the gas and electric departments then there could be no escape from the necessity for making the same apportionment in 1907 on the same basis notwithstanding it would result to the disadvantage of the City.

3. The Master deducted $3,600.00 covering the salaries of Mr. Henry L. Doherty and Mr. Charles A. Frueauff, representing the total amount for the year 1912 paid to Mr. Doherty and Mr. Frueauff. The total amount in any event should not have been deducted by only seventy-nine per cent thereof or $2,884.00.

4. Mr. Lea included in the $197,277.00 depreciation in the amount of $20,865.03. The Master allowed for depreciation in 1912, $12,000.00 which would result in a deduction of $8,865.03 bringing the total operating expense down to $177,314.33.

5. To the $177,314.33 should be added the occupation tax of three per cent on $227,297.00 at the $1.00 rate, or $6,818.91, which results in a total operating expense on the Master's basis with the corrections in his figures, as above indicated, $184,128.24, leaving the net earnings for 1912 at $43,169.00. The Master in making the computation by reason of the errors above noted, reached the figure of $46,658.00. The errors, however, are apparent.

The Master does not give the value of property for any of the intervening years between 1907 and 1912, and so far as the operating expenses are concerned gives only the amounts for such years as shown by the Company without any definite deductions, so that no exact figure can be made of the net earnings for such intervening years. However, the Master found that the total depreciated value of the property added between the years 1907 to 1912 inclusive, was $240,000.00.

The construction account (Trans. p. 1896) shows the total construction for 1907 in the gas department to have been

$16,017.70; for 1908, $73,638.84; for 1909, $23,031.93; for 1910, $50,248.06; for 1911, $20,033.10! for 1912, $27,167.72, which is exclusive of the $30,484.43 paid on house service by consumers during said period (Trans. p. 1826).

In view of these expenditures shown in the construction account and in the absence of any findings of value, by the Master for the intervening years, it is necessary to assume an apportionment of the $240,000.00 added depreciated value for the years covered by the expenditures. For the purposes of the calculations which are here submitted we have apportioned the $240,000.00 equally between the six years, 1907 to 1912, being $40,000.00 for each year. If the $40,000.00 is deducted from the valuation found by the Master at the close of the year of 1912 and $10,000.00 added covering the depreciation on the property for that year exclusive of the $240,000.00 depreciated value added between 1907-1912 inclusive, we would reach approximately the Master's value of the property at the beginning of the year of 1912 before the $40,000.00 additional depreciated value had been added and before the $10,000.00 depreciation had been taken off and by the same process working back to 1907 we can reach approximately a value for each of the years on the Master's basis of valuations for the year 1912.

The operating expenses for the intervening years we must necessarily assume to be the amount actually expended by the Company as we have no deductions by the Master except for the year 1912, the 1907 operating expenses being allowed by the Master as reported by the Company. The 1913 operating expenses were offered in evidence as shown in Exhibit "424," page 2060, and the new construction in 1913 more than offset the depreciations so that it is altogether fair to the City to assume the present depreciated value in 1913 the same as found by the Master in 1912. The table below shows the valuation, net earnings and per cent of net earnings on the valuation for each of the years 1907 to 1912 inclusive, prepared as above stated.

## MASTER'S VALUATIONS.

1.

Master's Valuation as indicated above not including the $100,000.00 of going value found by Master but excluded.

| Year | Valuation | Actual Net Earnings | Per Cent. |
|---|---|---|---|
| 1913 | $676,567 | $23,791 | 3.4% |
| 1912 | 676,565 | 23,257 | 2.4% |
| 1911 | 646,565 | 35,309 | 5.4% |
| 1910 | 616,565 | 39,569 | 6.4% |
| 1909 | 586,565 | 51,076 | 8.7% |
| 1908 | 556,565 | 41,982 | 7.5% |
| 1907 | 496,565 | 27,179 | 5.4% |

2.

Master's Valuation including the $100,000 of going value found by Master, but excluded.

| Year | Valuation | Actual Net Earnings | Per Cent. |
|---|---|---|---|
| 1913 | $776,567 | $23,791 | 3. % |
| 1912 | 776,567 | 23,257 | 2.9% |
| 1911 | 746,565 | 353,091 | 4.7% |
| 1910 | 716,565 | 39,569 | 5.5% |
| 1909 | 686,565 | 51,076 | 7,4% |
| 1908 | 656,565 | 41,982 | 6.3% |
| 1907 | 596,565 | 27,179 | 4.5% |

## LEA'S VALUATION.

| Year | Valuation | Actual Net Earnings | Per Cent. |
|---|---|---|---|
| 1913 | $1,090,913 | $23,791 | 2.1% |
| 1912 | 1,090,913 | 23,257 | 2.1% |
| 1911 | 1,051,172 | 35,309 | 3.3% |
| 1910 | 985,878 | 395,690 | 4. % |
| 1909 | 926,712 | 51,076 | 5.5% |
| 1908 | 830,120 | 41,982 | 5. % |
| 1907 | 784,682 | 27,179 | 3.4% |

The two and one-half occupation tax under the ordinance for the years 1907, 1908, and 1909, has been excluded from the operating expenses in the above table. The occupation tax of three per cent for the years of 1910, 1911 and 1912, at the one dollar rate has been included as the case involving the validity of that ordinance is awaiting a determination of the rate in order to fix the amount on which to compute it.

The average for the period according to the Master's findings as above in tabulation one would be 5.7%, and in tabulation two would be 4.9% and the average for the period as shown by the Company's valuation and its actual operating expenses would be 3.6%.

The evidence shows that in 1904 the Company was struggling to get money for its operating expenses and for extensions and betterments on its 7% notes secured by double the amount of the notes in bonds plus 2% commission on the notes and was unable to get money on that basis and the stockholders advanced $100,000.00. The rate of gas in Lincoln about that time had been reduced 30c per thousand. The evidence shows that in 1909 the Company's first mortgage bonds in the amount of $333,000.00 would mature the following year and the Company, in order to get the money to take up said bonds, was obliged to issue short time 6% notes, for which the bonds were held as collateral secured by a first mortgage in the amount of $333,000.00 on the combined properties of the gas and electric departments. On that basis it was necessary for the Company to suffer a discount and the notes were sold under the order of the Railway Commission on the basis of 96c on the $1.00 resulting in an interest charge of 7.6%. The evidence also shows that when those notes matured it was necessary for the Company to take them up by another note issue under like conditions. It is absurd to say that a fair rate of return upon investment in the properties would be 5% or 6% in face of the fact that in financing the Company's needs for money where the security was a first mortgage lien limited to

$333,000.00 on the combined properties of the gas and electric departments, the Company was obliged to pay 7.6%. If the Company was obliged to pay 7.6% for money to maintain its business and properties and for betterments and extensions in 1909 to 1912 a rate or return short of that amount would be confiscatory, because it would not be a fair rate of return determined by the actual experience of the Company.

In conclusion we want to again urge upon the attention of the court that enforcement of the ordinance against the Company would result in confiscation of practically the entire property of the Company. The 20 cents per thousand refund with interest amounts to approximately $525,000.00. The entire earnings of the property between the years 1907 and 1912 were devoted to (1) payment of bond interest and, (2) the maintenance and operation of the property. The application to the Railway Commission for permission to issue the $500,000.00 of notes shows that the difference between the $333,000.00 of bonds retired and the $500,000.00 was to cover money furnished for extensions and betterments in the property. The Master's valuation as of January 1, 1913, was $676,565.00. In this situation the confiscatory character of the rate ordinance in question appears to be clearly and conclusively demonstrated.

Respectfully submitted,

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[redacted]

OCTOBER TERM, 1897

IN THE

# Supreme Court of the United States

LINCOLN GAS & ELECTRIC LIGHT COMPANY, APPELLANT,

VS.

THE CITY OF LINCOLN, NEBRASKA, ET AL. APPELLEES.

## BRIEF OF APPELLEES

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[redacted]

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General Number 25574.

Term Number 300.

OCTOBER TERM, 1917

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IN THE

# Supreme Court of the United States

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LINCOLN GAS & ELECTRIC LIGHT COMPANY, APPELLANT,

VS.

THE CITY OF LINCOLN, NEBRASKA, ET AL, APPELLEES.

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## BRIEF OF APPELLEES

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### STATEMENT OF CASE.

In the fall of 1906 the city council of the city of Lincoln, Nebraska, passed an ordinance reducing the price of gas from $1.20 to $1.00 per one thousand cubic feet. The ordi-

nance was to take effect December 1st, 1906. Complainant refused to comply with said ordinance and on the 27th day of December, 1906, filed its bill in the Circuit Court of the United States, in and for the District of Nebraska, against the city of Lincoln and its then mayor and city attorney, praying an injunction against the enforcement of said ordinance on the ground that the rate fixed was not compensatory and that the ordinance was therefore violative of the 14th Amendment to the Constitution of the United States. In its bill, as an incident to the main purpose, complainant also sought to restrain the enforcement of an ordinance of said city providing for an occupation tax of 2 1/2 per cent of its gross receipts from the sale of gas. This last mentioned ordinance has never been complied with by complainant, its excuse being the one set up in the bill in this case, namely, that it was discriminatory and void.

The cause was tried to the court without the aid of a master. The court found the occupation tax ordinance to be discriminatory and void and enjoined its enforcement, but held the gas rate ordinance valid. A restraining order had been issued against the enforcement of the gas rate ordinance at the commencement of the suit and this was ordered to remain in force, pending an appeal to this court by complainant, upon its execution of a bond with sureties approved by the clerk of the court conditioned for the repayment to gas consumers of the difference between the old rate and the new in the event the gas rate ordinance should finally be upheld. The bond was given and the appeal was perfected. The case was submitted to this court at the December term, 1911. This court reversed the judgment of the lower court and ordered the case remanded with directions to appoint a special master to take such additional evidence as the parties might wish to offer and to make

findings of fact and conclusions of law and for such other proceedings as a proper disposition of the case might require.

When the matter of the appointment of a Special Master came before District Judge W. H. Munger, the attorneys for the respective parties were called together, and the names of a number of eminent lawyers of the state were submitted to them, with the request that they endeavor to agree upon some one of the attorneys thus suggested. Without hesitation, Judge John J. Sullivan was selected, and duly appointed by the court. We are sure that counsel for the plaintiff will agree with us that Judge Sullivan is one of the ablest, and most eminent lawyers of our state. He is a lawyer of wide experience, and has the respect of the bench and bar of Nebraska, and is widely known throughout the state as a man of unquestioned legal ability and integrity. He was at one time associate justice and then chief justice of our supreme court. No one who knows Judge Sullivan and is acquainted with his history as a lawyer, as a district judge, and as a member of our supreme bench, will deny that any conclusion reached by him either upon a legal question or upon any question of fact based upon the consideration of conflicting evidence is entitled to very great weight.

Complainant excepted to substantially all of the findings of fact and conclusions of law contained in the master's report. The exceptions were heard before Federal District Judge Morris of Duluth, who overruled them so far as they related to the validity of the gas rate ordinance, but sustained them so far as they related to the occupation tax ordinance. It will be remembered that at the former trial Judge W. H. Munger held that the occupation tax ordinance was void, whereas the master in his report at the present trial held it valid and allowed the complainant to in-

clude such tax in its operating expenses notwithstanding it had never paid any tax under the ordinance and was then litigating it not only in this suit, but in the state courts. Judge Morris took the view of Judge Munger rather than that of the master and held against the occupation tax ordinance. A decree was entered upon the master's report dismissing the bill as to the gas rate ordinance. Complainant then applied for an order reinstating the restraining order pending an appeal to this court, which order was granted upon condition that complainant should file a bond with the clerk of the court in the sum of $575,000 conditioned for the repayment to gas consumers of the difference between the old rate and the new in the event the gas rate ordinance should finally be sustained. The bond was filed and approved and the appeal to this court was perfected. This court advanced the case for hearing at the October, 1917, term.

## I.

## LEGAL PROPOSITIONS INVOLVED.

### 1. Weight to be given the master's report.

**We concede that the report of a master may be set aside by the court, modified or corrected in any manner not inconsistent with the justice of the case. This power, however, is not to be exercised except for good cause shown.**

*Jafrey* v. *Brown*, 29 Fed. 477.
*Carey* v. *Lovell*, 31 Fed. 346.
*National Folding Box Paper Co.* v. *Dayton, etc.*, Co. 91 Fed. 824.

**The report, so far as the facts are concerned, is given the effect of the verdict of a jury. We doubt if any case can be found where the master's report has not been followed where his findings were in favor of the rate complained of.**

*Gerard etc. Co.* v. *Cooper, et al.*, 162 U. S. 529, 40 L. Ed. 1062.

*Des Moines Water Co.* v. *City of Des Moines*, 194 Fed. 557.

*Crawford* v. *Neal*, 144 U. S. 585, 36 L. Ed. 552.

*Peter L. Kimberly* v. *Chas. D. Arms, et al.*, 129 U. S. 512, 32 L. Ed. 764.

*Emil Boesch, et al.*, v. *Albert Graff, et al.*, 133 U. S. 697, 33 L. Ed. 787.

*John T. Davis, et al.*, v. *John H. Swartz, et al.*, 155 U. S. 631, 39 L. Ed. 289.

**2. As to what items are usually included in "overhead cost."**

*Whitten, Valuation, etc.*, Sec. 240.

*Foster, Engineering Valuation, etc.*, p. 17.

**3. That "straight line" method of depreciation is the one most commonly employed.**

*Hayes, Pub. Utilities*, secs. 139 and 162.

*Foster, Eng. Val.*, p. 20-21.

**4. That actual records and figures should be produced as to overhead costs, rather than to rely on opinions and theories of engineers.**

*Whitten*, Sec. 240.

*Cumberland Telegraph & Tel. Co.* v. *City of Louisville*, 187 Fed. 637.

**5. "Working capital equals average monthly payroll and average monthly vouchers."**

*Foster, Eng. Val.*, p. 22.

**6. That such value as inheres in the physical property because it is connected up with an established business may be included and is presumed to have been included by the witnesses on value.**

*Des Moines Gas. Co.* v. *Des Moines*, 238 U. S. 153, 59 L. Ed. 1244.

*Cumberland Tel. & Tel. Co.* v. *City of Louisville*, 187 Fed. 637.

*Cedar Rapids Gas Light Co.* v. *Cedar Rapids*, 223 U. S. 655, 56 L. Ed. 594.

**7. Going value in the sense of business value not a proper element to be included as an asset in a rate case.**

*Minnesota Rate Cases*, 230 U. S. 352, 57 L. Ed. 1511.

**8. Going value allowed in Omaha water case was business value such as described by Mr. Lea. The Omaha case recognizes a distinction between a rate case and a condemnation case in respect to going value.**

*Omaha* v. *Water Co.*, 218 U. S. 180, 53 L. Ed. 991.

**9. That paving over mains should be excluded.**

*People* v. *Wilcox*, 104 N. E. 911.

*Des Moines Gas Co.* v. *Des Moines*, 238 U. S. 153, 59 L. Ed. 1244.

**10. That the unused real estate and equipment should be excluded.**

*Cedar Rapids Gas Light Co.* v. *Cedar Rapids*, 120 N. W. 966, 138 A. S. R. 299.

*Spring Valley Water Co.* v. *San Francisco*, 165 Fed. 667.

*Pietee* v. *Brooklyn, etc., Co.*, Pub. Utility Rep. 1915A, p. 46.

**11. Failure to produce the Sloan and Huddle report creates a presumption that it would have been unfavorable to plaintiff's case.**

*Jones on Evidence*, Sec. 19.

*Fonda* v. *St. Paul City Ry. Co.*, 70 A. S. R. 341.
*Barnes* v. *Shreveport City R. R. Co.*, 47 A. S. R. 400.
*Star Mills* v. *Bailey*, 140 A. S. R. 370.

**12. That Mr. Adams was right in estimating what it would cost to construct modern out-of-doors purifying boxes rather than the present ones.**

*Cedar Rapids Gas Light Co.* v. *Cedar Rapids*, 138 A. S. R. 299, (308).

**13. That the Company cannot demand rates high enough to make up for past blunders and bad management resulting in failure to provide for accrued depreciation.**

*Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 53 L. Sd. 371.

**14. Duty of plaintiff to make a full, fair and complete showing of its operating expense and to establish that they are necessary and reasonable.**

*State* v. *Adams Express Co.*, (Neb.) 122 N. W. 691.
*Chicago & Grand T. R. Co.* v. *Wellman*, 143 U. S. 339, 36 L. Ed. 176.

**15. Section of Nebraska statutes giving Lincoln city council power to regulate gas rates.**

*Revised Statutes* 1913, Sec. 4476.

**16. In all cases of joint use of property, or joint expense of the two departments, the burden is on the Company to show that correct division has been made. Also to show to what extent renewals and extensions have been made from current receipts and charged to operating expense.**

*Railway Commission* v. *Cumberland Tel. & Tel. Co.*, 212 U. S. 414, 53 L. Ed. 577.

**17. Rate may be unreasonable yet not confiscatory.**

*San Diego L. & T. Co.* v. *Jasper,* 189 U. S. 439, 47 L. Ed. 892.

*Southern Pac. Co.* v. *Bartine,* 170 Fed. 725.

**18. That extensive replacements, such as the rebuilding of the benches and the station meter, should be spread over a period of time equal to the life of such improvements has been settled by this court, in Illinois Cent. R. Co. v. Interstate Commerce Com., 206 U. S. 441, 51 L. Ed. 1128, where the rule is stated thus:**

> "Expenditures for permanent improvements and equipment should not be charged to current or operating expenses of a single year for the purpose of testing the reasonableness of an increased freight rate."

**19. It is the duty of a public service corporation to provide its own funds to take care of new construction and all permanent improvements, and these should not be charged to operating expenses.**

*Illinois Cent. R. Co.* v. *Interstate Commerce Com.,* 206 U. S. 441, 51 L. Ed. 1128.

*Wyman Pub. Service Corp.,* Sec. 1163.

**20. Where items of this character have been paid for from current receipts and charged to operating expense, they should be excluded from consideration in estimating the value of the property upon which the Company is entitled to earn dividends, or excluded from the operating expenses of a single year.**

*San Diego Water Co.* v. *San Diego,* 118 Cal. 556 (574), 62 A. S. R. 261 (275).

*Illinois Cent. R. Co.* v. *Interstate Commerce Com.,* 206 U. S. 441, 51 L. Ed. 1128.

**21. As to the matter of meter connections and service pipes, these are paid for by the consumers and do not represent an outlay by the Company at all. It is charged to operating expenses in the**

**first instance and then collected from the customer (Honeywell, bottom p. 151, Vol. 1), and under no view of the matter can this item be included for any amount.**

*San Diego Water Co.* v. *San Diego,* 118 Cal. 556, 62 A. S. R. 261, (275).

See, also, *Smyth* v. *Ames,* 169 U. S. 466, 42 L. Ed. 819.

### 22. Capitalization as Evidence of Present Value.

In *Knoxville* v. *Knoxville Water Co.,* 212 U. S. 1, 53 L. Ed. 371, the weight to be given to nominal capitalization, in an inquiry as to the value of the tangible property of a corporation, where the same is largely fictitious, was stated in the third paragraph of the syllabus, thus:

> "Capitalization affords no guide to the present value of the tangible property of a waterworks company which is objecting to the rates fixed by municipal ordinance as confiscatory, where substantially all the common and preferred stock was issued under construction contracts entered into with persons who controlled the corporate action, and was greatly in excess of the true value of the property furnished under the contracts."

See, also, *Smyth* v. *Ames,* 169 U. S. 466, 42 L. Ed. 819.

A public service corporation, regardless of the amount of its stocks and bonds, is only entitled to a fair return on the value of the property at the time used for the convenience of the public. When this return has been received by the corporation, it becomes the property of the corporation to be applied to interest upon bonds and the balance distributed in dividends. If the net income is not sufficient to pay the interest on bonds, then it is the misfortune of the bondholders and not of the public. If there is only enough of a net income to pay interest on bonds, and nothing is left for dividends, this is a misfortune of

the stockholders. This matter is well stated by Judge Garoutte in *San Diego Water Company* v. *City of San Diego,* 118 Cal. 556, 62 A. S. R. 261, in the following language:

> "But as to the amount of the bonded indebtedness, or the amount of interest annually accruing thereon, we fail to see their materiality in determining the value of the plant, or the sum total of revenue to be raised from the sales of water. It is not a question in which rate payers are concerned, whether the water company has no outstanding indebtedness, or is floundering under a bonded debt which threatens to sink it at any moment. If the municipality is required to establish a scale of rates which will produce a revenue sufficient to pay interest upon outstanding bonds, this provision of the constitution would not only be a perpetual guaranty to the bondholders for the payment of their annual interest, but a constant incentive to additional issues of bonds. Such conditions were never contemplated by anybody. It is the duty of the municipality, when it has arrived at a determination as to the valuation of the plant, to determine the necessary outlay for the ensuing year; then to determine what would be a reasonable, just, and fair compensation to the company, based upon the valuation of the plant, and thereupon to fix a schedule of rates which will produce that sum of money. If there be outstanding bonds, the company may apply its income to the payment of interest thereon. If there be no outstanding bonds, this income may pass to the pockets of the stockholders in the shape of dividends declared. A municipality must fix a fair and just rate for the water, based upon the valuation of the plant, and when it has done this, its duty has been performed, and the revenue collected under such rates is the property of the company, to do with as it seems best."

The public should only be required to pay a fair and reasonable return upon the present reasonable value of the Company's property used at the time for the convenience of the public, and can not be required to provide,

in addition thereto, for the payment of interest upon bonded or other debts; *and the rate should be the same whether the works are acquired or constructed by the Company from its own resources, or with money borrowed from others.*

See, *Redlands, etc., Water Co.* v. *Redlands,* (Cal.) 53 Pac. 843, 844.

**23. Probable Effect of New Rate.**

It is quite probable that the effect of the reduced rate would somewhat reduce the earnings of the Company during the first year, but all experience shows and this court has recognized in many cases that the probable effect of a reduced rate on such commodities as gas would be to greatly increase the consumption without a corresponding increase of expense, and that in time the increased consumption of gas, resulting from the reduced rate, would be sufficient to more than overcome the amount of the reduction.

See testimony of Professor Bemis in relation to this subject (pp. 229-30 vol. 1, printed record).

As Mr. Honeywell testified, the Company voluntarily reduced the rate from $1.35 net, after allowing discount for prompt payment, or $1.50 without the discount, to $1.20 per thousand (pp. 173-77, printed record). It will be seen that the net rate for gas from July, 1900, to June, 1904, was $1.50 for light and $1.25 for fuel, and from the latter date the net rate has been $1.20 for both.

The following table (Exhibit "122," p. 304, vol. 1, printed record) shows that, notwithstanding said reduction, the net earnings very greatly increased:

| Year | Cubic feet of gas sold | Average net price per-1000 | Gross gas earnings | Operating expense | Net earnings |
|---|---|---|---|---|---|
| 1902 | 75,680,800 | $1.3833 | $104,766.66 | $ 74,164.96 | $30,601.70 |
| 1903 | 98,343,300 | 1.3664 | 134,471.06 | 81,582.79 | 52,888.27 |
| 1904 | 117,429,858 | 1.3015 | 152,846.15 | 101,472.85 | 51,373.30 |
| 1905 | 143,690,700 | 1.2086 | 173,619.03 | 105,421.95 | 68,197.08 |
| 1906 | 153,663,600 | 1.2090 | 185,778.26 | 127,049.24 | 58,729.02 |
| 1907 | 179,366,300 | 1.2031 | 215,776.20 | 141,924.37 | 73,851.83 |

Judge W. H. Munger, in his opinion in the case at bar at the first trial (Vol. 1, p. 24, Printed Record), referred to this matter in the following language:

> "The record shows that in June, 1904, complainant voluntarily reduced its rates from approximately $1.50 per thousand to $1.20, and the amount of gas consumed and net profits resulting considerably increased. The inquiry in cases of this character is not alone what has complainant theretofore earned, but it is what will be the effect of the ordinance reducing the rate upon the future net earnings of the company, and it devolves upon complainant to show, not that the past rates have not produced a reasonable return, but that the rate prescribed by the ordinance will not in the future produce a reasonable return."

In *Wilcox* v. *Consolidated Gas Co., supra*, this court, at page 51 of the opinion, recognized the strong probability that the earnings would increase under the reduced rate as a factor to be considered.

**24. No allowance can be made for commission on sale of bonds, nor can bond interest nor cost of paying it be charged to operation.**

> "No distinction can be made between corporations which have completed their works with their own money and those which have borrowed money for that purpose from others. In either case, the money actually and reasonably invested is the basic criterion of the revenue to be allowed."
>
> *San Diego Water Co.* v. *San Diego,* 118 Cal. 556, 62 A. S. R. 261.

**25. The rate fixed by this ordinance not having been put to a practical test, but having been suspended by this injunction, the ordinance will be upheld unless the case is one leaving no just or fair doubt that the rate, if enforced, would be confiscatory.**

*Wilcox* v. *Consolidated Gas Co.*, 212 U. S. 19, 53 L. Ed. 382.

*Knoxville* v. *Knoxville Water Co.,* 212 U. S. 1, 53 L. Ed. 371.

*Ex Parte Young,* 209 U. S.. 123, 52 L. Ed. 714.
*San Diego L. & T. Co.* v. *Jasper,* 189 U. S. 439, 47 L. Ed. 892.

**26. "What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it for the use of a public highway than the services rendered by it are reasonably worth."**

*Smyth* v. *Ames,* 169 U. S. 466, 42 L. Ed. 819.

"What the company is entitled to demand, in order that it may have just compensation, is a fair return upon the reasonable value of the property at the time it is being used for the public. The property may have cost more than it ought to have cost, and its outstanding bonds for money borrowed and which went into the plant may be in excess of the real value of the property. So that it cannot be said that the amount of such bonds should in every case control the question of rates, although it may be an element in the inquiry as to what is, all the circumstances considered, just, both to the company and to the public."

*The San Diego Land & Town Co.* v. *National City,* 174 U. S. 739, 43 L. Ed. 1154.

**27. In the opinion handed down by the lower court, in San Diego L. & T. Co. v. National City, 74 Fed., on pp. 87, 88, the court said:**

"Nor can it make any difference that the complainant in the construction of its plant and the carrying on of its work borrowed $300,000, on which it pays interest and for which, it may be, it issued its bonds. The buyer of such bonds, like the loaner of money on mortgages on real estate, does so with his eyes open. The loaner of money on a mortgage knows that conditions may be such as to increase the value of his security, or they may be such as to decrease its value. He takes the chances that everybody must take who engages in business transactions. The buyer of bonds issued by a water company, such as the complainant, has the like knowledge and the further knowledge that

the law, which every one is presumed to know, prescribes that the rates to be charged for the water furnished by the company, shall be established and fixed by a special tribunal."

In *Smith* v. *Ames, supra*, Mr. Justice Harlan, relative to the same subject, says:

> "If a railroad corporation has bonded its property for an amount exceeding its fair value, or if its capitalization is largely fictitious, it may not impose upon the public the burden of such increased rates as may be required for the purpose of realizing profits upon such excessive valuation or fictitious capitalization."

In *re Grain Shippers* v. *Railroad Co.*, 8 I. C. C. Rep. 158, it is said:

> "Whatever of wastefulness or mismanagement there may have been in the construction or antecedent history of the railroad, whatever of jobbery or of thievery even, it is apt to find its way into the capital account, until it is eliminated by some process of reorganization, and in the reorganization itself the capitalization has no relation ordinarily to the actual value of the property, but it is made to depend upon the convenience or even the whim of those who manipulate the reorganization scheme. To make the capital account of our railroads the measure of their legitimate earnings, or a rule, would place the corporation which has been honestly managed from the outset under enormous disadvantages.'

**28. In the recent case of City of Louisville v. Cumberland Telephone & Telegraph Co., 225 U. S. 430, 56 L. Ed. 1151, the lower court had granted an injunction against a new telephone rate because it found that the new rate would reduce the income of the Company to 3.6 per cent on its investment as found by him. This court disagreed with the lower court as to some items of valuation, and reversed the judgment of the lower court, using the following language:**

> "We express no opinion whether to cut this telephone company down to 6 per cent by legislation would or would not be confiscatory. But when it is remem-

bered what clear evidence the court requires before it declares legislation otherwise valid void on this ground, and when it is considered how speculative every figure is that we have set down with delusive exactness, we are of opinion that the result is too near the dividing line not to make actual experiment necessary. The master thought that the probable net income for the year that would suffer the greatest decrease would be 8.60 per cent on the values established by him. The judge, on assumptions to which we have stated our disagreement, makes the present earnings 5 10/17 per cent, with a reduction by the ordinance to 3 6/17 per cent. The whole question is too much in the air for us to feel authorized to let the injunction stand. Decree reversed without prejudice."

**29. The master was not bound to follow the expert testimony; he had the right, and it was his duty, to fix values in the light of all the evidence before him, tested by his own experience, at such figure as his best judgment dictated.**

*Head* v. *Hargrave*, 105 U. S. 45, 26 L. Ed. 1028.

*Whitney* v. *City of New Orleans*, 54 Fed. 617.

*The Conqueror*, 166 U. S. 132, 41 L. Ed. 947.

*Chicago, etc., Ry. Co.* v. *Drake*, 46 Kan. 569, 26 Pac. 1039.

*Grand Rapids, etc., Ry. Co.* v. *Chesebro*, 74 Mich. 478, 42 N. W. 70.

*Laflin* v. *Chicago, etc., Ry. Co.*, 33 Fed. 422.

*Johnson* v. *Burlington, etc., Ry. Co.*, 37 Minn. 521, 35 N. W. 439.

*Lincoln Land Co.* v. *Phelps*, 80 Neb. 820.

*Forsyth* v. *Doolittle*, 120 U. S. 73, 30 L. Ed. 586.

*Davis* v. *School District*, 84 Neb. 859.

*Hull* v. *City of St. Louis*, 138 Mo. 618.

*Jones & Williams* v. *Fitzpatrick*, 47 S. C. 40.

**30. The Master's failure to Furnish a Summary of the Evidence.**

In his preliminary observations, beginning on page 36, vol. 1, of printed record, the master explains that a summarization of the evidence is quite impossible and would, in his opinion, be of no assistance to court or counsel. It is to be remembered that there was a very large number of witnesses produced and the testimony at the last hearing amounts to almost five thousand pages of typewriting, to say nothing of the very great number of exhibits and tabulations. To summarize this evidence would be impossible, and any attempt to do so would require weeks, if not months of labor. The master did the only practical thing under the circumstances to make his findings with respect to small subdivisions and to cite evidence, and give his reasons, only when necessary, to make clear his actual findings. The master certifies all of the evidence and filed the same with his report and that is the best that could be done in the premises. The order of reference did not require the master to summarize the evidence, and in the absence of such an order it was not necessary for him to do so.

> "The evidence, however, need not be stated or incorporated in the report, nor generally even the facts themselves."
>
> 34 *Cyc.* 846.
>
> "Except where so required by the order of reference, or where so required by the provisions of the statute, controlling the reference, the referee in making his report of the proceedings, had, under the rule, or order of reference, is not required to, and should not report the evidence."
>
> 34 *Cyc.* 843, and cases cited.
>
> *Welsh* v. *Briggs*, (Mass.) 90 N. E. 1146.
>
> "According to the practice, it would not have been proper for the master to report the entire evidence before him, as there was no order from the court to

that effect, nor to report even such portions of the evidence as related to the exceptions, without a request from the party excepting."

*Massie W. T. Co.* v. *Enterprise Tr. Co.*, 175 Fed. 6 (10)

"A master's report need only state (1) the ultimate facts, by reference to the pleadings, or otherwise, (2), his conclusions on the questions of law without discussion or argument and (3) make computation of the amount due."

*Manowsky* v. *Stephen*, (Ill.) 84 N. E. 354.

**31. As to the Qualifications of Alton D. Adams to Testify as an Expert.**

We quote the following from *Jones on Evidence*, (2nd Ed.), Sec. 368:

"It now becomes necessary to discuss at some length the conditions under which expert testimony may be given. While it is clear that the witness in order to be competent as an expert must show himself to be skilled in the business or profession to which the subject relates, there is no precise rule as to the mode in which such skill or experience must be acquired. Thus, the witness may have become qualified by actual experience or long observation without having made a study of the subject. *On the other hand he may be an expert although his knowledge has been derived from the study of the subject, and not from actual experience or practice in the business or profession.* Thus, it has sometimes been held that a physician may give opinions as to matters connected with his profession or with medical science, although in his own practice he may not have had experience as to such matters, and although his knowledge in respect thereto is derived from study only, even though he may not have made the disease under inquiry a specialty. On the same principle one who is familiar with the diseases of man may be allowed to testify as an expert concerning the disease of animals. The law of a foreign country or sister state may be proved not only by jurists and lawyers who have practiced their profession in that jurisdic-

> tion, but also by those not lawyers who, from their official position or business relations, have become acquainted with such laws. Courts will take notice that certain pursuits are so intimately connected with others as to give those following one of such pursuits unusual facilities for becoming acquainted with the other; and if the occupation and experience of the witness have been such as to give him the requisite means of knowledge of the subject, he may be competent as an expert, although engaged in some other occupation or even if he has abandoned the business to which the inquiry relates. It is necessary that the witness should possess the requisite skill either from actual study, experience or observation. The mere opportunity of obtaining such skill does not suffice.'

Numerous citations are given in the foot notes in support of the above quoted text, from which it will be seen that the Wisconsin cases, upon which counsel for the Company rely, are not in line with the holdings of other courts.

See also:

*Scott* v. *Astoria R. R. Co.*, (Or.) 72 Pac. 594, 99 A. S. R. 710, where the Wisconsin cases are disapproved.

*German Life Ins. Co.* v. *Lewin*, (Colo.) 51 Pac. 488, 65 A. S. R. 215.

*People* v. *Thacker*, 108 Mich. 652, 66 N. W. 562.

*Boswell* v. *State*, 114 Ga. 40, 39 S. E. 897.

*Isenhour* v. *State*, 157 Ind. 517, 63 N. E. 40, 87 A. S. R. 228.

*Howard* v. *Great Western Ins. Co.*, 109 Mass. 384.

*Costner* v. *Slicker*, 33 N. J. L. 95 (107).

*Hamond* v. *Wood*, 66 A. D. 234 (note).

*Gonzales College* v. *McHugh*, 21 Tex. 256.

In *Central Ry. Co.* v. *Mitchell*, 63 Ga. 173, it was held that the opinion of a civil engineer derived solely from books was properly admitted.

The true rule is stated by the Indiana supreme court in *Isenhour* v. *State*, 62 N. E. 40, 87 A. S. R. 228, as follows:

> "If a witness exhibits such knowledge, gained from experiments, observation, standard books, or other reliable source, as to make it appear that his opinion is of some value, he is entitled to testify, leaving to the court, in its discretion, to say when such knowledge is shown, and to the jury what the opinion is worth."

**32. Failure of Master to Find and Certify Reproduction Cost, Age, Etc., of Separate Items in Works Equipment and Distributing System.**

It was not necessary that the master should include any of these matters in his findings. He was only required to find the present value of complainant's property, and each and all of said matters were but steps or processes leading to the final result. The plaintiff is entitled to a reasonable return upon the reasonable present value of its property, and that was the value found by the master. According to all authorities, the cost of reproduction, original cost, and market value are not the sole tests, but are matters to be considered in arriving at the fair present value. In the Minnesota rate case, 230 U. S. 352, 57 L. Ed. 1511, Mr. Justice Hughes quotes with approval the following from *Smyth* v. *Ames:*

> "In order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property. What the company is entitled to ask is a fair return upon the value of that which it employs for the public convenience."

The master expressly states in his report that he considered all of these matters in arriving at the present value of the plant. The master was not required to state the mental processes by which he arrived at his results, nor to give reason for any of his findings of fact.

> "Where, by order of reference the whole issues are referred, the referee is substituted for the court. The trial is to be conducted in the same manner as a trial by the court, and the referee's report stands as the decision of the court. His findings should contain just what the findings of the court should contain, nothing more and nothing less. Like the court, he is not required to find upon any other facts than those necessary to cover the issues in the case, and which enter into and form the basis of the judgment to be rendered upon his report. He is required to find upon the issues only, and not to report the evidence, or to explain the means or process by which he arrives at his conclusions."
>
> *Landell* v. *Cheney*, (Minn.) 52 N. W. 819 (919).

33. **Franchise.**

Neither the question as to whether plaintiff's franchise is valid nor as to whether it is or is not perpetual is involved here.

> "Whether such franchise was acquired or is held rightfully, is to be determined only in a direct proceeding to oust the corporation, or in a proceeding to which someone who claims a better title is a party."
>
> *Bronson* v. *Albion Telephone Co.*, (Neb.) 93 N. W. 201.

Judge W. H. Munger, at the former trial of this case, excluded franchise as an element of value in appraising plaintiff's property for rate purposes. His reasons for so doing are thus stated in the opinion:

> "I do not allow anything as the value of complainant franchise. It does not appear from the allegations of the bill or proofs that anything was paid for the franchise. The City simply granted to complainant,

without compensation, the right to use the public streets and alleys for the purpose of constructing and operating its plant. This was a mere right and privilege to complainant, and did not involve the expenditure of money. While it is true a franchise is a property right, which will protect complainant in its use of the streets and alleys for the purpose expressed, yet it involves no investment of money, complainant's investment being in its tangible property under authority of the franchise, and the public ought not to be taxed for a privilege which it has voluntarily granted. I do not think there is anything in the case of *Wilcox* v. *Consolidated Gas Co.*, 129 Sup. Ct. Rep. 192, which conflicts with this view. In that case the legislative enactment providing for consolidation of various companies expressly required that a value should be given to the franchise of the respective companies. For that reason the court sustained the value of the franchise thus fixed, but refused to recognize any increased value accruing during subsequent years by reason of the large increase in the tangible property from extensions, etc."

It is conceded that special franchises, such as this, partake of the nature of, and are regarded as property by the courts. Whatever value such a franchise has is based upon the earning power of the Company, and it has no value which can be estimated separate and apart from such earning power. We have not been able to discover that this court has ever passed upon the exact point here raised, viz., whether, in estimating the capital of a public service comporation for the purpose of fixing a basis for testing the validity of established rates, a separate valuation may be placed upon the special franchise separate and apart from the value of its tangible property, and included in the sum upon which the corporation is entitled to earn dividends.

In the case of *Wilcox* v. *Consolidated Gas Co.*, 212 U. S. 19, 53 L. Ed. 382, the company was allowed the value of the franchises of the several companies which were consolidated, the value allowed being that fixed by them at the time of the consolidation in 1884, under legislative authority,

and which entered into the new capitalization. The increase found by the lower court was rejected, but this, as we read the opinion, was upon the ground that the amount of the increased value was not properly arrived at. We are, therefore, left in doubt as to what this court would have done had the lower court had competent evidence before it as to the value of the franchise and had based its findings thereon.

The learned district judge who tried the Wilcox case below stated that his personal convictions were against placing any value upon such franchises in considering the compensatory character of rates, but felt constrained to follow the reasoning of former adjudications in which such franchises were recognized as property. His personal views were stated in this language:

> "For these reasons I believe that, on principle, a franchise should be held to have no value except that arising from its use as a shield to protect those investing their property upon the faith thereof, and that, considered alone and apart from the property which it renders fruitful, it possesses no more economic value than does an actual shield possess fighting value, apart from the soldier who bears it."

In *Wyman on Public Service Corporations*, the matter of franchise valuation is discussed in the light of the most recent authorities. The author lays down the rule that the value of the franchise should not be considered in regulating rates.

Section 1104 of that work reads as follows:

> "It should be clear that in estimating the capital upon which a public service company is entitled to a fair return the value of a franchise enjoyed by the company cannot be considered. The value of the franchise is based upon the capacity of the company to earn profits; and it becomes greater when the earnings of the company are increased. If, therefore, a high rate

of income could be justified on account of the great value of the franchise, this fact would in turn enhance the value of the franchise itself and so justify a still higher charge; and there would be no limit to the legal charge to the company which could be enforced should such franchise value be permitted to increase in this way, the capital charges. As Mr. Justice Savage in a late Maine case involving this point: 'In connection it should be noted that to say that the reasonableness of rates depends upon the rates which may be reasonably charged, seems to be arguing in a circle. If we should say that reasonableness of rates depended solely upon the value of the property, and that the value of the property depended solely upon the rates which may be reasonably charged, such would be the case. But neither proposition is true.' It unquestionably follows that such franchise values can not stand in the way of rate regulation. As Mr. Justice Peckham recently said in the supreme court of the United States, as to a valuation of the property of the Consolidated Gas Company, which included some millions for its franchises: 'Its past value was founded upon the opportunity of obtaining these enormous and excessive returns upon the property of the company, without legislative interference with the price for the supply of gas, but that immunity for the future was, of course, uncertain and the moment it ceased and the legislature reduced the earnings to a reasonable sum the great value of the franchise would be at once and unfavorably affected.'"

The language of Mr. Justice Hughes in the Minnesota rate case (230 U. S. 352, 57 L. Ed. 1511), in dealing with another matter, is quite applicable here, and is in accord with the doctrine of *Wyman on Public Service Corporations*, above quoted. On page 461 of the opinion Mr. Justice Hughes said:

"The value of the use, as measured by return, cannot be made the criterion when the return itself is in question. If the return, as formerly allowed, be taken as the basis, then the validity of the states' reduction would have to be tested by the very rates which the state denounced as exhorbitant. And, if the return as

> permitted under the new rates be taken, then the state's action itself reduces the amount of value upon which the fairness of the return is to be computed."

It seems to us that the rule should be that franchises of this character should be treated as property only to the extent necessary to protect the holder in the exercise of the rights granted therein, and upon the faith of which the company has expended its funds; but where the franchise is a mere voluntary grant by the public, for which no money has been paid, and where the Company has nothing invested therein, that no value should be placed thereon as an element in determining the compensatory character of rates. The Company has no actual investment in the franchise, and why should it be permitted to demand a return from the public upon a mere right to occupy the public streets which the public has gratuitously granted?

The Company's expert, Henry I. Lea, at the present trial gave it as his emphatic opinion that there is no franchise value to be included here.

He says (p. 1295, vol. 4, printed record):

> "There isn't any franchise value. Whether the Company has a franchise or not there is no value to the franchise that should be included in determining the value of the property as a whole, unless the Company has actually paid a specific sum for a franchise, and I know of no such payment having been made here for a franchise."

### 34. Organization Expense Cannot Be Capitalized.

There was no evidence whatever as to what, if any, expense was incurred in the organization of this company. The present company can have no claim for the expenses of organizing the original company in any event. For aught that appears in the evidence the initial cost of organizing the present company as well as its predecessor

may have been repaid long ago in the form of excessive earnings. At all events, the master included all such items in his overhead cost. This was in harmony with the usual practice of courts and commissions.

> *Whitten on Valuation of Public Service Corporations,* Sec. 262.

The cost of organizing the Company was not a proper capital charge.

> "Nothing can be allowed for the promotion and organization of the company, for it is immaterial by whom the plant may be owned in estimating its value."
>
> *Cedar Rapids Gas Light Co.* v. *Cedar Rapids,* (Ia.) 120 N. W. 966, 138 A. S. R. 299.

## II.

## ARGUMENT.

### 1. General Observations.

The testimony taken at the first trial of this case consisted of one large volume of printed matter containing 580 pages. The testimony taken at the last trial consisted of four large volumes of typewritten matter, amounting to almost five thousand pages, and in addition to this there were over four hundred exhibits, consisting of intricate and complicated tabulations by experts, maps, charts, blue prints, letters, telegrams, photographs, and various other documents. There were forty-eight witnesses sworn and examined and the master, Judge Sullivan, heard this testimony when it was introduced, saw the witnesses while on the stand, heard the explanations of the various tables and documents introduced, and heard the experts and the attorneys propound and explain their different theories as the case progressed. The taking of testimony continued at intervals for a little over one year. After the evidence was closed, counsel for

the respective parties spent weeks in digesting the evidence and preparing and printing briefs. There was an oral argument before the master which consumed four full days. After the submission of the case, the master took this enormous record consisting of the evidence taken at both trials, together with the briefs submitted, and, after several weeks of hard labor on his part, produced and filed the report now under consideration.

On nearly every question of fact involved in this case the evidence widely differed and was sharply conflicting, especially as to all property values and as to what should be allowed as legitimate operating expenses.

In later portions of this brief we shall undertake to show that the master was more than liberal with complainant, not only as to values, but as to its operating expenses. We shall point out large items of property which he valued as a part of the property upon which he estimated complainant's rate of return under the ordinance in question, which are neither used nor useful as part of complainant's gas plant. We shall show, also, that in the matter of operating expenses the master allowed numerous substantial items which should have been excluded.

The valuation placed by the master on practically all of complainant's property, though somewhat lower than that assigned to it by the company, is substantially higher than the valuations made by the witnesses for the city.

**2. The Master's Valuation of Complainant's Property, as of January 1, 1913.**

In that part of the master's report at page 52 of the printed record under the caption "Revision" will be found not only his valuation of the property as of January 1st, 1913, but

also his deductions as to complainant's rate of return under the $1 rate for the year 1912. His valuation was as follows:

| | |
|---|---|
| Real estate | $ 16,250 |
| Buildings | 29,381 |
| Works equipment | 179,310 |
| Distribution system | 351,624 |
| Working capital | 60,000 |
| Going value | 40,000 |
| Master's total value as of Jan. 1, 1913 | $676,565 |

It will be seen by reference to the above cited page of the record, that the master found that, with gas selling at $1.00, as fixed by the ordinance, complainant's gross receipts would have been $227,297, and that the legitimate operating expenses would have been $180,639, leaving the net income for 1912 at $46,658, or 6.9 per cent on the valuation fixed by the master.

It will appear by reference to the first sentence of the master, under the caption "Revision," that he allows an item of $8,195 occupation tax as a part of the operating expenses for the year 1912. We contended before the master, and in the lower court, that this was not a proper item as it was not being paid by the company, but was being contested in the state courts. Since the trial below the Nebraska supreme court sustained the complainant's plea in abatement and suspended action in the state courts to collect the occupation tax under an ordinance passed subsequent to the one involved in the first trial, holding that the validity of this second ordinance was necessarily involved, and was being litigated in this "Dollar Gas" suit in the federal courts.

The burden being upon complainant to show that the rate fixed by the ordinance is confiscatory, it cannot aid itself in its contention by including, as an item of operating expense,

an occupation tax which it is disputing and refusing to pay, and payment of which it is resisting in the courts. It is not sufficient for the company to show that it *may* be required to pay this occupation tax. It has assaulted this rate ordinance and one of the vital elements involved here is the legitimate and *actual* operating expense of the company and not what they *may* be. A similar question was presented and decided in *San Diego Water Co.* v. *City of San Diego*, 118 Cal. 556, 62 A. S. R. 261-275. We quote from the opinion on page 275, of the last cited publication:

> "The finding that the expenses of the company for the year in question were $40,000 is also attacked. The books of the company put the amount at $44,255.30. Of this amount, appellant objects to items of about $5,000 as unnecessary and improper, and objects particularly to an item of $12,800, being an unpaid bill which is disputed by plaintiff, and on which its liability is left doubtful. Counsel for respondents have not attempted to answer these points. As the evidence is presented to us in an unsatisfactory shape, we will say no more than that it does not support the finding. Whether all of the items complained of are proper or improper cannot be determined upon this record, but some of them are not shown to be proper."

If we eliminate this occupation tax of $8,195 and add it back to the receipts for the year 1912 the net receipts as per the master would be $54,853, which would be over 8 per cent upon the valuation fixed by the master.

The master's valuation also included a working capital of $60,000, which is almost four times the working capital actually used by the company, as we shall hereinafter point out, and an item of $40,000 going value, which we contend was improper.

### 3. The Master's Figures for the Crucial Year, 1907.

At page 52 of the printed record, under the heading "Valuation, Operating Expense and Net Income for 1907," will be found the master's valuation and conclusions as to net income for the year 1907. That is the crucial year for the purposes of this suit. The operations of years subsequent to that time are important only as they bear upon the validity of the rate when it was to go into effect. Fortunately for the city, the company was unable by its manipulation of operating expenses, and its unwarranted and unnecessary additions to its plant, far in excess of present demands, to make a showing for the years during which this suit has been pending that would in any way indicate that this dollar rate would operate to confiscate its property. The showing most favorable to the complainant is the one made for the year 1907.

The master arrives at his valuation for 1907 by deducting from his valuation for January 1st, 1913, all value, tangible and intangible which he finds was added to the plant after the year 1907. In this way he fixes his valuation for the latter year at $436,656.

It is to be noted that the amount deducted by the master in arriving at his 1907 valuation was $240,000. This was the *depreciated* value of all property, tangible and intangible, which the master found had been added to the plant after the year 1907, for he expressly states that the $240,000 is the value of such additions *as of January* 1, 1913. At the hearing below, on the exceptions to the master's report, counsel insisted that the master deducted the undepreciated amount of the additions found from the *depreciated* value found by him for the year 1913, and that in this way the amount deducted was larger and the value for 1907 smaller than it should have been. The master's report is not open

to that criticism. It is perfectly plain that the $240,000 deducted by the master is the depreciated value of the additions, and since his valuation as of January 1, 1913, ($676,565) was the *depreciated* value, the master was right in first finding the *depreciated* value of the additions before deducting them from his 1913 valuation in arriving at the 1907 valuation.

In his calculations as to the 1907 income the master found that at the $1.00 rate the gross income for that year would have been $178,626, and that the legitimate operating expenses should have been $156,277, leaving a net return for that year under the rate fixed by this ordinance of $22,349, or 5.2 per cent on the valuation found by him for that year. This, however, is upon the basis of the actual sales for that year under the old rate and does not take into account increased sales which would probably follow, and which all experience tells us would follow, a reduction of the gas rate. It is also to be remembered that that the master's calculation for 1907 included a substantial amount for going value, since there was $40,000 included in the 1913 valuation which was added on top of and in addition to the tangible property, and in the total for 1913 is included said sum of going value, from which the master made his deductions of added value in getting his valuation for 1907. He found that the construction account of the company showed additions to the property since 1907 amounting to $210,437, and he increased this amount sufficiently to cover going value and other intangible items and fixed the value of the additions at $240,000 as of January 1, 1913 (that is, the depreciated value), and this when deducted from his depreciated value for the whole plant for January 1, 1913, left his valuation for 1907 which, of course, included an allowance for going value up to that year.

Aside from the question whether a separate item of going value should be included, and, for the present discussion, leaving the valuation at the figures fixed by the master, we call attention to the fact that the master included in the 1907 operating expenses an item of $4,466 to cover the occupation tax provided by the occupation tax ordinance which was in force when this suit was begun and which was attacked by the bill in this case. The master allowed this in spite of the fact that no such occupation tax had ever been paid by complainant and in spite of the fact that complainant was resisting payment, not only by its attack in this litigation, but was also resisting payment in litigation then pending in the state courts wherein the city was attempting to enforce collection. Judge Morris, before whom the exceptions to the master's report were heard, disagreed with the master as to the validity of the occupation tax ordinance and held that it was void. Since the hearing in the court below, the Nebraska Supreme Court, in a suit wherein the city was attempting to enforce the collection of the occupation tax under said ordinance, held the ordinance void. (See *City of Lincoln* v. *Lincoln Gas & Electric Light Co.*, 100 Neb. 182).

There is, therefore, no longer any basis for contending that complainant has the right to have included in its operating expenses for 1907 said sum or any other sum to cover the occupation tax. Eliminating this one item from the operating expenses for 1907, allowed by the master, the net income for that year on the master's figures would be $26,815, or a little over 6.1 per cent on the master's valuation for that year.

We shall, in a later portion of this brief, point out many substantial items included in the operating expenses by the master which should have been excluded. The master admits in his report that many of these items were not proper

but he states that he did not find it necessary to eliminate them since his finding sustained the rate without such elimination. (See pages 50-51 and last half pafe 53 and top page 54, printed record.)

The master made no detailed calculations as to the rate of return for the intervening years between 1907 and 1912, but, with reference to these years he says, on page 53 of the printed record:

> "I do not go into the accounts for the years between 1907 and 1912 as the calculations made by Mr. Lea show beyond question that the net income was for each of these years from 50 per cent to 100 per cent greater than in 1907."

**4. Burden of Proof on Complainant.**

In the case of *Wilcox* v. *Consolidated Gas Co.*, 212 U. S. 19, 53 L. Ed. 382, the attitude of this court in such cases was clearly defined. The third section of the syllabus states the rule thus:

> "The case must be a clear one before the courts should be asked to interfere by injunction, with state legislation regulating gas rates, in advance of any actual experience of the practical result of such rates"

On page 51, in the body of the opinion, Mr. Justice Peckham, speaking for the court, said:

> "Of course there is always a point below which a rate could not be reduced and at the same time permit the proper return on the value of the property; but it is equally true that a reduction in rates will not always reduce the net earnings, but, on the contrary, may increase them. The question of how much an increased consumption under a less rate will increase the earnings of complainant, if at all, at a cost not proportioned to the former cost, can be answered only by a practical test. In such a case as this, where the other data upon which the computation of the rate of

> return must be based, are, from the evidence, so uncertain, and where the margin between possible confiscation and valid regulation is so narrow, we cannot say there is no fair or just doubt about the truth of the allegation that the rates are insufficient."

And in the case of *Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 53 L. Ed. 371, the same question was gone into and many statements in the opinion make it plain that where it is sought by injunction to suspend the enforcement of a rate in advance of an actual trial of its effect, the court will decline to interfere unless the showing is sufficiently strong to put the confiscatory character of the rate beyond any just and fair doubt. In the course of the opinion, Mr. Justice Moody, on page 16, said:

> "The jurisdiction which is invoked here ought, as has been said, to be exercised only in the clearest cases. If a company of this kind chooses to decline to observe an ordinance of this nature and prefers rather to go into court with the claim that the ordinance is unconstitutional, it must be prepared to show to the satisfaction of the court that the ordinance would necessarily be so confiscatory in its effect as to violate the constitution of the United States. In *Ex parte Young*, 209 U. S. 123, 52 L. Ed. 714, the last word of caution by this court was said (p. 166): 'Finally it is objected that the necessary result of upholding this suit in the circuit court will be to draw to the lower federal courts a great flood of litigation of this character, where one federal judge would have it in his power to enjoin proceedings by state officials to enforce the legislative acts of the state either by civil or criminal action. To this it may be answered, in the first place, that no injunction ought to be granted unless in a case reasonably free from doubt. We think such rule is and will be followed by all the judges of the federal courts.'"

And on the same page, the following from the opinion in *San Diego Land & T. Co.* v. *National City*, 174 U. S. 739, 43 L. Ed. 1154, was quoted with approval:

> "Judicial interference should never occur unless the case presents, clearly and beyond all doubt, such a flagrant attack upon the rights of property under the guise of regulations as to compel the court to say that the rate prescribed will necessarily have the effect to deny just compensation for private property taken for the public use."

And again on page 17 of the same opinion the writer repeated with approval the following expression of the court in the case of *San Diego L. & T. Co.* v. *Jasper*, 189 U. S. 439, 47 L. Ed. 892:

> "In a case like this we do not feel bound to re-examine and weigh all the evidence, although we have done so, or to proceed according to our independent opinion as to what were proper rates. It is enough if we cannot say that it was impossible for a fair-minded board to come to the result which was reached."

And again, on page 17, the court sums up the whole matter in this manner:

> "We do not feel called upon to determine whether a demonstrated reduction of income to that point (4 per cent) would or would not amount to confiscation. Where the case rests, as it does here, not upon observation of the actual operation under the ordinance, but upon speculations as to its effect based upon the operations of a prior fiscal year, we will not guess whether the substantial return certain to be earned would lack something of the return, which would save the effect of the ordinance from confiscation. It is enough that the whole case leaves us in grave doubt."

In other words, it is the settled policy of this court to discourage, as far as possible, the practice on the part of public service corporations of rushing into the courts, and attempting to suspend rate regulation without first giving the rate a practical test, thereby eliminating speculation and prophecy based upon opinion evidence, and substituting

facts gleaned from actual trial and experience, and to refuse to interfere by injunction, except in those cases where there is no just or fair doubt of the confiscatory character of the rate complained of.

### 5. Real Estate Valuation.

The master not only valued the real estate of the complainant at a much higher figure than we think was justified by the evidence, but he included several tracts which are neither used nor useful in the gas business of complainant.

We contend that the block on which the gas manufacturing plant is located is the only real estate which is either used or useful in the operation of this plant for the Lincoln service. This is block 79 in the Original City of Lincoln, and contains twelve lots. There are some lots in other blocks near the plant which the company has included in its inventory, but which are not used by the company in connection with the gas business. The lots in Peck's Grove are partly used for the East Lincoln holder, and part of them are not used at all by the Gas Company, but are rented for residence purposes. Of course, it goes without saying that the lots which are not used at all, but are being rented, cannot be included in this valuation. As to the Peck's Grove lots whereon the East Lincoln holder is located, there is a controversy between the city and the company as to whether this East Lincoln holder forms a necessary part of the Lincoln service. The East Lincoln holder is located on lots from 6 to 15, inclusive, in block 2, Peck's Grove, and these lots cost the Company, at the time it erected the East Lincoln holder, $1,000 (B. C. Adams, p. 626, printed record). The lots have not increased in value since that time, but, as a matter of fact, there has been a slump in the value of real estate in that vicinity. One thousand dollars

would, therefore, be a fair valuation for the six lots upon which the East Lincoln holder is located, in case the court should find that this property, or any part of it, should be included. All of the other Peck's Grove lots were purchased to satisfy objecting owners in that location, as the evidence cited will show, and are not used in the gas business, and they should not be inventoried as a part of the property upon which rates are to be paid.

The remainder of the real estate is disconnected from any part of the plant or property used in any way in connection with the manufacture or distribution of gas. This disconnected property is rented to tenants. There is no present nor contemplated use for any of it. Such real estate was excluded in *Cedar Rapids Gas Light Co.* v. *Cedar Rapids*, 144 Ia. 426, 120 N. W. 966, 138 A. S. R. 299, which was affirmed by this court in 223 U. S. 655, 56 L. Ed. 549. See also: *Petee* v. *Brooklyn & C. B. Light & W. Co. Pub. Utility Rep.* 1915A, p. 46, decided by Maryland public service commission, January 15, 1915, where it is said:

> "Suffice it to say that we think the sum of $150,000, upon whic hthis estimate of a proper return is based, is too high, especially when we consider that in the construction of its plant in Brooklyn, the respondent provided a plant sufficiently large not only to take care of the present prospective customers in that territory, but also all customers that might be added by the future development and provement of the property in and around Brooklyn for a number of years to come. In doing this, the apparatus at its pumping station was materially enlarged and its mains were run through certain sections in Brooklyn where the property is unimproved, but which the defendant hoped would be improved in the future. This additional outlay the defendant preferred to make, and perhaps wisely so, rather than increase the capacity of the plant as new demands were made upon it; but certainly the present users cannot be expected to pay a rate sufficiently high to yield a fair return on the money invested in excess of the

amount necessary to properly provide for the present consumption. If the company elects to make this outlay now, rather than wait until there is a demand for it, then the company, and not the users, should stand the interest on this amount."

See also:

*Southern Pac. Co.* v. *Bartine*, 170 Fed. 725, (767).

*Long Brach Commission* v. *Tintern Manor Water Co.*, 70 N. J. Eq. 71, 62 Atl. 474.

*Ely* v. *Ely Light & Power Co.*, 3d Am. Rep. Nev. P. S. C. 295, (298).

*San Diego L. & T. Co.* v. *Jasper*, 189 U. S. 439, 47 L. Ed. 892.

If we eliminate the unused real estate and include only the lots in block 79 where the plant is located, and the Peck's Grove lots where the East Lincoln holder is located, (notwithstanding this holder is primarily for the suburban service) and give to this real estate actually used the value assigned to it by the Company's witnesses, we get the value as follows:

| | |
|---|---|
| 12 lots in block 79 | $11,000 |
| Lots 6 to 15, block 2, Peck's Grove, $300 per lot | 3,000 |
| | $14,000 |
| Deduct 27% for electric department | 3,780 |
| Value of real estate actually used by the gas department | $10,220 |

In justification of the apportionment to the electric department of 27 per cent, we call attention to the fact that the master found that the electric consumers were 27 per cent of the total number of consumers of both departments (bottom p. 51 and p. 52, P. R.). Attention is also called to the fact that at the former trial of this case the complainant apportioned the real estate at the works on the basis of two-thirds to the gas department and one-third to the electric department.

### 6. Valuation of Buildings.

The reproduction costs fixed by the master for a number of the buildings are the same as those fixed by the Company's principal expert witness. The reproduction costs found by him for the remainder of the buildings are almost an exact average of the reproduction costs fixed by the witness for both sides. Mr. Assenmacher, the only practical contractor who testified at the last trial, and who was the only witness in a position to give strictly reliable information as to what these buildings could be built for today, fixed the reproduction cost in every instance far below that fixed by the master. The tendency of the master was to give complainant the benefit of the doubt and to follow or approximate the values fixed by the Company's experts.

Complainant complains of the master's method of depreciation. He applied what is known as the straight line method, insofar as he depended upon arbitrary hypothesis (see p. 44, printed record), but it must not be understood that he applied said method in its full force. He assumed that a large part of depreciation was taken care of by current repairs and renewals and took this into account in applying depreciation as well as in his allowance for future depreciation. On this subject he says on page 53 of the printed record, beginning with line 14:

> "The property has been depreciated on the assumption —warranted I think by the proofs—that it has been kept in good order and efficient, not only by current repairs, but by renewals as well."

To show how far the master fell short of applying full straight line depreciation we here analyze his figures:

#### PURIFYING HOUSE.

The master found the reproduction cost of the purifying house to be $16,700, and its present value $13,200. Hence the amount of his depreciation was $3,500. The assumed life of

this building, according to Mr. Lea, (complainant's expert), was fifty years, and its age twenty-two years. The depreciation, according to the straight line method would be 44 per cent, whereas the master's depreciation is but 21 per cent of the new cost.

GENERATOR HOUSE.

The master found the reproduction cost of this building to be $4,000, and its present depreciated value $3,800. In other words, it has depreciated, according to the master's findings, $200, or five per cent. If we take the assumed life, fifty years, assigned by Mr. Lea, the Company's expert, and the age, five years, agreed to by the experts of both parties, it will be seen that this building had lived one-tenth of its assumed life, and had therefore depreciated $400, or ten per cent of its new cost, according to the straight line method.

RETORT HOUSE.

The master found the reproduction cost of this building to be $7,500, and its present depreciated value $6,375. Accordingly he found the building had depreciated $1,125. It is agreed that the building was 22 years old. Mr. Lea assigned an assumed life of fifty years, and on this assumption the building had depreciated 44 per cent, which would be $3,300, instead of $1,125, found by the master. The percentage of depreciation found by the master was 15 per cent, or about one-third of what it would be on the basis of Mr. Lea's assumed life.

METER SHOP AND BOOSTER HOUSE.

The master found the reproduction cost $2,850, and present value $2,660. The depreciation would therefore be $190, or 6.6 per cent. On Mr. Lea's assumed life and age the depreciation on the straight line method would be 10 per cent, or $285.

COAL SHED.

The master found the reproduction cost to be $2,000, and present value $520. The depreciation would therefore be $1,560, or 75 per cent of the new cost. According to the assumed life and age by Mr. Lea, the depreciation would be 88 per cent instead of 75 per cent on the straight line method.

We therefore contend that since the reproduction costs placed by the master upon these buildings were much higher than what they should have been, according to the evidence produced by the city, the Company has no reasonable basis for complaint of the master's findings as to these reproduction costs. If the present value of the buildings is to be arrived at by applying the straight line method of depreciation to the new or reproduction cost, then the master's findings of present value as to all of these buildings are much higher than they should be, and, since this is the result, not of a failure of the master to make proper findings from the evidence, but a failure to apply in its full force a correct engineering or legal principle to the matter of depreciation, we feel at liberty to urge, without at all conflicting with our contention as to the weight to be given to the masters' findings of fact, that assuming the reproduction costs found by the master to be correct, his present values should be scaled down to a considerable extent. We therefore revise the master's figures as to the present value of these buildings, and in order to remove any opportunity for discussion as to the assumed life and ages we have taken those assigned by Mr. Lea, the Company's expert, and have applied the straight line method of depreciation to the master's reproduction costs, with the following results:

| Bldgs. | Lea's Assumed Life | Lea's Ages | Master's Reproduction Cost | Master's per cent Depreciation | Correct per cent Straight Line Depreciation | Master's Present Value | Correct Present Value Under Straight Line Depreciation |
|---|---|---|---|---|---|---|---|
| Purifying House | 50 | 22 | $16,700 | 21 | 44 | $13,200 | $9,352 |
| Generator House | 50 | 5 | 4,000 | 5 | 10 | 3,800 | 3,600 |
| Retort House | 50 | 22 | 7,500 | 15 | 44 | 6,375 | 4,200 |
| Meter Shop. | | | | | | | |
| Booster House | 50 | 5 | 2,850 | 6.6 | 10 | 2,660 | 2,565 |
| Coal Shed | 25 | 22 | 2,080 | 75 | 88 | 520 | 150 |
| Oil Tank House | 50 | 15 | 1,807 | 17 | 30 | 1,500 | 1,265 |
| Oxide Shed | 20 | 3 | 70 | 10 | 15 | 63 | 59 |
| Stable and Blacksmith Shop | 25 | 15 | 949 | 48 | 60 | 493 | 379 |
| District Holder Booster House | 40 | 3 | 811 | 5.5 | 7.5 | 770 | 751 |
| | | | | Total | | $29,381 | $22,321 |

To enable the court to compare the reproduction costs of the buildings as found by the master with the reproduction costs of the several expert witness of both parties at both trials of this case we give below the figures of the several witnesses and those of the master for the entire group of buildings:

(a) REPRODUCTION COSTS OF THE COMPANY'S BUILDINGS AS OF JANUARY 1, 1907.

Malone, for complainant ..... $37,288
Lea, for complainant ..... 33,034
Jansen, for the city ..... 24,643
Adams, for the city ..... 22,247

The master made no separate valuation of the buildings for 1907. Mr. Lea, the principal expert for complainant, made no separate valuation for 1907, but, by deducting from his 1913 valuation the additions he claims were made since 1907, we get his 1907 reproduction cost as above stated.

(b) REPRODUCTION COSTS OF BUILDINGS AS OF JANUARY 1, 1913.

Lea, for complainant ..... $41,312
Assenmacher, for the city ..... 29,007
Adams, for the city ..... 28,135
The master's reproduction cost ..... 36,767

As we have said the figures given in both of the above tabulations are the reproduction costs before taking off depreciation. The difference between the reproduction cost of the Company's buildings as fixed by Mr. Lea, the Company's chief expert, and the figures of the master for reproduction cost is $4,545, and if the master had given full force to the usual straight line method of depreciation, the difference in the present or depreciated values of the two would have been much greater than the difference in their reproduction values, whereas, by the assumption indulged in, and rightly too, that much of the depreciation had been taken care of by repairs and renewals, the master's depreciated value of the buildings is but $1,586 below the depreciated value claimed by complainant.

### 7. Valuation of Work Equipment.

AS OF JANUARY 1, 1913

The Company's expert, Henry I. Lea, fixed the reproduction cost of the works equipment at $253,298, and its present or depreciated value at $196,759. Alton D. Adams, the city's expert, fixed the reproduction cost at $171,273 and its present value at $133,298, which includes in both instances 7 per cent for engineering, etc. The master fixed the reproduction cost at $198,868 and its present value at $179,310.

It will be seen that the master's reproduction cost for works equipment as of the above date was $27,595 more than the valuation placed upon it by Alton D. Adams whose valuation was largely based upon actual prices paid, and costs incurred by the Company, and upon recent prices involved in contracts for such equipment in other plants. We will not trouble the court with a tedious discussion of the expert testimony relative to this or any other part of the physical equipment. Any one who cares to read the testimony of Henry I. Lea, the complainant's chief expert, will see that he paid absolutely no attention

to what this Company had paid fr any of its equipment. Time and again in his testimony he disclaimed any knowledge of what the actual cost was, and that he did not even investigate the books of the company for actual costs, and did not care what they were. He claimed to base his valuation upon his large experience in installing and valuing such property elsewhere, yet he refused to give actual cost of other properties urging, as his reason, that it would be betraying secrets of his clients and would be unprofessional.

On the other hand, the city's expert, Alton D. Adams, in almost every instance based his valuation upon actual cost of similar equipment elsewhere, or the actual price paid by this Company for the equipment being valued. In spite of Mr. Lea's contempt for actual costs, courts recognize such costs as being among the most reliable means of arriving at present value. In the Kansas City Water Works case, 62 Fed. 853, Mr. Justice Brewer said:

> "The original cost of the works is not accurately and satisfactorily shown. If it would have assisted us in reaching a conclusion—if, in consequence of our ignorance thereof, we have not placed the value upon this property which it deserves—the company is alone to blame, for by the production of its books it could have clearly shown the actual cost of every part and of the whole of its property."

An instance quite clearly showing the difference in methods of these two experts is the matter of valuing the two tar tanks. Mr. Lea estimates the steel alone in the two tanks to cost $1,149 (subdivision "I," Exhibit "7," p. 1330, printed record).

Mr. Adams, however, estimates that the steel part of each tank would cost $393, or $786 for the two (pp. 897-8, printed record). They differ a little on their price per pound for the steel, but the difference is largely in the number of pounds.

Mr. Lea takes the tanks just as he finds them, and estimates the pounds of steel they contain. Mr. Adams finds that they were not constructed as tar tanks at all but were two old steam boilers constructed of heavy steel sufficient to resist steam pressure, and that they are much heavier than tar tanks constructed as such. He therefore estimates the quantity of steel in two tar tanks constructed as such with equal capacity, and values these tanks at what two such tar tanks would cost.

In his treatment of these out-of-date purifying boxes, Mr. Adams was sustained by high judicial authority. Dealing with a similar question the Supreme Court of Iowa in *Cedar Rapids G. L. Co.* v. *Cedar Rapids*, 138 A. S. R. 299, (308), said:

> "In ascertaining values in this way, the worth of a new plant of equal capacity, efficiency and durability, with proper discounts for defects in the old, and depreciation for use should be the measure of value rather than the cost of exact duplication."

Would these old boilers be worth any more to a purchaser to be used as tar tanks than what two tar tanks of equal capacity could be constructed for? We call attention to the fact that Mr. Lea figures the steel at 4.5 cents per pound whereas Mr. Adams estimates it at 3.7 cents the actual price paid per pound by the Company in 1909 and 1910 respectively for the two oil tanks which we shall next discuss. This shows the value and importance of getting at actual prices paid by the company in actual experience.

Another instance, to which we direct attention, showing how Mr. Adams corroborates his testimony from the records of the Company, and clearly illustrating the value and importance of doing so, is the case of two oil tanks testified to by Mr. Adams, beginning at page 898, printed record. It will be seen by referring to subdivision "I" of Mr. Lea's Exhibit

"7" (vol. 4, p. 1330) that he values the two steel parts of the two 10- foot 9-inch oil tanks at $1,158. Mr. Adams finds the bills for these tanks showing that they actually cost the Company $335 each, or $670 for the two.

And we here cite the construction account of the Gas Company (p. 1957, vol. 5, line 2) in corroboration of Mr. Adams and to contradict Mr. Lea, as to the cost of these tanks and as to the cost of their complete erection.

AN INTERESTING COMPARISON AS TO TWO STEEL OIL TANKS.

| | Lea (7-I-55) | Adams (Ex. 235) | Const. a/c of Co. | Lea's excess over Const. a/c. |
|---|---|---|---|---|
| Cost of two tanks ..... | $1,158.00 | $ 670.00 | $ 630.00 | $ 528.00 |
| Cost of erection ..... | $ 697.00 | $ 490.00 | $ 559.32 | $ 137.68 |
| Complete cost. | $1,855.00 | $1,160.00 | $1,189.32 | $ 665.68 |

Now what confidence can be placed in a valuation by an expert who is so totally at variance with actual costs as to be guilty of such ridiculous overstatement? And what shall we say of a company which will permit such an estimate to be made and sworn to and placed in evidence with the purpose of having it accepted by the court, when their own records show the cost of every item entering into the construction of these tanks, and when they knew that their expert had valued them 56 per cent higher than they actually cost? Does this court believe that Mr. Lea did not know what these tanks actually cost? If he did not know why did he not ask? And why did not this company show this construction account to Mr. Lea? When he had produced such a monstrous over valuation of these tanks why did they not produce this record and ask him if he did not wish to cut it down so as to bear some reasonable relation to actual cost?

This was not a mere oversight. It was deliberate, and whatever excuse Mr. Lea may offer, this Company can not excuse itself for so attempting to impose upon the court.

It will be noticed from reading the above cited testimony that Mr. Lea is not to be relied upon in any of his valuations. These two tanks were purchased November 22, 1910, since the first trial, yet the Company, well knowing what they actually cost, also the actual weight, permitted Mr. Lea to turn in a valuation practically double the amount actually paid for these items of equipment, and greatly overestimating the weight.

The fact that this company would permit such a gross exaggeration of the actual weight and value of these tanks when they could just as well have produced the actual vouchers and construction account for so recent a purchase indicates that it is willing to mislead the court as to the cost and value of any and all of its property, and makes it highly important that we should scrutinize its showing, not only as to its property, but also as to its operating expenses.

### 8. Valuation of Distribution System.

By far the largest single item of physical property belonging to complainant's gas plant, is the distribution system. This is practically all under ground and cannot be seen and, therefore, an excellent opportunity is afforded for controversy as to its age, the weight of the pipes, and its present condition. A slight mistake as to the age would result in an erroneous conclusion as to depreciation. A slight increase, or decrease, in the weight of the pipe, or in its cost, would result in a very substantial error as to its value. It was, therefore, important to determine, as nearly as possible, the actual age of each piece of construction in the distribution system; the actual weight of the pipe per foot, and, as nearly

as possible, the actual original cost of the material and labor entering into its construction as well as the actual present cost of reproduction. It goes without saying that any public service company properly conducted not only could, but would, have records of its construction showing the actual facts as to all these items. It is claimed by complainant that in the early history of this corporation no accurate record was kept and that there is none in existence from which an accurate history of these matters can now be obtained. It is to be remembered, however, that the original plant and original distribution system which were constructed back in those "dark ages" of this enterprise, are no longer in existence and are not a part of the property with which we are now dealing. The original distribution system consisted of wooden mains and these have long ago passed out of existense, and the original plant at which the gas was manufactured was long ago abandoned and the present gas works are in an entirely different location and, so far as we have been able to discover, no part of the original plant or distribution system is now in existence. For the period of time during which the present property has been developed this company has kept fairly accurate records and could, if it would, produce the actual cost of practically every piece of property now owned by it. Instead of furnishing to the master at the hearing in this case the actual cost of its property and the actual ages of a very large portion of it, and the actual weight of the cast iron pipes forming the most valuable part of its distribution system and the actual cost of its buildings and machinery, it has seen fit to take the position that the actual figures could not be procured and furnished and it has rested its entire case upon the testimony of experts who dealt with theories and speculated as to the value of this property, its age and in the distribution system not only the age of the different pieces of construction but the actual weights and cost of the pipe were left almost

entirely to speculation. Mr. Alton D. Adams, the expert for the city, spent a great deal of time searching through the records of the company and through its vaults and through boxes and piles of papers in its basement endeavoring to get the actual history of all of these matters. Concerning the work done by him, as well as the difficulties encountered in endeavoring to get at the actual facts relative to these matters, we quote the following from his testimony, beginning on page 840, volume 3 of the printed record:

> "As to what benefits, if any, have been derived from the reports filed with the Massachusetts Gas Commission in ascertaining the life of property and apparatus used in the manufacture of gas, that is one of the particularly valuable features, to my mind, of the Massachusetts (reports), because the form of the reports, is sufficiently complete so that engineers familiar with the gas business can read those reports and can go about and look at the properties and recognize the properties from the reports and trace the properties down through now more than a quarter of a century of life and see what the changes have been and thereby is created a record as to depreciation that is unexcelled. I have been doing that a great deal for the last ten years and made a great many records from it.
>
> "I have repeatedly examined the property of the Lincoln Gas & Electric Light Company with a view of making a valuation of it. As to what examination of the company's property, records and books I have made and the time I have put in on it,—I began to attend in Lincoln in the latter part of last year, have now forgotten the date * * * and have been here in the city of Linocln, apart from some work that I did away from the city,—have been here certainly more than two months, perhaps as much as three, right here in the city. I have during that time repeatedly visited the gas works, can't say how many visits I have made, but enough to familiarize myself at least in a general way with the plant. Have spent a large portion of the time that I have been in Lincoln in an investigation of the records in the office of the gas company as to its plant, property and operations. Have spent a good deal of time in an effort to acquire a knowledge of the property of the

gas company apart from the works, that is the property scattered over the city of Lincoln under the streets. And I may mention, as I understand the testimony of the company's engineers, the greater part, substantially more than half, of the visible property of the gas company is spread over the city of Lincoln and is not down at the works at all. I am quite sure the valuation made by Mr. Lea shows over 60 per cent of the physical value to be in what is termed the distribution system, to a great extent is covered up and buried in the ground, and isn't readily open to inspection like buildings and machinery at the plant. I have given a great deal of consideration in an effort to arrive at a just and fair cost of what that property really is for a basis of valuation. Then of course the vouchers of the company which run back to 1901, not back of that so far as I find, have been through all of those years of vouchers and have made copious extracts from the bills since 1901 rendered to the company by various concerns from which it bought equipment. As to whether I caused any examination to be made prior to the year 1901, I would say that it is impossible to do that. I made an extended search in the vaults and out of the way places for all of the vouchers you could find. We had a good deal of difficulty in finding these bills, not that I mean the company made any difficulty for us, but the bills were not filed in any regular way or place and we failed to find a large part of them. Some were in the vault down in the basement nailed up in some old wooden boxes, entirely unassorted, and they had to be arranged and gone over before we could find what was in them. I can hardly dignify the assistance I have had from the company as to those vouchers by the name of a search. I don't mean to say that the company has put any impediment in our way. I asked for all of them and they said all are in this miscellaneous pile; there was a vault down stairs and they said everything is down here now, help yourself; we helped ourselves and the company as to some special vouchers have repeatedly given me some assistance where I wanted a particular bill and in several instances found the bill I wanted, in one or two instances because some officer of the company had it. In general the policy of the company was to say our records were in such and such a place, go there see what you can find, and help yourself. I did considerable searching for and question-

ing about these contracts entered into the past year for various parts of its gas equipment. Those contracts have only in part been discovered. I understand from the testimony of the company that they have all been turned over to me that have been available; a good many contracts have disappeared. Then the regular books of accounts, such as ledgers, journals, and cash books and some others have all been looked into with a good deal of care for the records of the structural cost of the property here. Of course those books are run under the name of the different one or two corporations that have preceded the present corporation, but the books are in the office of the company back to 1872 or 1873, when the construction of this plant was carried out.

"Then the company has certain records as to the construction of its mains. I have made a considerable number of extracts of these and the process of investigating main work orders so-called, which are orders to the foreman to lay specific pieces of gas mains in specific places. These are still under investigation. The company has a very considerable file, I think nearly 700 of these work orders, which are on file in bound volumes and reveal a good deal of the facts relative to that part of the construction of the company's property. They are the best evidence, as far as they go of its mains, but the orders appear only to be given about the year 1905, and run from there down to date. The service cards are another source of information. I think they begin about 1905. The work of investigating these service cards, which are a written record on a little card-board filed away, concerning the construction of the service pipes from the main to the meter of some consumer, and contain a good bit of valuable information as to the size of pipe, its length and various other matters connected with its construction. The company has a few drawings that have been made accessible to me, the files of the company are not very full in that respect; they are a source of information. It has several maps of mains that have appeared in the testimony; those have all been considered by me. Then the company has a special form of record called gas report, being a specific form of record called a gas report, being a specific form of compilation as to its gas plant and particularly as to the operation of its gas plant, as far as I can judge for the purpose of showing the officials of the company, perhaps those absent as well

as those present in Lincoln, what were the operations of the company from year to year. Of course the figures that go into those so-called gas reports are drawn from other records of the operations of the company—the station records, laying of mains, and various other sources. I resorted very considerably to those so-called gas reports which are made out in the first instance month by month and later for the twelve months closed into the year. Those gas reports begin to be pretty complete about the year 1903, and continue down to date. So we have a pretty complete record of the operations of the company beginning with the year 1903 in those gas reports. By operations I mean particularly the making of gas. These gas reports do not disclose in any complete way the construction of the property, for that you have to go to the bills, books and plant itself as it exists down on block 79, and as it exists in the streets of the city of Lincoln. I think that is a fair general statement of the scope of the investigation.

"As to the condition of the company's construction account as it appears on the books and my investigation of it, would say I have been over the construction account of the company, as it appears on the books, very extensively. In fact, I have worked with Mr. Wiggins in the compilation of the account which I understand he has presented here in evidence. The construction account appears in their books from about 1873 down to date."

If the company's gas mains were above ground and could be seen and measured there would be no great difficulty in arriving at their present value, but being under ground and out of sight and their size, weight, age and condition all being important factors in arriving at their value it was the duty of the company to produce the actual facts as to all of these matters. We believe if it had been to the interest of the company to furnish the exact history of its distribution system, the exact cost of its mains, their sizes and weight that these matters would all have been produced and the actual records placed in evidence. If this had been done the court could by making proper allowances for the increase

or decrease in cost of material and labor as compared with the time of construction, have arrived at a fair and just valuation against which neither party could have made any valid complaint. It is inconceivable that a corporation owned to a very large extent by financiers who are non-residents of the city and who are obliged to operate it through persons employed and placed in charge of the property would permit the development and construction of a plant without having exact records kept as to the cost of each item of construction. We believe such records have been kept and could be furnished if the interests of the company in this litigation required that they should be furnished. If they have not been kept it is the fault of the company and not of the public, and if either party is to suffer as the result of this neglect it should be the one guilty of the neglect.

In valuing the distribution system, as well as the other portions of the plant, the master had before him the testimony of Henry I. Lea, the chief expert witness of the company, and of one or two others, all of whom testified theoretically as to the value of most of the items of property. They paid little or no attention to the original cost of the plant and Mr. Lea especially disclaimed any knowledge of what the property cost and frankly admitted that he did not care. The witnesses for the city testified either from actual experience in local construction or from information gained very largely from the records of the company and from actual costs of similar properties recently purchased or constructed. Yet the master, in the main, followed the reproduction figures of Mr. Lea in valuing the distribution system. On page 43 of the printed record will be found his valuation of this portion of the plant and the following extract from his report found on that page shows clearly how he arrived at his figures:

"Mr. Lea's estimate of the net construction cost of mains laid in unpaved streets is $179,814; Mr. Adams' $130,913. I have allowed $173,700. Lea's estimate of the net construction cost of total services is $111,689; Mr. Adams' $69,939. I have allowed $76,116.

"For services and boxes and cocks I have allowed $9,000; for total service governors $18,950; for total meters $60,500; for distribution tools $6,210; for street main drips $1,113; for main valves $328; for district governors $225; for railway crossings $2,800; and for gas appliances loaned $3,250; making a total of $352,192 as the net construction cost of the distribution system. The difference between the total cost, as fixed by me, and the total cost according to Mr. Lea ($529,736) consists for the most part in the elimination from Lea's figures of three items, namely:

"(1) 3½ excess overhead.

"(2) The cost of paving over mains and services, and

"(3) The cost of service pipes paid for by patrons of the company.

"Adding 12½% overhead charge to the net construction cost of $352,192 gives $396,216 as the total reproduction cost of the distribution system; and its depreciated value or present worth I find to be $351,634. That no allowance can be made in a rate case for the reproduction cost of paving over mains and service pipes seems now to be established by the clear weight of judicial and administrative authority."

Since the master found the reproduction cost of the distribution system in harmony with the testimony of complainant's chief expert, complainants can have no reasonable ground for objection to the finding unless the master was in error as to the three items above named, which were responsible for reducing his valuation below that claimed by the company, or, unless he was in error in his method of depreciating the property.

We have referred to the testimony bearing upon the valuation of the distribution system at some length for the purpose

only of calling the attention of the court to the fact that the master resolved the doubt as to reproduction cost mainly in favor of complainant's own contention.

As to the overhead item allowed by the master we beg leave to discuss that subject in a later portion of this brief where we shall discuss overhead expense as applied to all of the property.

As to the cost of paving over mains and services which were laid in dirt streets, we need only cite the recent holding of this court in *Des Moines Gas Company* v. *City of Des Moines,* 238 U. S. 153, 59 L. Ed. 1244, where it was held that the cost of paving over mains which were laid before the street was paved need not be included as a part of the reproduction cost of the property in a rate case.

To the same effect see also *Cedar Rapids Gaslight Company* v. *Cedar Rapids,* 134 Ia. 426; *People* v. *Wilcox,* 104 N. E. (N. Y.) 911.

With reference to cost of service pipes paid for by consumers, which was eliminated by the master, he says on page 44 of the printed record:

> "Of course, in valuing a utility, no distinction can be made between property acquired by purchase and property acquired by gift or otherwise. The value of whatever the company ownes and devotes to the public service regardless of the means or method of acquisition is a just and proper standard by which to measure reasonable rates. But it cannot, I think, be said, looking at the matter broadly, that the company is the owner either technically or equitably of these service pipes. It bought and put them in, it is true, but when it was reimbursed by its patrons for the cost, can it be supposed that it still intended to retain title and the right to remove them at pleasure? A more reasonable inference is that in every case both parties to the transaction regarded the pipes when paid for as belonging to the owner of the

tenement with the right on his part to use them if so inclined in connection with a service furnished by a rival company or for any other purpose, even though entirely unrelated to the gas business. They cannot, it seems to me, consistently with the principle above stated by Mr. Justice Harlan, constitute in part the basis for a rate that can be regarded as entirely fair to the public. The gas consumers have paid $30,484 of the amount claimed by the company for putting in service pipes and this item I have eliminated from the valuation."

The annual gas reports of the company for the years 1903 to 1912 inclusive show a total collected by the company from gas consumers for the installation of gas services of $33,-789.15. This amount, of course, was included in Mr. Lea's valuation plus 16% for engineering, etc., and this 16% the master was obliged to add to the amount paid for by consumers when he deducted the amount from Mr. Lea's valuation of services in getting the amount which he finally accepted as the value of the distribution system.

In support of the elimination of the amount paid by consumers for new services see *Santiago Water Company* v. *Santiago*, 118 Cal. 556, 62 A. S. R. 261, (275); *Illinois Central* v. *Interstate Commerce Commission*, 206 U. S. 441, 51 L. Ed. 1128.

### 9. Overhead Charges.

Concerning the matter of overhead charges the master said, beginning on page 37 of the printed record:

"In ascertaining the value of the property of a public service corporation it is the recognized and approved practice to add to the fundamental cost of the physical equipment, excepting real estate and working capital, a proper percentage to cover overhead expenses. This percentage represents the difference between the net construction cost and the cost of reproduction new. Just what it should be is the question about which there is much difference of opinion among engineers, courts and

commissions. In this case Mr. Lea puts it at 16% and Mr. Adams at 7%. The matter is not governed by any inflexible rule, but is to be determined in every case by the exercise of good sense and sound discretion. The amount should be sufficient rather than liberal, especially where liberality might result in blotting out legislation which in the regulation of rates is only required to stop short of confiscation. The property was inventoried by Mr. Broadnax, an employe of the company, and a gas engineer of long experience. The work seems to have been done with unusual thoroughness. The only error discovered during the course of the long trial was one of inclusion; there was none of exclusion. My judgment upon the matter is that an allowance of 12% on the total net construction cost of the physical property, excepting real estate and working capital is sufficient to cover all overhead expenses, including engineering, superintendence, legal expenses, taxes, interest during construction, omissions and contingencies, casualty liability and whatever else is usually classified under this caption. This is necessarily an estimate based almost entirely upon expert testimony. No accounts were kept and no books, vouchers or other evidence produced showing with even approximate accuracy what expenditures were actually made and properly chargeable to this account. The value of the property has substantially increased by additions made to it in recent years, but the only means of ascertaining what the overhead charges on account of such additions were is by the use of a more or less reliable hypothesis. Courts and commissions differ widely upon this question; and while it may be that the percentage here allowed is not enough, the evidence does not convince me that it ought to be more."

ENGINEERING, ETC.

Most engineers include in the term overhead cost engineering and supervision, contingencies, contractors' profit, interest during construction, legal expenses, expenses of organizing the company, taxes and insurance, and expense of promotion, and some also include working capital and going value (see *Whitten Valuation of Public Service Corporation*, Sec.240). Mr. Lea, however, has taken a part of what is

usually classified with overhead charges, and has made a separate item of it, which he denominates "Organization and Legal Expense," in which he includes preliminary investigation, preparation of articles of incorporation, making and certifying abstracts, drawing and examining contracts, general retainer fee, salaries of manager and clerical force for two years during construction, incidental and traveling expense for two years during construction, rent and stationery for two years during construction, aggregating $33,000 (see subdivision "A," Exhibit "7," p. 1300, printed record). He has also separately stated his working capital and going value. We are therefore to remember, in comparing Mr. Lea's item of overhead expense with amounts and percentages allowed by courts, commissioners and other engineers for "overhead cost," that Mr. Lea has separated the items ordinarily included in overhead expense into at least two divisions: one, "organization and legal expense," and the other, "engineering, etc.," the last being set out in subdivision "C" of his Exhibit "7" (p. 1301, printed record) and itemized by him as follows:

| | |
|---|---|
| Engineering and supervision | 6% |
| Casualty liability | 2% |
| Taxes and loss of interest during construction | 4% |
| Omissions and contingencies | 4% |
| | 16% |

Neither are the intangible elements of working capital and going value included under this head. He adds this 16 per cent to his "net construction cost" of all physical equipment except real estate and items going into working capital. Alton Adams allows 7 per cent for "engineering, interest, taxes and general," which, for 1907, amounts to $23,740 (Exhibit "180," p. 1397, printed record), and, as of January 1, 1913, amounts to $36,084 (see Exhibit "231," p. 1443, printed record, also p. 945, prited record). It is to be remembered,

however, that Mr. Adams, in his figures for reproduction cost of all physical equipment, says that he has made them high enough to include such items as contractors' profit, contingencies and omissions, and liability insurance. In other words, his estimates are based upon actual prices and contracts for construction, and installation of equipment,—that is, prices at which contractors are willing to install, and do install, and construct, the several parts of a gas plant,—and they necessarily involve and include contractors' profit, and all of the hazards incurred by a contractor on account of omissions and contingencies, and for such liability insurance as the contractor sees fit to carry.

This matter of overhead cost, like all other intangible elements included by engineers in appraising public service plants, is one that has been greatly overworked. There being no exact criterion, aside from the actual expense incurred by the company for the items involved (and these are seldom produced), it is very easy for engineers to expand and enlarge this item to such proportions as to make it practically impossible to sustain any rate established by a rate-making body. That this is the case is coming to be recognized by courts and engineers. They are coming to recognize that the customary percentages allowed by valuators for this item of "overhead expense" bears no just relation to the actual expense incurred where such actual expense can be discovered. In this connection we quote the following from *Foster on Engineering Valuation of Public Utilities and Factories*, pp. 20-21:

> "It is a question in the writer's mind if engineers are not carrying overhead charges to extremes, for in many cases of actual charges to properties constructed, when strict account has been kept, the total of items that may have bee considered chargeable to this account is very much less than the percentage frequently used. A study of the cost of street railways as shown

in the Reports of the Massachusetts Railroad Commission will aid very much in determining the true percentage to charge. These items are all examined by the commissioners before being allowed as overhead charges, and in the great majority of cases are charged against the railway division of accounts, no charges of any similar nature appearing against any other division. The sum of all the items that could be counted as overhead charges in the twenty-five million dollars for the equipment of the New York subway amounted to less than six per cent. This included interest during construction, insurance, engineering, taxes and all contingencies. It is time for engineers to bring forward actual figures for these items, actual expenditures for overhead charges, for at present they seem to be far too high—even those offered by the most experienced engineers. As a matter of fact, it is found that in very few new projects are accounts so kept as to reveal the overhead charges."

The following quotation from section 240, *Whitten, Valuation of Public Service Corporations*, recognizes the same tendency:

"In most cases a company should be able to substantiate its claims for overhead allowances by actual vouchers and other records of such expenses incurred in the construction of the plant. There is no necessity for leaving this matter entirely to expert opinions as to such costs, based on somewhat hypothetical conditions of assumed reconstruction."

In section 245, *Whitten on Valuation of Public Service Corporations*, reference is made to the case of *Columbus Railway & Light Company* v. *City of Columbus*, where the master's report recommended a total allowance of 9.8 per cent for total overhead charges.

At the former trial of the instant case, Judge Munger allowed a total overhead charge of 7.7 per cent, which included $3,000 (six-tenths of one per cent) for cost of organizing the company, which we claim is not a legitimate item. If this last mentioned item is eliminated, the allowance by

Judge Munger at the former trial for overhead charges would be 7.1 per cent, which substantially agrees with the allowance made by Mr. Adams.

Halbert P. Gillette, consulting engineer to the Washington Railroad Commission, made an appraisal of the railroads of that state in 1908. He went to the books and records of the several companies and got the original items entering into the overhead expense. And the sum total of all the overhead items and the percentages for each of the roads, and the various items icluded are set out in a table, on page 21 of *Foster on Engineering Valuation of Public Utilities and Factories*, as follows:

OVERHEAD CHARGES AS DETERMINED FROM THE BOOKS AND ACCOUNTS OF ORIGINAL COST OF THE RAILROADS IN THE STATE OF WASHINGTON BY H. P. GILLETTE.

| ITEMS | Gt. N. 767.75 Miles Per Cent | Gt. N. 488 Miles Per Cent | W. & Gt. N. 83.9 Miles Per Cent | F. & S. Ry. 132.3 Miles Per Cent | S. & N. Ry. 131.5 Miles Per Cent | N. P. R. R. 1645 Miles Per Cent | C. R. & N. 501 Miles Per Cent |
|---|---|---|---|---|---|---|---|
| Engineering | 2.50 | 3.23 | 4.40 | 3.56 | 3.50 | 5.51 | 2.83 |
| Gen. expense | .28 | .26 | .08 | | 1.00 | 1.22 | .48 |
| Legal expense | | | | 3.55 | | .01 | .02 |
| Insurance | | | .01 | .06 | | | |
| Int. on advances | .93 | 1.23 | 3.25 | | | | |
| Bond interest during construction | 2.44 | 3.84 | | | 5.25 | 13.60 | 2.61 |
| Bond expense | .10 | .18 | | | | | |
| Taxes | .02 | | .17 | | | | .05 |
| Undistributed acct. | | | | | | .91 | 2.64 |
| Total percentage | 6.27 | 8.74 | 7.91 | 7.17 | 9.75 | 21.25 | 8.63 |

Reference is made to the valuation of the Washington railroads in section 258 of *Whitten on Valuation of Public Service Corporations*, in which he says the appraisal of the railroads allowed 6.9 per cent for overhead charges. With reference to the practice of the Wisconsin Railroad Commission, relative to this matter of overhead charges, *Whitten on Valuation of Public Service Corporations*, section 262, says:

"In valuations made by the Wisconsin Railroad Commission for rate regulation or for municipal purchase, the general rule as to water, gas and electric plants has been to allow 12 per cent on the total inventory—reproduction—cost to cover engineering, superintendence, legal expenses, interest during construction and contingencies. The 12 per cent allowed is not usually segregated between the above items, but in certain cases the Commission has said that the 12 per cent allowance was made up of 5 per cent for engineering and superintendence, 4 per cent for interest during construction, and 3 per cent for legal expenses, organization, casualties, commissions, etc. In a few cases the total overhead charge has been 10 per cent, but 12 per cent seems now to be the general rule. In certain cases the companies have contended strongly for a higher percentage, but the Commission has rejected the demand."

The books of this Company do not disclose any actual payments for any of these overhead costs. Of the enormous sum which the Company claims has been added to this plant, since 1907, not one dollar is shown to have been paid, either by the Company's books or by the testimony of its witnesses, for engineering, supervision, casualty insurance, or any other item covered by Mr. Lea's 16 per cent allowance. The fact is that no such items were paid, but that the figures representing any piece of construction or equipment include all of these imaginary and intangible elements.

ORGANIZATION AND LEGAL EXPENSE.

At the former trial of this case, the Company's expert witness, Mr. M. E. Malone, claimed that a reasonable allowance for this item would be $24,950 (see printed record, p. 119).

The Company's expert witness, H. I. Lea, at the present trial, estimated this item at $33,000 (see Exhibit "7"3. The items going to make up this sum are set out in subdivision "A" of Exhibit "7," as follows:

| | |
|---|---|
| Preliminary investigation | $ 3,000.00 |
| Preparing articles of incorporation, making and certifying abstracts, drawing and examining contracts, and general retaining fee | 7,500.00 |
| Salaries of manager and clerical force during construction (two years) | 18,000.00 |
| Incidental and traveling expenses (two years) | 2,500.00 |
| Rent and stationery (two years) | 2,000.00 |
| | $33,000.00 |

The court, at the former hearing, allowed $3,000 for organizing the Company (see p. 24). We contend, however, that this item has no place in a valuation of the Company's property for rate making purposes, as the public is not concerned with who owns or operates the plant, and should not be required to pay a higher rate merely because the service is being furnished by a corporation, than if furnished by an individual. This was the position taken by the supreme court of Iowa in *Cedar Rapids Gas Light Company* v. *Cedar Rapids*, 144 Ia. 426, 120 N. W. 966, 138 A. S. R. 299, where the matter is disposed of thus:

> "Nothing can be allowed for the promotion and organization of the company, for it is immaterial by whom the plant may be owned in estimating its value."

See, also, *Cumberland Telephone & Tel. Co.* v. *City of Louisville*, 187 Fed. 637, where all so-called "overhead charges" are excluded, the reason for such exclusion being stated by Judge Evans as follows:

> "Overhead charges consist of expenses much of which were incurred long ago. Probably those expenses may have added very materially in increasing the present value of the plant. That present value we must ascertain, but it does not follow that 'overhead charges' as a separate item should be included as such. It seems to us that they are too intangible to be available for that purpose."

In *Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 53 L. Ed. 371, the lower court had included $10,000, on a total cost of $608,000, to cover "organization, promotion, etc.," and Mr. Justice Moody refused to express an opinion as to the propriety of including this item, but left the question open to be considered when it necessarily arises.

We find no court decision authorizing the inclusion of this item as part of the value of a public service property, at all events no such extravagant sum could be allowed for this item as claimed by the Company. Judge Tibbetts, at the former trial, testified as to the reasonable expense of organizing the Company, including legal services, and fixed it at $500. (P. 246, printed record).

The allowance of $3,000 made by the court at the former hearing was amply large to cover this item, if it is proper to include it. We wish, also, to call attention to the fact that this item, when considered at all, is usually dealt with and treated by engineers as an overhead expense. Mr. Lea, however, for some reason or other, has seen fit to make it a separate item, apart from, and in addition to, his 16 per cent added as overhead expense to his "net construction cost" of all physical property, except real estate and working capital (see Exhibit "7-C," p. 1303, printed record).

The substantial difference between the master's present valuation of complainant's property and that fixed by complainant's principal expert, Henry I. Lea, results as we have pointed out, not from any very radical difference in their respective figures as to reproduction cost, but to the disallowance of certain items, such as paving over mains, and to the application of different theories as to the intangible element. There are, of course, reasonable limitations when it comes to estimating the value of physical property, but when it comes to valuing the intangibles, such as work-

ing capital, overhead charges, and going value, there seems to be no limitation at all. Engineers seem to be disposed to place their figures on such items wherever the emergencies of the case may require. If we include going value and working capital among the intangible elements, (and this, of course, we must do in the case of going value), then the valuation claimed by the company in this case for the intangible elements through its expert, Mr. Lea, is considerably over half of the total net construction cost of the physical property. To illustrate: Mr. Lea's total reconstruction cost is $1,306.075. Of this sum $461,672 represents intangible elements including working capital and going value. He has scattered his intangible items throughout his valuation and subdivided and disguised them in such a way that it is somewhat difficult to discover them. He has cunningly avoided stating the sum allowed in dollars in most instances. It is only by going to the different parts of his report, and especially subdivisions "B" and "D" of his exhibit "7" and by making certain calculations that we are able to ascertain his allowances in dollars. To illustrate:

| | Net Construction Cost | Reproduction Cost |
|---|---|---|
| Real Estate | $ 21,700 | $ 21,700 |
| Buildings | 35,614 | 41,312 |
| Works Equipment | 218,358 | 253,298 |
| Distribtuion System | 568,731 | 659,727 |
| Total | $844,403 | $976,037 |

The difference between the first of the above totals and the second is $131,634, which represents the intangible elements produced by Mr. Lea's 16% allowance for engineering, supervision, etc., in connection with the last three of the above items. This $131,634 nowhere appears in Mr. Lea's report as a separate item, it is simply referred to as a percentage.

The intangible items included by Alton D. Adams and Mr. Lea respectively in their valuations may be set down thus:

| | Per Adams | Per Lea |
|---|---|---|
| Engineering, interest, etc | $36,084 | $131,634 |
| Organization and legal expense | | 33,000 |
| Working capital | 20,239 | 72,038 |
| Going value | | 225,000 |
| Total intangibles | $56,323 | $461,617 |

| | Per Lea |
|---|---|
| Construction and overhead cost | $1,306,075 |
| Deduce intangiblest | 461,672 |
| Leaves net construction cost | $ 844,403 |
| Per cent of intangibles to net construction cost of tangible property | 54.6 |

To illustrate the quantity of intangible value included in the 1913 valuation after taking off depreciation we submit the following table:

PRESENT OR DEPRECIATED VALUE AS OF JANUARY 1, 1913.

| | Adams | Lea |
|---|---|---|
| Engineering, interest, etc | $ 27,198 | $ 107,776 |
| Organization and legal expense | | 33,000 |
| Working capital | 20,239 | 72,038 |
| Going value | | 225,000 |
| Total value intangible items | $ 47,437 | $ 437,814 |
| Value of construction of plant | 388,547 | 695,300 |
| Total | $435,984 | $1,133,114 |
| Per cent of intangible to construction value, (after depreciation) | 12.2 | 62.9 |

To obtain the $695,300 for Mr. Lea's plant construction the value of the buildings, works equipment and distribution system given by Mr. Lea, amounting to $781,376, is divided by 1.16, in order to eliminate his 16% which gives us $673,600. and to this is added Mr. Lea's real estate valuation of $21,700, which gives us the $695,300.

The $107,776 for engineering, etc., is obtained by subtracting the $673,600 from the $781,376 above named. It will be seen that in the total figures for plant construction Mr. Lea has included $437,814 in his depreciated or present value for January 1, 1913, for intangibles.

The manner in which Mr. Lea reaches his remarkable total for overhead cost appears more plainly from the details in the following table, which are taken directly or derived by computation from his, so called, report. These details have been grouped, as nearly as possible, into three classes covering respectively all costs in the nature of engineering and supervision, all general costs incident to construction, and interest and taxes, besides working capital and going value.

Four items mainly in the nature of engineering and supervision, which obviously contain duplicate charges for the same work, are said by Mr. Lea to cost $77,862 or 9.22 per cent of the construction. General items of cost are placed by Mr. Lea at $53,862, or 6.38 per cent of the construction, and he adds another $32,908 for interest and taxes during two years, making a total of $164,632 for engineering, interest and general cost, or 19.49 per cent of construction cost:

ITEMS OF OVERHEAD COST PER MR. LEA.

| Cost Items | Total | Per Cent of $844,403 Construction |
|---|---|---|
| Preliminary investigation | $ 3,000 | |
| Incorporation, drawing, contracts, etc. | 7,500 | |
| Manager and clerical force on construction | 18,000 | |
| Engineering and supervision | 49,362 | |
| Total engineering and supervision | $ 77,862 | 9.22 |
| Rent and stationery | 2,000 | |
| Omissions and contingencies | 32,908 | |
| Casualty liability | 16,454 | |
| Incidental and traveling expenses | 2,500 | |
| Total general cost | $ 53,862 | 6.38 |
| Interest and taxes in two years' construction | $ 32,908 | 3.89 |
| Total engineering, general and interest cost | $164,632 | 19.49 |
| Working capital | 72,038 | 8.53 |
| Going value | 225,000 | 26.64 |
| Total overhead cost | $461,670 | 54.66 |

### 10. Working Capital.

The master allowed $60,000 for working capital, whereas the complainant contends for $72,037.63. The amount allowed by the master is over four times as much as the

amount of necessary working capital ever employed by this company as its records will show. Working capital is, of course, the amount of stock and material on hand, and ready cash currently employed by it in the operation of its business, and which has not yet entered into the physical equipment, or has not been converted into current revenues. Every item of supplies and material on hand and every item of expense incident to operation is necessarily reflected in the operating expenses of the company. If we know what the operating expenses are for a given year we can divide this by 12 and arrive at what the expenses were per month and this will tell us exactly what the company has been compelled to spend from month to month in the operation of its plant, including repairs, supplies, labor, salaries, and current bills and expenses of every kind which must be met by working capital. There is no need of applying fanciful theories nor of indulging in speculation as to what is an adequate working capital for this company. We have its own reports made annually since 1903 in which it sets up its total annual expenses, and these, of course, include everything involved in working capital. It is resolving the doubt in fabor of the company to say that it must have on hand each month sufficient capital lying idle to meet its monthly operating expenses, because many of its bills are not paid monthly, and besides, many of the items included in the operating expenses are excessively large and not proper to be allowed, such, for instance, as the item of $19,000 spent in 1912 for the promotion of new business, and a similar item for the same purpose in each of the years preceding, and also, the excessive executive salaries which have been paid since this suit has been pending, and also, the expenses of this litigation. However, taking the operating expenses just as we find them in the company's report for 1912 namely, $173,689.87 and dividing it by 12 we get $14,474 as the operating expenses for each month. Mr. Phillips, the secretary

and treasurer of the company, stated that the current bills per month during the year 1912 were about $17,000. (See page 758, vol. 3, printed record). It will be seen that Mr. Phillips' estimate was considerably higher than the reports of the company show the average monthly expenses to have been.

It seems to us utterly absurd to say that this company needs and should be allowed a working capital in excess of what the history of the company shows it has actually employed in the operation of the business. We repeat that these operating expenses include every item which the company includes in its estimate of working capital, except the necessary money to pay interest on its bonds, and certainly the public is not concerned with the bond interest item and cannot be required to furnish the necessary capital for that purpose. That a large part of the money included in the estimated working capital of the company is for the purpose of paying bond interest see the testimony of Mr. Phillips, the secretary and treasurer of the company, page 758, vol. 3; Mr. Wettling, page 807, vol. 3, and the General Manager B. C. Adams, page 651, vol. 3, printed record. That bond interest should be excluded.

> See, *Redlands, etc., Water Co.* v. *Redlands*, (Cal.) 53 Pac. 843 (844).
> *Santiago Water Company* v. *City of Santiago*, 118 Cal. 556, 62 A. S. R. 261.

### 11. Going Value.

The master included in his valuation of the company's property upon which it is entitled to a fair return $40,000 as a separate item for going value. That part of the master's report dealing with going value begins on page 46 of the printed record. Among other things he says:

> "Whether this element of plant value was purchased entirely by earnings below or above a fair return on capital invested is not, as to a portion of the time at

> least, disclosed by the company's records. In other words, it does not satisfactorily appear to just what extent the company's business was acquired at its own expense, and to what extent it was acquired at the expense of the public. The company was, at all times, entitled to a fair return upon its investment, and whatever was received by it in excess of a fair return should go, in some form, to the credit of the public. If employed in the promotion of new business, the value of such business has manifestly no place in the valuation made as a basis for fixing reasonable rates. The records show that between 1906 and 1913 the company paid out of its earnings and charged to operating expenses about $100,000 for the promotion of new business. In view of this fact, I conclude that an allowance of $40,000 for going value is sufficient."

When we come to discuss the operating expenses in a later portion of this brief we shall have occasion to refer to the new business item. At this point we merely call the court's attention to the master's discussion of it on page 49 of the printed record where he mentions the fact that in 1912 the company spent over $19,000 for the promotion of new business and the master, though reducing the amount, still allows $12,000 per annum or $1,000 per month to be included in the current operating expenses for that item alone.

## GOING VALUE DISCUSSED

We do not contend that in valuing this property we should proceed as if there were nothing here but the "bare bones" of the plant. We concede that this property is more valuable by reason of the fact that it is in a condition to be operated and is connected up and is being operated as a going concern and has an established business. This added value, however, inheres in the physical property and is one of the elements which enters into its present value as distinguished from junk value. It is our contention that in a rate case no element of purely business value as a separate

item of property should be included as a part of the assets upon which a reasonable rate of return is to be allowed. While the master does not say so in express words it must necessarily be understood that he valued the physical property of the company upon the basis that it formed a going operating plant with an established business. All of the witnesses as to value necessarily had this in mind because they were not valuing junk but were valuing a going plant with an established business. Alton D. Adams, the city's expert, makes his position clear in that respect. At page 871, printed record, he says:

> "I would like to say a very few words in reference to my valuation of this property as a plant in operation to forestall the possibility that I didn't fully cover it in what I said yesterday. I intended to make it perfectly plain that I have valued this Lincoln Gas Plant as a "going," operating plant, going in the sense that it is operating and is to be operated and used, as well as being used, for the purpose of making gas. Now the word 'going' as I understand it, is used in several senses in connection with public service properties and business. When I say I have valued the Lincoln Gas Plant as a 'going' plant I mean simply as an operating plant and suitable to be operated and intended to be operated. There is a 'going value' that attaches to a public service business. As I said yesterday I have not computed that value for the reason, primarily, that I don't think the going value of a public service business is an element to be considered in a rate case, but I want to forestall particularly any inference from my testimony that I value any of the physical properties of the company as junk, or as material to be removed or sold or anything of that sort. I have valued it all as equipment used and useful to be used in the gas business."

That Mr. Adams properly treated the element of "going value" and gave it all the weight it was entitled to in a valuation for rate purposes we think is fully sustained by the subsequent decision of this court in *Des Moines Gas*

*Company* v. *City of Des Moines*, 238 U. S. 153, 59 L. Ed. 1244, where the rule is stated in the first section of the syllabus as follows:

> "The going value of a long established and successful gas company was sufficiently taken into account in determining the value of the company's property for the purpose of testing the reasonableness of gas rates fixed by municipal ordinance, where the valuation was based upon a plant in actual and successful operation, and overhead charges were allowed for promotion, organization and development expenses."

In the instant case the master not only included in his overhead charges all of the expenses which would be incident to the promotion and development of the original plant but he recognized that, so far as the records of the company disclosed, the business has been developed by large items which have been charged to operating expense and he allowed $1,000 per month in the operating expenses to cover future development of business.

It is to be remembered that there is absolutely no evidence in the record to show any sacrifices were made by this company in the development of the business. The business was established and the pioneer work in developing the business was all carried on by the predecessor of the present company. The rates at which gas was sold prior to the adoption of the ordinance in question were voluntary rates established by the company itself. (See Mr. Foster's cross-examination of Mr. Phillips, secretary of the company, page 761, vol. 3, printed record). It had a monopoly of the gas business and could, and did, fix the rate at whatever figure it saw fit. The rate which was in existence at the time this ordinance was passed was $1.20 per M cu. ft. in case of prompt payment, but those who were delinquent in paying gas bills at the required time were compelled to pay $1.50 per M cu. ft. and those rates were a reduction voluntarily made

by the company from previous higher rates which it had voluntarily established. *It was incumbent upon the company to show that the going value which it asked to have included among its assets was a value that had been created by it out of its own funds.* Upon this point Mr. Justice Day in the *Des Moines Gas Case, supra,* said:

> "In this case, what may be called the inception cost of the enterprise entering into the establishment of a going concern had long since been incurred. The present company and its predecessors had long carried on business in the city of Des Moines, under other ordinances, and at higher rates than the ordinance in question established. For aught that appears in this record these expenses may have been already compensated in rates charged and collected under former ordinances. As we have said, every presumption is in favor of the legitimate exercise of the rate making power, and it is not to be presumed, without proof, that a company is under the necessity of making up losses and expenditures incidental to the experimental stage of its business."

No showing whatever was made, nor attempted to be made by complainant in this case as to what, if any, early sacrifices were made by the company or its predecessors in developing the business, the burden was upon it to do so and the court will not presume that any such sacrifices were made, in the absence of proof, *especially since the business throughout its entire history, prior to the passage of the present ordinance, was conducted under higher rates voluntarily fixed by the company itself.* This court, in the *Des Moines Gas Case*, cited *Cedar Rapids Gas Light Company* v. *Cedar Rapids*, 223 U. S. 655, 56 L. Ed. 594, and quoted with approval the following language therefrom:

> "Then again, although it is argued that the court excluded going value, the court expressly took into account the fact that the plant was in successful operation. What it excluded was the good will or advantage incident to the possession of a monopoly, so far as that

might be supposed to give the plaintiff the power to charge more than a reasonable price. (Citing authorities). An adjustment of this sort under a power to regulate rates has to steer between Scylla and Charybdis. On the one side, if the franchise is taken to mean that the most profitable return that could be got, free from competition is protected by the 14th amendment, then the power to regulate is null. On the other hand, if the power to regulate withdraws the protection of the amendment altogether, then the property is nought. This is not a matter of economic theory, but of fair interpretation of a bargain. Neither extreme can have been meant. A midway between them must be hit."

After calling attention to the fact that the master in the Des Moines Gas case though first disposed to allow an additional $300,000 for going value concluded to exclude it after the decision in the Cedar Rapids case, Mr. Justice Day, in the opinion in the Des Moines case, said:

"While there is a difference between court and counsel as to what the master meant by this, we think it is apparent that he meant to say that, applying the rule of the Cedar Rapids case, he has already valued the property in the estimate of what he calls its physical value upon the basis of a plant in actual and successful operation; for he said that otherwise its value would have been much less."

Going value was similarly treated in *Cumberland Telephone & Telegraph Company* v. *City of Louisville*, 187 Fed. 637, where the writer of the opinion said:

"It is insisted that $50,000 should have been included in the estimate as a distinct and additional enhancement of the value of the plant because of the fact that the company is a going concern. In valuing property of the character of that involved here, it would indeed be looking only at its 'bare bones' not to take into consideration the fact that the company is a going concern. The fact, however, though somewhat unconsciously to themselves, must necessarily, we think have been taken into account by the witnesses who testified as to values. Property under ground or overhead, thinly strung out

over many miles, would have very diminished value were it not in actual use for the purpose for which it was installed. The matter does not appear to have been passed upon in the report, nor, while it is argued in the brief, does any exception appear to be based upon this phase of the case, but we have concluded that this element of value would hardly be susceptible of accurate measurement by and of itself, and we shall consider the fact to be that it was an inherent factor in the estimates made by each witness who testified as to values."

Aside from the fact that there is a total lack of evidence to justify the inclusion of a separate element of going value upon the theory of early sacrifices on behalf of the company, and aside from the fact that so far as the company's records show its present business has been built up by large and extravagant expense for the promotion of new business, which has been included as a part of the operating expenses and paid by the public—over $19,000 in the year 1912—we contend that, upon principle, no element of purely business value can rightfully be included as a part of the property upon which the company is entitled to earn a fair return. The value of an existing business depends upon the amount of the net income. A business with no income would have little or no value. A business with a small income would have a small value, and a business with a large net income would have a value correspondingly large. The amount of the net income of a public utility depends, to a large extent, upon the rate at which its output is sold. The very fact that the company is resisting a reduction of the rate is a confession that it estimates that such a reduction will reduce its net income. It follows that the higher the rate the greater the value of the business, and if we include the value of the business as an asset in fixing rates then whenever the value of the business increases the rate must be correspondingly increased and we find ourselves reasoning in a circle. Such a principle, if applied, would destroy

the rate making power. This was recognized by Mr. Justice Hughes in the Minnesota rate case, *Simpson* v. *Shepard*, 230 U. S. 352, 57 L. Ed. 1511, where he said (P. 461):

> "The value of the use, as measured by return, cannot be made the criterion when the return itself is in question. If the return, as formerly allowed, be taken as the basis, then the validity of the state's reduction would have to be tested by the very rates which the state denounced as exorbitant. And, if the return permitted under the new rates be taken, then the state's action itself reduces the amount of value upon which the fairness of the return is to be computed."

Mr. Hurd, one of complainant's witnesses who testified in this case as to going value, based his testimony on the experience of the company under the old rate. A part of his cross-examination (page 1291, vol. 4, printed record) was as follows:

Q. "Assuming that the rate were to be reduced to $1.00, would it make any difference in the computation, that is, in the net results obtained as to the value of the item 'going concern.?' "

A. "Well, I should say it might, it would be introducing a new factor into the equation; yes, sir."

Q. "That the rate of return is an essential element in this computation, there is no question?"

A. "Yes, sir, it is the vital element."

Q. "So that if you take the rate in force at the present time and the rate which is sought to be enforced by the City, and make a computation with the two different rates you would arrive at two different results?"

A. "Most assuredly, because you would have different factors entering into the calculation. That might be exemplified if you had a losing concern, at present it was losing money, you would have a very different result in the going value than you would have if it was a profitable one, or a concern that was running on a profitable basis."

Q. "So that in that case you would get a different value for 'going concern?' "

A. "Yes, sir."

Q. "That is, in each instance?"

A. "Yes, sir."

Now, is it not apparent that "going value" as defined by the Company's witness, and as estimated by them, is nothing more nor less than an attempt to capitalize future net earnings accumulated at the old rate through an arbitrary number of years? (see Lea's Exhibit "K"). And Mr. Hurd makes it clear that in order to have any "going value" the business must be in successful and profitable operation, and that this depends upon the rate of return. Is not the rate of return the very point which constitutes the issue in this suit? The above quotation from Mr. Justice Hughes lays down the principle that *the value of the use of the Company's property cannot be measured by return when the return itself is in question.*

This court in *Omaha* v. *Omaha Water Co.*, 128 U. S. 180, 53 L. Ed. 991, held that going value was a proper element for which to allow compensation in a condemnation case, but it expressly pointed out that the going value for which compensation was to be made, was the "value of the business, as a going concern." The court also plainly indicated a distinction between a purchase case and a rate case, so far as going value is concerned. We quote the following from that opinion beginning on page 202.

> "That there is a difference between even the cost of duplication, less depreciation, of the elements making up the water company plant, and the commercial value of the business as a going concern, is evident. Such an allowance was upheld in *National Waterworks Co.* v. *Kansas City*, 22 L. R. A. 827, 10 C. C. A. 553, 27 U. S. App. 165, 62 Fed. 853, where the opinion was by Mr. Justice Brewer. We can add nothing to the reasoning

of the learned justice, and shall not try to. That case has been approved and followed in *Gloucester Water Supply Co.* v. *Gloucester*, 179 Mass. 365, 60 N. E. 977, and *Norwich Gas & Electric Co.* v. *Norwich*, 76 Conn. 565, 57 At. 746. No such question was considered in either *Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 53 L. Ed. 371, 29 Sup. Ct. Rep. 148, or in *Wilcox* v. *Consolidated Gas Co.*, *supra*. Both cases were rate cases, and did not concern the ascertainment of value under contracts of sale."

In order to escape the logic of the contention presented in the preceding discussion under this subdivision, Mr. Lea, in explaining his theory, carefully avoids stating that the measures his "going value" by the amount of income yielded by the business. That is to say, he refrains from saying that there is so much "going value" in this plant, because it has a profitable business which is worth so much because it is profitable, and is yielding a certain annual net income, but he seeks to arrive at the same result by projecting the present plant six years into the future and theorizing as to what its net income will be during each of these years, and then he creates a hypothetical plant and projects it six years into the future and prophesies that it will cost a certain sum of money to enable this hypothetical plant to overtake the actual plant, and this sum of money that he thinks it will take to enable the imaginary plant to catch up with the imaginary progress of the real plant, is, after being reduced to its "present worth," the amount accepted by Mr. Lea, as the "going value" which inheres in this plant, and its business at the present time. It seems to us that this is but another method of stating the same thing. In other words, if the present plant were projected into the future by a pessimistic engineer whose forecast would indicate that the plant so projected would either lose money, or fail to make any net return, then, certainly, the prospective buyer would waste no time projecting his hypothetical plant into the future for six years or six minutes,

because, if he knew that the then existing plant which he was trying to value for the purpose of investing his money in it, did not make a net return of any amount during the next six years, at the then existing rate, he certainly would not add anything to the value of the physical property by reason of the fact that the plant was a 'g'oing concern." A going concern, in order to be of any additional value over the physical property, must be one *going successfully and yielding a profit to the owner over the operating expenses.* A plant which is going to the "bow-wows" may be a going concern, but there will be no "going value" for which any purchaser would be willing to pay an additional sum, above the value of the physical property.

### 12. Depreciation.

We have already cited page 44 of the printed record where the master stated that insofar as he relied upon arbitrary hypothesis he applied the straight line method of depreciation. In a previous portion of our brief we have pointed out that the master did not in any instance apply the straight line method of depreciation in its full force to the physical property but assumed that it had been kept in an operating condition by current repairs charged into the operating expenses and that in this way a large part of the depreciation had been taken care of. However, since the complainant makes a vigorous assault upon the straight line method of depreciation and insists upon the application of an entirely different method, we beg leave to discuss at some length the question of depreciation and to compare the straight line method with the method used by Mr. Lea in valuing the property on behalf of the Company.

In a rate case depreciation is to be considered in two different aspects:

(a) In arriving at the present value of the property it is necessary to deduct the amount of depreciation which has accrued up to the time of the valuation, and,

(b) In determining the amount of net earnings which is being realized or will be realized under a given rate, it is necessary to determine how much shall be allowed from annual gross receipts and included in the operating expenses to take care of current depreciation.

(a) AMOUNT TO BE DEDUCTED IN ARRIVING AT PRESENT VALUE

Mr. Lea's method of arriving at the present depreciated value of the physical property is purely fanciful and cannot possibly be applied with any degree of accuracy or justice in valuing plaintiff's property. He undertakes to apply the "sinking fund method," not only in providing for current depreciation, but also uses tables, which are only used by engineers in connection with the "sinking fund method," to find the present per cent condition of the property. This plant has been in existence since 1873. A large part of the physical property is old and greatly affected by depreciation from age, inadequacy and obsolescence. When this plant was installed no provision was made for a sinking fund to take care of depreciation, and therefore there is now in existence no sinking fund belonging to this corporation available for replacing any of the old parts of the plant, nor for taking care of accrued depreciation in any manner. The sinking fund method can only be used to finance future depreciation, and there is no way by which you can take an old plant affected by a large percentage of accrued depreciation and apply the sinking fund method in arriving at its present depreciated value. This method was not designed for any such purpose. The sinking fund method could, no doubt, be applied equitably if installed at the time of the installation of a new plant, provided the rate of interest could be so controlled as not to disturb advance calculations. Assuming

that the rate of interest used in the calculation is the same as that subsequently realized on the sinking fund, then, in valuing the plant in any subsequent year, the value of the physical property at the time of valuation, plus the sinking fund and the accrued compound interest up to that time, would approximate, with reasonable accuracy, the original investment, but a plant which has been in existence for many years, and is greatly affected by accrued depreciation, cannot be valued by the use of any tables worked out to find the present worth of such plants as are supposed to have installed the sinking fund method at the very beginning. Mr. Lea's method, not having been installed here at the beginning of this plant, and there being no such sinking fund to include in the present valuation as offsetting existing depreciation, the sinking fund method cannot be applied here, even though it might otherwise be deemed practicable. The vicious part of this method, as applied to this property, is the fact that by the use of the sinking fund method he obtains an excuse for applying the tables used in connection with that method in finding his "present per cent condition" of the property, and we think this is the reason for his using the sinking fund method in his valuation. We believe that Mr. Lea uses the sinking fund method, not for any advantage it would give the Company in financing future depreciation, but in order to gain the more than compensating advantage of being able to use the tables in finding the "present per cent condition" of the property. The effect of using those tables is to give the physical property a greater *present* value than it actually has. *Past years* do not count as heavily in estimating depreciation by the use of these tables as will be the case with *future* years. By the use of these tables heavy depreciation is to be *looked forward to* subsequent to the rate hearing, but *past years* are considered as having dealt lightly with the property and as not having seriously affected it by way of depreciation.

In order to see clearly how this system works, we call attention to Mr. Lea's testimony on page 401, printed record, dealing with the purifying house. He gives the purifying house an assumed life of fifty years, and finds that it is now twenty-two years old. In other words, twenty-two years of the life of the building is gone, leaving twenty-eight years of remaining life, or, in percentages, 44 per cent of the assumed life of the building has expired and 56 per cent remains; yet, by the use of these tables, Mr. Lea finds that the present per cent condition of that building is 73 per cent. That is to say, according to the normal process of thinking, the average man would say that since 44 per cent of the assumed life of the building has expired, that it had been affected 44 per cent by way of depreciation, and that there would be but 56 per cent of its value remaining, but by the use of Mr. Lea's tables, in arriving at the present per cent condition, he is able to gain 17 per cent and runs it up from 56 per cent to 73 per cent. His explanation for this is found at the bottom of page 401, where he says: "Because the depreciation does not occur in a straight line. Your depreciation accrues very much slower in the first half of the life of any equipment than it does in the last half. A piece of machinery having a life of fifty years and only twenty-five years old will be very much more than one-half of its original value." One difficulty about that explanation is that it has no basis in actual experience. It is purely fanciful. Another objection to it is that it has nothing to do with the use of the tables for finding the present per cent condition of a public service plant, which has been in the past, and is at the present, taking care of depreciation by the sinking fund method. Those tables have nothing whatever to do with the matter of whether depreciation occurs more rapidly in the later years than in the earlier years, and that assumption does not, in any degree, enter into those tables. It may be that an old plant or an old piece of equipment of any kind may have the same present efficiency

and the same earning power as if new, and yet that does not say that the plant or the equipment has not depreciated. The depreciation is there, wholly regardless of its efficiency or its productive power. The mains in the streets will carry just as much gas and carry it just as efficiently when half of their life has expired as they did when new, yet the mains have depreciated, and any purchaser would say that inasmuch as they will only last half as long as new mains, they are only worth half as much.

Another example illustrating the advantage gained for the plaintiff by the use of Mr. Lea's method of finding the "present per cent condition" of this property is quite clearly shown in his testimony concerning the coal shed, on page 404. He assigns to this shed an assumed life of twenty-five years and he finds that it is twenty-two years old. It therefore has but three remaining years of its assumed life, yet he finds its present per cent condition to be 25 per cent. It will be seen that the actual remaining life of this shed is but 12 per cent of the assumed life, yet Mr. Lea gives its present per cent condition as 25 per cent, thereby more than doubling the present depreciated value of the property. The sinking fund method of financing future depreciation contemplates that the corporation will set aside annually such sum as, put out at compound interest at a rate which it may safely be assumed will at the end of the life of the property or equipment under consideration, yield a sufficient sum to replace the property when it is entirely gone as the result of depreciation. Aside from extensions to the property, the sinking fund, plus the accrued interest, plus the remaining value of the property, will not equal the original investment at any point beteewn the initial date and the objective date, but the power of the sinking fund to accumulate compound interest is necessary to reproduce the investment at the end of the plant life. But as a matter of fact it is doubtful if any company ever did set

aside such a fund and keep it all out at interest from the time of installing the plant to the time it went to pieces as a result of depreciation. So we say that in actual practice the sinking fund method is but a theory and finds no president in actual experience. Even Mr. Lea admits that the theory of the sinking fund method is not ordinarily carried out, but that the Company uses this fund as it needs it to make improvements and extensions.

Mr. Lea testified:

Q. "Well, that would put a public gas company in the loaning business, wouldn't it—money loaning business?"

A. "No, sir; I think they could put the money in their own property; that is the usual practice."

It will be seen that this bit of testimony corroborates Alton D. Adams, the City's expert, as the following extract from his testimony (p. 850) shows:

> "How, then, is the value of a plant, as we say, meaning by plant, all the things engaged in the carrying on of that portion of the gas business, for instance,—how is that to be maintained? The only way it can possibly be maintained is by extending the property in one way or the other. You may extend it by putting in bigger machinery—that is more valuable than the machines were on a certain date, or you may extend it by laying additional new mains, but extend it you must if you are to maintain a value it had on some specific date. And that, of course, is what we mean when we talk about maintaining the value of a plant. * * * If you are going to keep the value of a plant as on a certain day you must extend it, either by longer mains or bigger gas holders, and this principle applies to gas or electric plants or any other aggregation of physical things."

It is true that at the first trial of this case, Professor Bemis, who appeared as an expert witness for the City, advocated this "sinking fund method" in financing *future depreciа-*

*tion,* but it will be noted that he took this property as he then found it and advocated the application of the sinking fund theory, to take care of depreciation from that time forward.

As against this sinking fund theory Alton Adams says (p. 852):

> "As to which method is usually adopted in actual practice, the universal method in the gas business is to put the money into the plant and keep your plant up and keep adding to it. I have never heard of the wonderful one horse shay method of replacing a plant, where all go out in a wonderful collapse and then replaced by some sinking fund process."

When we undertake to apply the sinking fund theory to an old plant and thereby to adjust past depreciation which has already accrued, as well as to provide for future depreciation, and in the process of doing so we undertake to arrive at the *present* value of the physical property by the use of tables, designed to find the present value of *a sinking fund* which has been provided from the beginning, we are attempting to do something that is absolutely unfair in its results to the public and totally impracticable and impossible of performance. We call attention to the fact that at the former trial the experts of the Company, and also the counsel of the Company, strenuously opposed and ridiculed the theory of Professor Bemis involving the application of the sinking fund method. As opposed to the sinking fund method, Mr. Alton D. Adams, the present expert of the City, has undertaken to value this plant by the application of what is known as the "straight line method" of depreciation, and also to provide for future depreciation by the same method. It treats gas consumers in the earlier stages of the Gas Company the same as gas consumers in the latter stages. They all have to bear an equal annual proportion of the depreciation, which is constantly going on in the plant. No such results come from the appli-

cation of the "straight line method" of depreciation as postponing the heavy burden of depreciation to future generations, but each generation, and the gas consumers of each year, bear their fair share of the depreciation.

Foster, in his work entitled "*Engineering Valuation of Public Utilities and Factories,*" on page 170, says:

> "By far the most commonly used method of depreciating machinery and plant is that known as the straight line. By this method a length of life of the particular apparatus under consideration is estimated and determined by the best experience and good judgment available, then this length of life divided into 100 will give the rate at which the depreciation is to be figured; that is, the rate per cent per annum, or the annual rate at which the depreciation is to be computed. If the life of an engine is assumed to be twenty years, then its cost new will be depreciated one twentieth of such cost each year, or at the rate of five per cent per annum on the original cost new.
>
> "While this method is in itself an assumption, yet it does away with all side assumptions or guesses as to how much the machine is depreciating each individual year. It is the method used by many of the public utility commissions, by the courts, most generally by public accountants, and by far the greater majority of engineers."

On page 171, in relation to the sinking fund method, he says:

> "This plan is based upon the assumption that a fund is to be laid aside annually to cover the depreciation. At the end of the year a certain amount of money, as determined from sinking fund tables, is deposited at interest, this interest is annually compounded and the regular contribution is added to it, the whole sum drawing interest at the regular rate for the ensuing year, when, the interest for the year just past having been added, the regular contribution is again made; and so it continues until the assumed period of life of the object or apparatus has come to an end, when there should be on deposit a sum equal to the first cost of the apparatus less the scrap of salvage value.

*"Two factors have to be predetermined in this case, first the length of life it is presumed that the object to be depreciated will last in good serviceable condition or until is usefulness has disappeared; second, the rate of interest that can be secured for the deposits, the interest to be compounded each year at the time the annual contribution is made."*

Hayes, in his work on *Public Utilities,* section 139, says:

"When the property of a public utility consists of plant alone, the loss in value must be determined by the straight line method, and when the property consists of plant and depreciation reserves, the loss in value must be ascertained by means of what has been called the sinking fund method."

The same author in section 162, says:

"If there is plant alone as representative of the property of the undertaking, the straight line method when age and life have been determined with accuracy, will show the absolute loss in value and consequently this loss in value gives the true depreciation of the property. If the property of the undertaking consists of plant and reserves, the sinking fund method will likewise show the loss in value if properly applied. But the equity of this method has been the subject of much doubt."

In order to verify what we have said in regard to the tables used by Mr. Lea in finding his present per cent condition of each of the items of physical property, we call attention to pages 185 to 189, inclusive, of Foster's work, above cited, where those tables are set out. It will be seen that they are used in connection with the sinking fund theory and they presuppose an assumed rate of interest at which the sinking fund is invested. We can readily understand how the present worth of a fund, which is to mature at a future date, can be arrived at by the use of these tables, and with the assumption of a given rate of interest, but how the present value of physical property can be arrived at in this way, or how any rate of interest has the least possible bearing upon the present

condition of physical property, we are absolutely unable to understand. As we have already said, in order that this sinking fund method, and this system of finding the present per cent condition, or present worth, of this plant could possibly approximate anything like fairness and justice to the public, it would be necessary for this corporation to have at this time an actual sinking fund to be included, and which would be included, in the valuation, and in the present per cent condition arrived at by the use of these tables. These tables involve not only the property, but the fund, and this company has no such fund and these tables are not at all applicable.

In this connection, we call attention to the very clear and rational explanation of the straight line method used and applied by Alton Adams, beginning on page 847 of the printed record. It will be seen that Mr. Adams takes the practical and sensible view of the matter and treats the depreciation as it is actually treated in practice. He says that he knows of no way by which depreciation can be taken care of with the passing years, excepting by the process of making extensions and renewals. That is to say, a given piece of equipment, when half of its life is gone, is only half as valuable as the same equipment new, and the only way that the owner of the property can keep his investment at its new value is to add new equipment by way of extending and enlarging his property. At a given time he may have two pieces of equipment in lieu of the one which he originally purchased, and the present value of the two, less depreciation, may not exceed the new value of one, but his investment is kept intact and unimpaired. If he keeps the same equipment without making any extensions, no matter how much he may do by way of repairing it, and no matter how efficient it may be in its operation and use, its value is affected by age and other elements which bring about depreciation, and the time will come when his investment will cease to have any

value. Looking at the plant as a plant, if we assume, as we must, that the corporation is entitled to collect from the public rates high enough to enable it not only to pay fair returns, but also to keep its original investment unimpaired, the only practical way that this can be done is to make extensions to the property, so that the sum total of the original property, plus the extensions, at any given time will be worth the original investment, or, rather, will equal the sum required to reproduc the original property at the time of valuation.

In order to show the advantage to the Company gained by Mr. Lea's method of dealing with accrued depreciation, whereby the heavy burden of depreciation is postponed to the future, and whereby he is able to give to the property a larger present value than he would be able to fix if he applied the straight line method of depreciation, we have prepared the following table setting out all of the property of the Company, to which Mr. Lea applies depreciation, using the cost, life and ages used by him, but applying the straight line method of depreciation used by Mr. Adams:

TOTAL DEPRECIATION OF LINCOLN GAS PLANT TO JANUARY 1, 1913, USING THE COST, LIFE AND AGE OF ITEMS PER LEA, AND USING THE STRAIGHT LINE METHOD.

| PLANT ITEMS | Years Life Per Lea | Years Age Lea Lea | Cost Per Lea | Total Resulting Depreciation Straight Line |
|---|---|---|---|---|
| BUILDINGS— | | | | |
| Purifying house | 50 | 22 | $ 19,279.00 | $ 8,482.76 |
| Generator house | 50 | 5 | 4,337.00 | 433.70 |
| Retort house | 50 | 22 | 8,919.00 | 3,924.36 |
| Meter Shop and booster house | 50 | 5 | 3,035.00 | 303.50 |
| Coal shed | 25 | 22 | 2,080.00 | 1,830.40 |
| Oil tank house | 50 | 15 | 1,807.00 | 542.10 |
| Oxide shed | 20 | 3 | 70.00 | 10.50 |
| Stable and blacksmith shop | 25 | 15 | 949.00 | 569.40 |
| District holder booster house | 40 | 3 | 836.00 | 62.70 |
| WORKS EQUIPMENT— | | | | |
| 7′ 6″ water gas set | 30 | 1 | 9,833.00 | 327.76 |
| 7′ 6″ water gas set | 30 | 3 | 9,833.00 | 983.28 |

TOTAL DEPRECIATION—Continued.

| PLANT ITEMS | Years Life Per Lea | Years Per Per Lea | Cost Per Lea | Total Resulting Depreciation Straight Line |
|---|---|---|---|---|
| Water gas condenser and scrubber | 30 | 3 | 1,414.00 | 141.39 |
| Operating floor | 50 | 3 | 2,380.00 | 142.80 |
| 6′ 6″ water gas set | 30 | 12 | 9,364.00 | 3,745.20 |
| 6′ 6″ water gas set, Springer | 30 | 22 | 5,790.00 | 4,246.00 |
| Operating floor | 50 | 12 | 2,170.00 | 520.80 |
| No. 7 Sturtevant blower | 25 | 5 | 316.00 | 63.20 |
| No. 7 Sturtevant blower | 25 | 4 | 324.00 | 51.84 |
| No. 1 Roots blower | 25 | 12 | 317.00 | 152.16 |
| No. 8 Sturtevant turbo blower | 20 | 4 | 1,665.00 | 333.00 |
| No. 8 Sturtevant blower | 25 | 4 | 525.00 | 84.00 |
| No. 6 Roots exhauster | 30 | 21 | 918.00 | 642.60 |
| No. 6 Sturtevant exhauster | 30 | 5 | 401.00 | 66.80 |
| 10″ McKenzie exhauster | 30 | 21 | 510.00 | 357.00 |
| 4″ x 5″ Greenfield engine | 20 | 15 | 278.00 | 208.50 |
| 5″ x 5″ Sturtevant engine | 20 | 5 | 313.00 | 78.25 |
| 7″ x 6″ Sturtevant engine | 20 | 4 | 426.00 | 85.20 |
| 40 H. P. motor | 20 | 7 | 760.00 | 266.00 |
| 35 H. P. motor | 20 | 10 | 657.06 | 328.50 |
| Countershafting, etc. | 25 | 21 | 89.00 | 74.76 |
| 6 benches 6's | 25 | 2 | 20,872.00 | 1,669.76 |
| Charging floor | 50 | 15 | 2,830.00 | 849.00 |
| 4′ 6″ x 25′ 0″ condenser | 30 | 22 | 883.00 | 647.46 |
| 5′ 6″ x 31′ scrubber | 30 | 22 | 477.00 | 349.80 |
| 4′ 6″ x 5′ 0″ rotary scrubber | 30 | 22 | 2,460.00 | 1,804.00 |
| 4 20′ x 24′ x 4′ purifying boxes | 30 | 11 | 15,182.00 | 5,566.66 |
| 10′ station meter | 40 | 11 | 4,525.00 | 1,244.32 |
| 6′ station meter | 40 | 30 | 1,575.00 | 1,181.10 |
| 500,000 cu. ft. gas holder | 40 | 5 | 51,023.00 | 6,377.85 |
| 200,000 cu. ft. gas holder | 40 | 23 | 29,138.00 | 16,754.35 |
| 50,000 cu. ft. gas holder | 40 | 31 | 12,074.00 | 9,357.35 |
| 20″ Connelly governor | 50 | 21 | 974.00 | 409.08 |
| 12″ Reynolds governor | 30 | 4 | 481.00 | 64.12 |
| 6″ x 10″ x 5″ x 10″ Knowles pump | 20 | 10 | 418.00 | 209.00 |
| 3″ x 4″ vertical pump | 20 | 20 | 186.00 | 186.00 |
| 3½″ x 4″ x 6″ Gardner pump | 20 | 6 | 104.00 | 31.20 |
| 4½″ x 3¾″ x 4″ Worthington pump | 20 | 2 | 116.00 | 11.60 |
| 4½″ x 2¾″ x 4″ Gardner pump | 20 | 4 | 110.00 | 22.00 |
| 4½″ x 2¾″ x 4″ Worthington pump | 20 | 4 | 110.00 | 22.00 |
| 3″ x 2″ x 3″ Worthington pump | 20 | 1 | 99.00 | 4.95 |
| 6″ x 4″ x 6″ Warren pump | 20 | 20 | 186.00 | 186.00 |
| 2½″ x 3″ x 4″ Marsh pump | 20 | 4 | 93.00 | 18.60 |
| Otis platform elevator | 20 | 4 | 1,230.00 | 246.00 |
| Fairbanks scale | 15 | 5 | 70.00 | 23.00 |
| Photometer | 10 | 7 | 522.00 | 365.40 |
| Calorimeter | 10 | 3 | 244.00 | 73.20 |
| No. 90 drill press | 15 | 5 | 52.00 | 17.30 |
| Shop tools and miscellaneous | 15 | 8 | 536.00 | 285.84 |
| 4 steel tar tanks | 40 | 7 | 882.00 | 154.35 |
| Tar separator | 40 | 7 | 208.00 | 36.40 |

TOTAL DEPRECIATION—Continued.

| PLANT ITEMS | Years Life Per Lea | Years Age Per Lea | Cost Per Lea | Total Resulting Depreciation Straight Line |
|---|---|---|---|---|
| 3' 3" x 3' 3" x 10' 10" tar well | 40 | 21 | 121.00 | 63.62 |
| 6' x 20' x 12' tar well | 40 | 15 | 548.00 | 205.50 |
| 2 steel tar tanks | 30 | 5 | 1,841.00 | 306.30 |
| 2 steel oil tanks | 30 | 7 | 2,152.00 | 502.11 |
| 2 steel oil tanks | 30 | 10 | 1,415.00 | 471.60 |
| Brick oil tank | 40 | 15 | 264.00 | 99.00 |
| Drain piping | 30 | 10 | 1,952.00 | 650.60 |
| Water piping | 20 | 9 | 952.00 | 428.60 |
| Oil piping | 20 | 6 | 514.00 | 154.20 |
| Gas yard mains | 40 | 12 | 7,830.00 | 2,349.00 |
| Steam piping | 20 | 8 | 3,082.00 | 1,232.80 |
| Tar piping | 20 | 12 | 680.00 | 408.00 |
| Work tools | 10 | 3 | 696.00 | 208.80 |
| Main office furniture and fixtures | 20 | 3 | 9,983.00 | 1,497.45 |
| 100,000 cu. ft. gas holder | 40 | 3 | 21,675.00 | 1,625.61 |
| Water piping district station | 20 | 3 | 250.00 | 30.75 |
| Gas yard mains district station | 40 | 3 | 537.00 | 40.26 |
| Manholes district station | 40 | 3 | 1,778.00 | 133.35 |
| 25 H. P. motor district station | 20 | 3 | 491.00 | 73.65 |
| 5 H. P. motor district station | 20 | 3 | 186.00 | 27.90 |
| No. 5 Sturtevant blower district station | 25 | 3 | 209.00 | 41.80 |
| No. 5 Sturtevant blower district station | 25 | 3 | 244.00 | 29.28 |
| DISTRIBUTION— | | | | |
| Street mains | 35.95 | 10.32 | 373,821.00 | 107,314.79 |
| Street mains miscellaneous | 11.26 | 10.32* | 21,086.00 | 19,321.10 |
| Services | 25 | 7.4 | 151,773.00 | 44,924.80 |
| Service boxes and cocks | 25 | 7.7 | 12,839.00 | 3,954.41 |
| Service governors | 25 | 4.8 | 23,628.00 | 4,536.57 |
| Meters | 25 | 9.3 | 76,580.00 | 28,487.76 |
| | | | $954,337.00 | $296,346.06 |

* Used same years ages as street mains.

The foregoing tabulation will show that Mr. Lea's present value of buildings, works equipment and distributing system, would be $657,911 if he had applied to his reproduction cost the straight line method of depreciation. By the use of his sinking fund theory, however, he gets for the present value of the same property $781,376, or a gain of $123,385, merely by selecting a favorable method of depreciation. And, as we have shown, he was obliged to reject the method which Mr. Foster in his work already cited says is the one almost universally used by engineers and commissioners, and accepted a method seldom if ever followed by any court or commission.

ANOTHER APPLICATION OF STRAIGHT LINE DEPRECIATION TO LEA'S VALUES.

Applying the straight line method of depreciation to all of the tangible property, except real estate, belonging to the complainant, using Mr. Lea's ages and assumed life in all cases, we find that the total amount of depreciation equals 31.5 per cent of the total reproduction cost.

Eliminating all paving over mains and services and services paid for by consumers and applying the same method in ascertaining the accrued depreciation we have the following:

| | | |
|---|---|---|
| Tangible property (see Exhibit "425-A, p. 1368) Lea | | $928,423 |
| Deduct: | | |
| Real estate | $19,320 | |
| Paving over mains and services (Exhibit "425-E," p. 1372) | 146,082 | |
| Services paid for by consumers | 33,789 | 199,191 |
| | | $729,232 |
| Deduct 31.5 per cent for accrued depreciation on straight line theory | | $229,708 |
| | | $499,524 |
| Add: | | |
| Correct Lea value of real estate | | 18,520 |
| Working Capital found by Master | | 60,000 |
| Going Concern value found by Master | | 40,000 |
| Present Value, January 1, 1913 | | $618,044 |

This is $58,521 less than the valuation found by the master.

(b) Provision for Future Depreciation.

Beginning on pages 1195-1200, Alton Adams explains his system of taking care of future depreciation, identifies and explains Exhibit "430," "430½" and "431." In Exhibit "430" (p. 1632) he states the amount of annual depreciation

estimated on his new cost of the Company's property as he found it to exist in each of the years 1907-1912, both inclusive. The first column of the exhibit gives the years. The second column gives the amount of annual depreciation for each of the years, which is arrived at and explained in Exhibit "431" (p. 1633) by taking each of the items of property owned by the Company at the end of the particular year, determining when it was installed or purchased, assigning to it an assumed life, estimating its new cost, and dividing the new cost by the number of years of assumed life, he gets the annual depreciation of that particular piece of property. These amounts of annual depreciation on each piece of property owned at the close of the particular year, are added together, as shown in Exhibit "431," which is carried forward into the second column of Exhibit "430" as the total annual depreciation of the Company's property for that particular year.

Now Mr. Adams in his estimate of operating expenses has allowed 9 cents per thousand cubic feet of gas sold to cover repairs, renewals and depreciation. In his Exhibit "430½" (p. 1632) the first column gives the years from 1907-1912 and the second column gives the M feet of gas sold during these said years. Taking the number of M feet of gas sold during any particular year and multiplying it by .09 we get the amount placed in the third column of Exhibit "430" to cover the amount which Mr. Adams says is ample to cover all items of repairs, renewals and depreciation for that particular year. Now, if we deduct the figures in the second column of Exhibit "430" opposite a particular year from the figures in the third column for the same year the remainder will be the figures in the fourth column showing the excess resulting from allowing 9 cents per M feet of gas sold, over the actual amount necessary for depreciation and renewals for that year, which excess, Mr. Adams says, is more than sufficient to cover the ordinary items of repairs. Let us take the year

1907 for example: Mr. Adams finds that the Company sold, in that year 179,366 M ft. of gas. Multiplying this by 9 cents we get $16,142.94, the amount placed in the second column of Exhibit "430," to cover repairs, renewals and depreciation. Now, in order to arrive at the amount which will be left for the item of repairs, we deduct $6,962.74 found in the second column, being Mr. Adams' estimate of depreciation and renewals for that year, from the $16,142.94, found in the third column of Exhibit "430," and this leaves us the figures opposite 1907 in the fourth column of Exhibit "430," as the excess resulting from allowing 9 cents per M ft. of gas sold in 1907, which excess is available for taking care of ordinary repairs. Exhibit "430½" deals with the same matter, except that the results are reduced to cents per M cubic feet of gas sold. It will be seen that the fourth column of Exhibit "430½" reduces the third column, or annual depreciation for the respective years, to cents per thousand cubic feet of gas sold, and the fifth column reduces the excess remaining in the sum produced as the result of multiplying the amount of annual sales by 9 cents and deducting from the product the amount allowed to take care of depreciation and renewals. It will be noted that in this last column of Exhibit "430½" the amounts remaining in the respective years to cover repairs run from 4.35 to 5.12 cents per M feet of gas sold, and Mr. Adams testifies that, from his investigations of this plant and other plants, and his experience and study of the matter, 3 cents per M cubic ft. sold would be ample for ordinary repairs. So it will be seen that in Mr. Adams' estimate of 9 cents per M cubic feet of gas sold to take care of depreciation, renewals and repairs, the amount allowed is ample to cover these items and to protect the company against any possible mistakes that might arise from understating the new cost, or overstating the probable life of a given piece of property.

In this connection we call attention to Adams' Exhibit "307" (p. 1495-6, vol. 5) wherein he shows a total reported

by the company as having been spent for repairs and renewals for the years 1903 to 1912 inclusive, and has reduced the sums so expended to cents per M cubic feet of gas sold in each year. Exhibit "309" (p. 1496-7, vol. 5) gives the details as to the particular parts of the plant upon which this money was expended. Take the year 1903 on Exhibit "309" for example: By reading to the right we find certain sums of money set in various columns under different headings such as buildings, gas benches, etc., and finally in the last column of the second sheet of the exhibit the total spent for that year in repairs and renewals is shown to be $5,912.21 and this total is carried back into the third column of Exhibit "307" after the year 1903 and this then is reduced to cents per M cubic feet and the result is placed in the last column of Exhibit "307." The matter is treated in the same way for each of the years. The object of these exhibits is to show what the company has been spending in cents per M cubic feet of gas sold during each of those years as shown in the final column of Exhibit "307." Mr. Adams' explanation of these exhibits may be found beginning on page 975, vol. 3, of the record. Mr. Adams was of the opinion that a considerable portion of the money thus spent was spent for objects other than items of actual repairs, and that quite a considerable portion of the money so spent was spent for renewals and for extensions and insofar as this was done existing depreciation was to that extent reduced. In other words, he maintained that the records of the company indicated that, to a considerable extent at least, the company has been taking care of depreciation over and above what would be a normal expenditure for such repairs as were necessary to keep the plant in operating condition from day to day. To quote from his testimony on page 977, vol. 3:

> "'Repairs' or 'repairs and renewals' is so slippery and so uncertain until we get down close to the matter and examine the things that were done and paid for and

called 'repairs.' In the first place let us take a gas property that is not extended at all in a particular year, is not enlarged I mean, in any way, and no part, that is no complete unit of it, as a machine of some kind, or a length of main or a gas meter is replaced—no unit of that structure is replaced during the year and no unit is added by way of extension or enlargement during the year. Now, in a case of that sort there would undoubtedly be small items of expense to be denominated 'repairs' that must be done and made on the gas property— there would be a screw loose here and a small patch to be put on there, and perhaps a diaphragm to be put in a meter, perhaps a retort to be put on a gas bench, etc., on down the line, but at the end of the year we should have simply the unit structures of machines, and the mains, etc., that we had at the beginning of the year, with no additions to them, and no one of them would have been replaced entirely. Now, there is perhaps an illustration of a simple bare case of repairs pure and simple as such. It is very seldom that the treatment of a gas property stops there in the way of repairs and renewals, but if it does stop there, the property so treated necessarily has shrunk in value during the year. It is impossible, of course, to keep up the value of any physical structure by simply repairing. The only way that a physical structure can be kept up to a given plane of value, assuming an even range of prices of material and labor, is by enlarging the structure. It is impossible to do it in any other way. Enlarge the structure and add some new gas meters in the case of a gas plant, or run another mile of main or build a new holder, or put up a new building, and you may put into the value of that new structure—in the cost of that new structure—that may add enough to offset the shrinkage in value of the rest of the structure. Otherwise, we can not keep up the value of the structure as a whole."

After the above explanation Mr. Adams proceeds to explain (p. 977) that the thing called "repairs" and the thing called "renewals" are generally very much mixed, and that in order to ascertain how much depreciation has been taken care of under these headings in addition to taking care of items of repairs strictly as such it is necessary to see what was done with the money or if this cannot be determined, allow for

repairs such sum as experience shows to be normal and treat the balance as having been applied to renewals and extensions and as having, to that extent, taken care of depreciation, not in the case of any specific article, but in the value of the plant as a whole. Mr. Adams then identifies and explains Exhibits "310" to "319" inclusive. These exhibits show the amount spent under the head of "repairs and maintenance" for the various parts of this physical plant during the years 1903 to 1912 inclusive. And beginning at the bottom of p. 978, vol. 3 of the record, he explains:

> "And so I have figured up here in the way I have indicated the amount they had expended on this property by way of repairs and renewals, and have inquired to see the exact meaning of those figures set down here in Exhibits '310' to '319,' inclusive, the exact items, that is, a description of the items appearing in the gas reports for which these moneys were expended, and it appears from an inspection of these items and from what familiarity I have been able to gain of the property by looking it over, that a number of new and valuable things, in addition to the mere putting on of patches and tightening up of screws and tightening up of hooks and such ordinary repairs,—that a number of new and valuable things were bought to replace the older things that had become, as it was thought, too old to be used. So that, I think in this plant during this period of years 1903 to 1912, in the cost of repairs and maintenance we had a substantial amount of money spent to offset the shrinkage in value of the property aside from what was spent to merely, as we might say, keep the thing going, keep the screws tightened up."

He then calls attention on page 979 to certain of the items in Exhibits "310" to "319" which cannot be for ordinary repairs, but must have been for renewals, and we submit that it requires but an inspection of these exhibits to show that this company has under the head of "repairs and maintenance" spent a substantial sum during these years in replacing worn out and discarded parts of its plant and has charged the same to current operative expense. For instance on Ex-

hibit "311" which shows the "repairs and maintenance" items for the year 1904, it will be seen that $1,113.69 was spent on the water gas apparatus and $1,231.84 on the coal gas apparatus. We submit that no such sums could possibly have been spent unless these machines or appliances were substantially reconstructed and to this extent they were taking care of depreciation out of operating expenses, which, whether proper or not, furnishes no criterion for normal expenses in making repairs, which is the point we are now dealing with. The last item on Exhibit "311,' p. 1472, vol. 4, printed record, is $1,819.97 for setting and removing meters. This includes, not only old meters taken out and new ones put in by way of substitution, but it also includes new meters put in for all new consumers, the cost of which enters into the appraisal by the company of the physical property which is here valued and is capitalized as a part of the plant for which the Company asks a return. Insofar as this item includes the cost of installing new meters for new customers it includes extensions to the plant and forms no part of legitimate operating expense nor does it furnish a criterion for normal expenditures for repairs. We make the same observations with reference to the same items in Exhibit "312," p. 1472, vol. 4, printed record, and also in that exhibit we find $949.45 for street main maintenance and $1,060.36 for "service maintenance." Since very few repairs can be made on street mains underground it is quite probable that some extensions were made and charged to operating expense, which would not be proper, and most of the balance of the item was probably for sections of leaking mains taken up and renewed and thereby depreciation was taken care of. The same may be said of the large items for service maintenance.

Exhibit "313," p. 1472, vol. 4, printed record, has a number of large items which could not possibly have been for repairs. Here again $1,976.09 was spent on the gas benches,

$2,312.47 on the water gas apparatus, $1,125.61 on the coal gas apparatus, and no one will contend that any such sums could have been spent in merely repairing these units of the gas plant. They were overhauled and reconstructed. The water gas apparatus, or at least some definite unit or part of it, was undoubtedly taken out and a new one put in, and the expense run into the "repairs and maintenance" account and spread over two or three years (see Frueauff's evidence, pp. 457-8, printed record).

In Exhibit "314," p. 1472, vol. 4, printed record, we find in the year 1907 another charge in connection with the gas benches of $4,022.24, and repairs to water gas generator apparatus $1,045.52 and for these two items we find a substantial charge in 1908 shown in Exhibit "315," p. 1472, vol. 4, and 1909 shown in Exhibit "316," p. 1472, vol. 4, and 1910 shown in Exhibit "317," p. 1472, vol. 4, and 1911 shown in Exhibit "318," p. 1472, vol. 4. Now as to coal gas benches, Mr. Honeywell at the former trial testified that the three south benches were built in 1901 and were refilled again in 1904. He was estifying in 1907 and he stated (p. 148, printed record):

> "I cannot tell you how many times those arches have been rebuilt, or how many times those benches were rebuilt, but we built the arches and refilled them last year."

He then stated that this expense was charged to "bench repairs" and spread over a period of time which they estimated the benches would last. So it is clear that these items expended in these several years for repairs and maintenance on coal gas benches covered not only repairs, but the renewal of the benches themselves and to that extent took care of depreciation. In fact, this is born out by the testimony of Mr. Phillips at the present trial beginnig on page 1293, vol. 4, printed record. He says that replacements are charged to

operating expenses and that in case of large items of this kind they spread the amount over several months. On this subject he testified:

Q. "Then what is the system of keeping up the plant, the replacing of old apparatus with new, taking out a section of main that has become defective and can not be used and putting in a new section, and taking out an old water gas set and putting in a new, the expense has either been added to your construction account or entered in your operating expense under the items of 'repairs and maintenance?' "

A. "Yes, sir, it has to go into one of the two places."

Q. "And sometimes, as you have said, part of the item is entered in each account?"

A. "Yes, sir."

Q. "And that is the way the company has kept up its plant and kept an efficient and working plant in times past?"

A. "Yes, sir."

Q. "And what is the present condition of the plant, is it in good condition or has it been allowed to run down and deteriorate?"

A. "As far as I know it is in good condition. I am not an engineer and do not know much about that end of it."

Q. "But such condition as we now find it in, and you you say it is in good condition, has been maintained in the manner you have outlined there by adding new articles of construction and entering it in your construction account and adding it to the assets or adding it into current expense?"

A. "Yes, sir."

Q. "Then in your opinion has the amount and sums expended by the company since this present management took charge of it been sufficient to maintain the value of the plant and keep the investment unimpaired?"

A. "It has."

Q. "That is the method employed by this company to to take care of depreciation and keep the plant from depreciating and running down?"

A. "Yes, sir, we call it that."

And that was the view taken of the matter by Mr. Justice Lurton in the opinion handed down in this case when the case was here before. We quote from the opinion, page 363 (223 U. S.):

"The work of reconstructing and replacing old parts by new in a plant of this kind must, in the very nature of things, be going on constantly. Heretofore it seems to have been so well and continuously done that the value of the plant as a whole has suffered less than 1 per cent per annum if the total depreciation be distributed through the more than 30 years of operation. So far as can be now seen, the construction and replacement charges, have up to present time been borne by current revenue, with the result that the revenue remained in the single year of 1907 showed a net surplus of $73,851.83, a sum large enough, if distributed to share holders upon the basis of the value of property engaged in the business as claimed by appellant to have paid a dividend of 10 per cent and about 15 per cent upon the valuation settled by the circuit court.

"There is no finding as to the extent of the application of the revenue of 1907 to reconstruct or replacement as distinguished from current repairs and operating expenses. It is, however, plainly inferable that the revenue of that year was used to the extent necessary. If, in the past, reconstruction and replacement charges have been met out of current expenses, the fact must be taken into consideration, both when we come to estimating future net income and in determining what sum shall be annually set aside to guard against future depreciation. This doubtless influenced the court below in settling upon the amount of $8,000 as a sufficient annual appropriation of income as insurance against future depreciation. But, if the constantly re-occurring necessity to do reconstruction or replacement work was in 1907 met out of the current income of that year, thereby diminishing the net income, the fact should be given weight in estimating future net income; otherwise there will be a

> double deduction on that account first by paying such charges as they occur, and thereafter by a contribution out of the remaining income for the same object."

In view of the testimony of Mr. Phillips above quoted and the testimony of Mr. Alton Adams above cited, the language of Mr. Justice Lurton is quite in point on the matter under discussion. If this company is renewing and replacing its property and charging the same to operating expense, then the gas consumers are, to that extent, already taking care of the item of depreciation, and the amount so spent should either be eliminated from the operating expenses when we come to estimate the net arnings, or should be taken into account when we come to determine the annual allowance to be made from gross receipts to take care of future depreciation.

We wish to make perfectly clear the real difference between the straight line method of estimating depreciation used by Mr. Adams and adopted by the master, and the sinking fund method employed by Mr. Lea, and to point out clearly, if we can, the important difference in the results obtained, not only as to the present value of the property, but as to provisions for future depreciation.

The total amount of accrued depreciation must be deducted from the cost of the plant to determine its fair value. If the amount of depreciation is not correct, the resulting value of plant will be in error to the same extent, for depreciation is simply another name for value lost.

So, too, the true amount of annual depreciation must be known to fix a reasonable rate, for if the allowed depreciation is too small the plant will be worn out before consumers have paid enough to replace it, while if too much depreciation is allowed the company will receive from consumers more than the plant cost.

Obviously, then, the annual payment by consumers for depreciation should just equal the annual loss of value by the plant. This annual loss represents a part of the value of the concrete physical things that make up the plant, and the fairest assumption to both consumers and the company is that the value lost annually by each item of equipment is its total cost divided by its years of total life, both expired and expected. This is known as the straight line method of depreciation.

Mr. Lea, while making some incomplete figures for straight line depreciation, bases all his conclusions as to value on computations relative to a sinking fund that is not, and never was owned by the Gas Company, and has no existence outside of his imagination.

Mr. Lea attempts to measure the annual depreciation of plant items by showing what sum must annually be invested at compound interest to produce a fund equal to the cost of each item at the end of its estimated life, and to measure total depreciation by finding the amount of said fund at the end of a series of years equal to the age of the plant item.

On this basis, 0.89 of one per cent of the cost of a plant item must be invested for depreciation annually to produce an equal fund at the end of a fifty-year life if the rate of interest is 4 per cent, but 0.34 of one per cent of the cost, or half the former amount, will be sufficient if the rate of interest is 6 per cent. So, again, with a life of fifty years for a plant item, the fund supposed by Mr. Lea to represent its total depreciation at the end of twenty-five years is 32.3 per cent of its cost if the rate of interest is 3 per cent, but the fund reaches only 18.9 per cent of the cost if interest is figured at 6 per cent.

*This method overlooks the fact that it is not a fund at interest in some bank, but an operating, wearing, depreciating plant that is being valued.*

How much more fair and accurate is the simple and reliable rule that depreciation increases uniformly with age, so that when one-half of the life and period of use has expired, one-half of the value is gone.

One advantage of computations gained by the sinking fund method of depreciation is that short life and consequent large annual depreciation may be assumed for plant items, and then the total amount of depreciation for *past years* on the straight line basis can be much reduced by assuming a suitable rate of interest for the fund. Thus Mr. Lea has cunningly selected a combination of plant life and interest rate that gives an annual depreciation of $20,865 and a total depreciation for past years of only $172,961, while straight line depreciation with his own figures for cost, life and age of plant, amounts to a total of $296,346, or $123,385 more. So Mr. Lea saves $123,385 for the value of the plant by substituting the sinking fund method for the straight line method.

The following tabulation furnishes the means of making comparisons between the results obtained by Mr. Adams and Mr. Lea by their respective methods of handling depreciation:

DEPRECIATION AND VALUE LINCOLN GAS PLANT, JANUARY 1, 1914.

| Items | Per Alton Adams | Per Mr. Lea |
|---|---|---|
| Cost of plant except land..... | $548,947.00 | $954,337.00 |
| Total depreciation, straight line.. | 135,827.00 | 296,346.00 |
| Cost of plant except land..... | | 954,337.00 |
| Total depreciation per sinking fund | | 172,961.00 |
| Value of plant per sinking fund... | | 781,376.00 |
| Excess of straight line depreciation | | 123,385.00 |
| Annual depreciation, straight line. | 10,914.00 | 31,639.00 |
| Annual depreciation, sinking fund. | | 20,865.00 |

| *Percentages*— | | |
|---|---|---|
| Total depreciation, straight line... | 24.6 | 31.5 |
| Value of cost, straight line..... | 75.4 | 68.5 |
| Total depreciation, sinking fund.. | | 81.9 |
| Annual depreciation, straight line. | 1.9 | 3.3 |
| Total times annual depreciation, sraight line ..... | 12.5 | 9.3 |
| Total times annual depreciation, sinking fund ..... | | 8.2 |

If a public service corporation sees fit to operate its property for a series of years without providing for depreciation, it cannot, in a rate hearing, call upon the public to make good past losses, no matter whether those losses result from mistakes, bad judgment, bad management, or from excessive dividends or bond interest. This point is clearly stated by Mr. Justice Moody in *Knoxville Water Co.* v. *Knoxville*, 212 U. S. 1, 53 L. Ed. 371:

> "To arrive at the present value of the plant, large deductions were made on account of the depreciation. This depreciation was divided into complete depreciation and incomplete depreciation. The complete depreciation represented that part of the original plant which, through destruction or obsolescence, had actually perished as useful property. The incomplete depreciation represented the impairment in value of the parts of the plant which remained in existence and were continued in use. It was urgently contended that, in fixing upon the value of the plant upon which the company was entitled to earn a reasonable return, the amounts of complete and incomplete depreciation should be added to the present value of the surviving parts. The court refused to approve this method, and we think properly refused. A water plant, with all its additions, begins to depreciate in value from the moment of its use. Before coming to the question of profit at all the company is entitled to earn a sufficient sum annually to provide not only for current repairs, but for making good the depreciation and replacing the parts of the property when they come to the end of their life. The company is not bound to see its property gradually waste without making provision out of earnings for its replacement. It is entitled to see that from earnings the value of the prop-

erty invested is kept unimpaired, so that, at the end of any given term of years the original investment remains as it was at the beginning. It is not only the right of the company to make such a provision, but it is its duty to its bond and stockholders, and, in the case of a public service corporation, at least, it is its plain duty to the public. If a different course were pursued the only method of providing for replacement of property which has ceased to be useful would be the investment of new capital and the issue of new bonds or stocks. This course would lead to a constantly increasing variance between present value and bond and stock capitalization,—a tendency which would inevitably lead to disaster either to the stockholder or to the public, or both. If, however, a company fails to perform this plain duty and to exact sufficient returns to keep the investment unimpaired, whether this is the result of unwarranted dividends upon over-issues of securities, or of omissions to exact proper prices for the output, the fault is its own. When, therefore, a public regulation of its prices comes under question, the true value of the property then employed for the purpose of earning a return can not be enhanced by a consideration of the errors in management which have been committed in the past."

**13. Revenue.**

The amounts listed below are the gross receipts from sales of gas for the respective years and are found opposite page 1716, printed record, at places indicated after each year.

| Year | Gross Outside Receipts | Exhibit | Line |
|---|---|---|---|
| 1907 | $215,776.20 | 26 | 910 |
| 1908 | 234,347.51 | 26 | 910 |
| 1909 | 245,124.74 | 27 | 910 |
| 1910 | 251,492.37 | 28 | 910 |
| 1911 | 274,292.95 | 29 | 910 |
| 1912 | 282,162.11 | 30 | 910 |

From these amounts should be deducted the gross receipts from the sales of gas for the territory outside of the city limits.

| Year | Gross Receipts | | For Lincoln |
|---|---|---|---|
| 1907 | $ 888.00 | leaving | $215,776.20 |
| 1908 | 1,554.58 | leaving | 232,792.93 |
| 1909 | 1,249.58 | leaving | 243,875.16 |
| 1910 | 2,984.66 | leaving | 248,507.71 |
| 1911 | 6,270.98 | leaving | 268,021.97 |
| 1912 | 8,986.00 | leaving | 273,175.93 |

To these last amounts should be added the residuals produced and rebates deducted at lines 1606-14 in the Company's operating reports for the respective years the amounts of which will be found below. (See the above Exhibits "26" to "30," inclusive). The years 1911 and 1912 are corrected for the amounts shown in the corresponding years of Mr. H. I. Lea's Exhibit "B" because of an error in computation of residuals for those years. This gives the gross earnings:

| Year | Residuals | Rebates | Corrected Gross Earnings |
|---|---|---|---|
| 1907 | $22,702.13 | $1,238.50 | $239,716.83 |
| 1908 | 19,272.05 | 1,243.98 | 253,308.96 |
| 1909 | 9,389.14 | 1,073.95 | 254,338.25 |
| 1910 | 2,737.71 | 1,524.56 | 252,759.98 |
| 1911 | 1,168.58 | 1,177.93 | 270,368.48 |
| 1912 | 597.49 | 933.56 | 274,706.98 |

It will be noted here that we follow the method outlined by Mr. Lea in his treatment of the revenues of the complainant (see Exhibit "7-P," p. 1386, P. R.), and eliminate the receipts from the territory outside of the city.

In addition to the above revenues the Company receives rent from two pieces of real estate, one of which is near the manufacturing plant and the other near the district holder at Thirty-third and X streets. Also the Company receives items of interest on bank balances and on notes due the Company (see p. 758). None of this interest or rent is reflected in the gross receipts as shown in the testimony in this record. Also the Company receives rentals on certain gas appliances which are included by Mr. Lea in working capital and the complainant's distribution system. None of this revenue is reflected anywhere in the Company's receipts and rightly so as we believe, but by the same token, the property charged into the complainant's capital account as an investment in these appliances loaned should be eliminated from any valuation upon which the public is required to pay a return, but this the master did not do.

The following table shows the gross earnings as corrected, the reported operating expenses, and the net earnings, resulting from deducting the expenses from the corrected gross earnings. It is to be borne in mind that these corrected net earnings are the result of correcting the gross earnings as the company's expert, Henry I. Lea, has done, and deducting therefrom the full amount of the operating expenses reported by the company for each year. As we shall show later these reported operating expenses include many items of expense, such as occupation taxes, excessive salaries, etc., and that the net income shown in this table would be much greater if the operating expenses were reduced by the elimination of improper items.

TABLE OF CORRECTED GROSS EARNINGS, REPORTED OPERATING EXPENSE, AND CORRECTED NET EARNINGS FOR THE YEARS 1907 to 1912 INCLUSIVE.

| | Corrected Gross Earnings | Reported Operating Expenses | Corrected Net Earnings |
|---|---|---|---|
| 1907 | $239,716.83 | $144,924.37 | $ 94,792.46 |
| 1908 | 253,308.96 | 137,090.35 | 116,218.61 |
| 1909 | 254,338.25 | 134,708.24 | 119,630.01 |
| 1910 | 252,759.98 | 143,670.45 | 109,089.53 |
| 1911 | 270,368.48 | 158,374.11 | 111,994.37 |
| 1912 | 274,706.98 | 175,573.49 | 99,133.49 |

### 14. Operating Expense.

We have already discussed the value of complainant's property as found by the master and the gross income of the company as shown by the records. We now come to the operating expenses. If rate regulation is to be effective at all it is necessary that the operating expenses shall be kept within proper limits. In the following discussion we shall consider:

First: The operating expenses as reported by the company, and,

Second: Deductions which we contend should be made of (a) excessive items, and (b) improper items.

## FIRST.

## EXPENSES AS REPORTED BY THE COMPANY.

It would extend this brief to unwarranted length were we to set out herein all of the various items of operating expense shown by the annual reports of the company.

At the top of page 1591 of the printed record will be found exhibit "339" which shows the gross income, operating expense and net income of the company for the years 1905 to 1912, inclusive, as reported by the company. That table includes in the first column receipts from gas sold within the city of Lincoln only, but does not include any receipts from gas sold in the suburban cities; the column of expense, however, includes all expense. The next table on the same page is exhibit "340" and was prepared by Alton D. Adams, the city's expert, for the purpose of separating the expense chargeable to the suburban service from the total expense so as to show the proper expense chargeable to the Lincoln service. These exhibits are explained by Mr. Adams on page 984, volume 3, printed record.

The annual gas reports of complainant for the years 1908 to 1912, inclusive, will be found opposite page 1716, volume 5, of the printed record, and are exhibit numbers "26," "27," "28," "29" and "30" respectively.

The master's discussion of the operating expenses will be found beginning on page 48 of volume 1, of the printed record. While the master recognized that a very large number of the items included by the company in the operating expenses were improper and excessive, he did not, in arriving at his conclusion as to the rate, eliminate any of them except the $3,000 salary of Henry L. Doherty, as president of the board of directors, the $600 salary of C. A. Frueauff as New York attorney, and reduced the amount to be spent for promoting new business from nearly $20,000, as the company had it, to $12,000 per year. All of the extravagant items which we shall hereafter point out, and the occupation taxes of $4,466 for the year 1907, which our supreme court has since held to be void and uncollectible, and for the year 1912, $8,195 which our supreme court has held in abeyance until the termination of this litigation, and the expense of

this litigation were all allowed and included by the master in the operating expenses, with the exception of Doherty's salary, the salary of C. A. Frueauff, and the deduction from the new business item to which we have already referred to. The master, however, did not recognize all of the items which we have criticized as legitimate items of expense, but he permitted them to remain just as the company reported them because he found the rate to be valid without their elimination. His comment as to the operating expenses as found, beginning on page 49, is quite suggestive. He says:

> "These figures without much scrutiny show the extent to which the validity of a rate ordinance depends upon individual will, if the right to determine what amount shall be expended in the campaign for new business or for any other purpose in a particular year is committed to the unrestrained discretion of the owner of the utility affected by the ordinance. That full discretionary power to transfer earnings into operating expenses cannot exist consistently with the right to regulate rates seems self-evident. Reasonable expenditures to stimulate business are usual and proper, but an expenditure of between $19,000 and $20,000 in one year, which brings in, as increased revenue, less than $5,000 would seem to be, under normal conditions, excessive, and when it may perhaps become a decisive factor in determining the constitutionality of rate legislation is so extraordinary as to arrest attention and excite inquiry at once. The present litigation was pending; the demand for rate reduction was insistent; the controversy between the public and the company has become acute; the company was about to have its property inventoried and appraised for the purpose of showing that there was an unjust disproportion between its value and its net earnings; in this state of affairs unusual caution and concertative action was, it seems to me, the company's obvious and paramount duty; and yet I cannot discover, either in this particular expenditure or in any other, evidence of a disposition on its part, by judicious retrenchment of expenses or wise economy of any kind to adjust itself to the conditions created by the ordinance reducing rates. It may be the company thought such adjustment was not possible,

but whatever reason controlled its conduct, I cannot regard the expenditure for new business as having been reasonably or prudently made or one that ought, in its entirety, to be allowed or taken into account in testing the enforcibility of the ordinance for 1912. In the exercise of ordinary business prudence and giving due consideration to the rights and interests of the vast consuming public, I think the company should not have expended in its campaign for new business more than $12,000, and that is what I have, for the purpose of this litigation, decided to allow. Reasonable limitations of expenditures must, in cases of this kind, be imposed by the courts or else the power to invalidate legislation regulating rates will pass inevitably from the public authorities into the hands of the owners of public utilities."

Beginning at the bottom of page 50 concerning executive salaries and other extravagant items of expense, the master said:

"The executive salaries, in comparison with those paid by other utilities producing and selling about the same amount of gas, are apparently excessive. I cannot believe the total expenditure for this purpose would have been, under the circumstances disclosed by the record, considered reasonably necessary had the business been prudently conducted with a view to making the cost of gas to consumers as low as good service and fair return upon the capital invested would justify. The operation of a public utility is a business within the scope of government. The company's plant is affected by a public use; the company has, in a qualified sense, taken upon itself, a governmental function, and is, therefore, bound in the conduct of its business to scrupulously regard the rights of the public equally with its own. A majority of the stock of the Lincoln Gas & Electric Light Company is owned and controlled by Henry L. Doherty & Company of New York, a co-partnership engaged in banking and manufacturing and controlling, through stock ownership, over 100 utilities—gas, water, electric and transportation—which it operates in practically the same manner as it does the Lincoln plant. Frank Frueauff became president of the Lincoln company in 1911 at a salary of $2,400 a year and at the

same time—at a time when an increase of operating expenses might be doubly advantageous to him—Henry L. Doherty became president of the board of directors at a salary, newly created, of $3,000 a year. Prior to 1911 Mr. Doherty was president of the company and Mr. Frueauff, as vice-president, performed, without compensation, the same services for which he now receives $2,400. Mr. Frueauff visits Lincoln six or eight times a year; Mr. Doherty, as far as the record discloses, does not come at all. Mr. B. C. Adams, an exceptionally efficient and capable man having a thorough technical and general knowledge of the gas business, is local manager at a salary of $3,600 per year. Of the 108 properties under the supervision of Henry L. Doherty & Company only three or four in addition to the Lincoln plant pay Mr. Frueaug a salary. Whether Mr. Doherty receives a salary in any of them does not appear. Conceding that the Lincoln company may receive prestige as well as financial, educational and other advantages from its connection with Henry L. Doherty & Company, I nevertheless think that the items of $3,000 for salary to the president of the board of directors should, for the purposes of this case, be disallowed. Mr. C. A. Frueauff, a brother of the president, engaged in the practice of law in New York City, receives from the Lincoln company an annual salary of $600, which is charged up as a part of the operating expenses. I think this expenditure, on the evidence given with respect to it, ought not to be allowed or taken into account in the decision of this case. In view of the fact that the company has, in its employ at Lincoln, a lawyer—one of the most capable and eminent in the profession—at a salary of $3,000 a year, it can hardly be reckoned reasonably necessary or prudent and provident management to incur this extra legal expense, especially at a time when it was claimed that compensatory earnings, measured by the dollar rate, were not coming in."

Beginning at the bottom of page 53 of the printed record, the master refers to a certain "free-list" which was maintained by the company whereby it gave gas and electric service to certain prominent and influential citizens (some of them its witnesses as to suitable net earnings in this community) free of charge, and he also refers to certain other

extravagances in the way of donations which are reflected in the company's reported operating expenses. He says:

> "I do not go into the accounts for the years between 1907 and 1912 as the calculations made by Mr. Lea show beyond question that the net income was, for each of these years, from 50% to 100% greater than in 1907. In these intervening years, there are various expenditures growing out of the present litigation which should, if necessary to sustain the ordinance, be deducted from the operation expenses. There are also many items of incidental expense that should be similarly dealt with. These later items are not large in the aggregate and there is small likelihood that they would affect the result in any possible revision of these findings. I, therefore, do not consider them in detail. It may not be out of place, however, to remark that in my judgment a utility corporation engaged as it is in carrying on a public business is bound to be prudent and circumspect in the use of its revenues. It seems hardly consistent with sound principle for such a corporation to maintain a free list or to make expenditures for social or fraternal purposes, or even for the advancement of education, morality, charity or religion, and then lay the burden of its munificence upon non-consenting rate payers. The practice of any cardinal virtue is, of course, wholesome and worthy of all commendation, but when indulged in by corporations it ought in reason to be, as in the case of individuals, at their own cost."

The burden was upon the complainant to show fully and fairly the amount of operating expenses justly and legitimately chargeable to the gas department in the Lincoln service. This corporation not only manufactures and sells gas, but it manufactures and sells electricity. It not only sells these commodities within the corporate limits of the city of Lincoln, but it sells both commodities in suburban cities and distributes them from its Lincoln plant. A very large part of the expense of the corporation is common to both the gas and electrical departments, not only within the city, but to such service as it renders to suburban cities. Complainant attacked this gas rate ordinance before it went

into effect, upon the theory that if the rate went into effect it would result in confiscating its property. Having attacked the rate in advance of a practical test, it assumed the heavy burden, imposed by the rule of this court established in similar cases, of showing beyond all just and fair doubt that confiscation would result if the new rate were permitted to go into effect.

Yet the company has not undertaken to separate the expenses incident to the suburban service from the expenses incident to the Lincoln service. Indeed, it has included all of the property of its gas department whether within or without the city limits, as property upon which it is entitled to a fair return. It has made separate statements of what the cost of its "output expenses" for the suburban business is. No capital charge, however, is made against the suburban business and that business is not made to carry any of the burden of the company's capital invested in the Lincoln manufacturing and distributing plant. Nor is the suburban business charged, as we understand it, with any of the general expenses of operating the company. As we understand it, in the "output expenses" charged to the suburban business in Mr. Lea's report, he has included merely the cost of the labor and materials entering into the manufacturing of gas used in the suburban service and certain expenses incurred at Havelock and University Place in handling the business there. The expense of the East Lincoln holder which was constructed primarily to furnish pressure for the suburban service is borne entirely by the Lincoln plant and no part of the burden is thrown upon the suburban service. The Lincoln plant has not only to manufacture gas, but has to convey it to the city limits free of expense so far as any capital charge is concerned. Nor has the company furnished any basis for apportioning the correct proportion of the capital charge to the suburban service.

As to common expenses incurred jointly in the operation of the gas and electric departments, there is no basis furnished in the evidence to enable the court to make a division unless it be upon the basis of the relative number of consumers in the two departments, or upon the basis of relative earnings of the two departments. These matters we will discuss later.

A public service corporation, when it attacks a rate established by lawful authority, must make a full and fair showing, not only as to its property and income, but, also as to its operating expenses, because the right to regulate the rate necessarily implies the right to control the operating expenses.

In the case of *State* v. *Adams Express Company*, 122 N. W. 691, the supreme court of Nebraska, in the second section of the syllabus, says:

> "When an attempt is made to strike down a rate statute, it is incumbent on the attacking party to make full, fair, and complete disclosure of all of the revenue derived from the business, and the disbursements of the same for all purposes, including salaries paid to all of its officers, agents, and employees, so that it may be determined whether such salaries and expenditures are necessary as well as reasonable in amount."

In support of the above doctrine, in the body of the opinion, Judge Barnes, speaking for the court, quoted from Mr. Justice Brewer in the case of *Chicago & Grand Trunk Ry. Co.* v. *Wellman*, 143 U. S. 339, 36 L. Ed. 176, as follows:

> "Surely, before the courts are called upon to adjudge an act of the legislature fixing the maximum passenger rates for railroad companies to be unconstitutional, on the ground that its enforcement would prevent the stockholders from receiving any dividends on their investment, or the bondholders any interest on their loans, they should be fully advised as to what is done with the receipts and earnings of the company; for, if so advised, it might clearly appear that a prudent and honest management would, within the prescribed rates, secure

to the bondholders their interest, and to the stockholders reasonable dividends. While the protection of vested rights of property is a supreme duty of the courts, it has not come to this that the legislative power rests subservient to the discretion of any railroad corporation, which may, by exorbitant and unreasonable salaries, or in some other improper way, transfer its earnings into what it is pleased to call 'operating expenses' * * * The silence of the record gives us no information, and we have no knowledge outside thereof and no suspicion of wrong. Our suggestion is only to indicate how easily courts may be misled into doing grievous wrong to the public, and how careful they should be not to declare legislative acts unconstitutional upon agreed and general legislative acts unconstitutional upon any general statements, and without the fullest disclosure of all material facts."

The importance of the doctrine above announced is made manifest, in a very striking manner, by the history of the division of the general expenses by this company between the gas and electric departments. At the time of the former trial such of these general expenses as were not divided equally between the two departments were divided on the basis of two-thirds to gas and one-third to electricity and the division was made on the investment basis, the assumption being that the property of the electric department was about one-third as valuable as that of the gas department (see p. 137, printed record, and 768-9 where it is shown that executive salaries, payroll and legal expense were divided equally, prior to May, 1908).

Since the former trial, however, and beginning May, 1908, the company has seen fit, arbitrarily, to change the method of apportionment so that now all of the general expenses, except taxes, are divided on the basis of 20 per cent to electricity and 80 per cent to gas, not on the investment basis as before, but on the basis of consumers, and even this basis is not exactly followed and Mr. Phillips testified that

it would be nearer 75 per cent to gas and 25 per cent to electricity (p. 759). But Exhibit "101," prepared by the company (p. 1849) shows the ratio of consumers in 1912 to be 73 per cent and 27 per cent. There is no reasonable and adequate explanation for this eccentric and capricious conduct and the only fair inference to be drawn is that such a division throws the burden of this expense upon the gas department, where it will do the most good to the company in its effort to defeat this rate. (As to the present method of making this division, and as to when it began, see pp. 768-9).

Not only has the ratio of apportionment between the two departments been thus manipulated against the public during the pendency of this suit, but the general expenses have very greatly and substantially increased without any satisfactory explanation as to the reason. Not only has the actual increase in dollars been very substantial, but the general expenses referred to per thousand cubic feet of gas sold have very greatly and substantially increased in spite of the increased output. Of course, with the increased output, we should expect the actual expenses to increase, but that is quite a different thing from an increase per unit of gas sold. When reduced to the unit of gas sold, then certainly we should expect the general expenses to decline per unit as the output increases. After all, the real test is the cost per unit. There is no other way of making comparisons that will disclose, in anything like a convincing manner, whether or not the general expenses at a given time bear any just relation to the volume of business done. Before we proceed to discuss the expenses incident to the operation of the plant, aside from the cost of manufacturing the gas, we will call attention to the cost of manufacturing gas for the past few years as disclosed by the reports of the company. There are a number of intimations in the old record, and some in

the new, implying that it costs a great deal more to manufacture gas here than elsewhere because of the distance from Lincoln to the field of supplies for gas-making material, and that the cost has increased lately by reason of the advance in the price of certain gas-making materials, particularly oil for enriching the gas. As to the location of Lincoln, it is to be remembered that if it were true that the cost of making gas were substantially enhanced by reason of the distance from the oil fields and supplies of coke, used in the manufacture of gas, and coal for making steam, still, as against this, we urge that a situation of that kind would make this city a better field for the sale of fuel gas, and this would offset, or more than offset, any disadvantage resulting from such location. But it is not true that Lincoln is unfavorably located in the matter of gas making materials. Steam coal, for the manufacturing of steam, can be, and is, procured at the coal fields of Iowa, Missouri, Kansas and Colorado; coke can be procured from Denver, Chicago or Milwaukee; oil can be, and is, procured from the Kansas oil fields. This plant is not making coal gas and the distance from the Pennsylvania coal fields is a matter of no consequence here. As far as steam coal, coke and oil are concerned, we are practically as favorably located as any of the cities of this size in the country, and much more favorably situated than many where gas rates are $1.00 and less. For instance, in the matter of water gas, what advantage over Lincoln has Cedar Rapids or Des Moines, Iowa? In these last named cities the gas rate is 90 cents per thousand cubic feet, and the rate has been upheld. We also believe that Lincoln is as near to steam coal and oil as most of the cities of the east, and certainly the situation is as favorable, as to gas making materials, as any of the towns of Massachusetts. In this connection, we call attention to Mr. Adams' Exhibit "393," printed record 1616, with his explanation of it, beginning on page 3356. It will be noticed that Lincoln,

Haverhill and Fall River are the only cities included in the exhibit where nothing but water gas is made. The generator fuel for Lincoln in 1907 was $5.50, in 1912 it was $5.44 in Haverhill in 1912 it was $5.84, and in Fall River in 1912 it was $5.92. So that, of the three cities shown on this exhibit where water gas alone is manufactured, Lincoln seems to be getting its generator fuel cheaper than the other two. And Mr. Adams introduced Exhibit "432," printed record 1632, showing the cost of coal and oil in gas plants in seventy-two cities of Massachusetts, during 1912, as per Brown's Directory. Brown's Directory is a publication used by gas companies and gas engineers all over the country, and containing accurate gas statistics. This table shows the coal cost per ton, oil cost per gallon, and the candle power and heat units of the gas manufactured in these several cities. According to this table, the coal and oil prices in those cities in Massachusetts average about the same as the Lincoln prices. The price paid for oil by this company, according to the 1912 annual report, averaged 3.15 cents per gallon, which compares very favorably with Massachusetts prices, being higher than some and lower than others. The gas rate in Haverhill is 85 cents and in Fall River 80 cents, as against $1.20 in the city of Lincoln. In Fall River the gas sales in 1910 were 495,612 housand cubic feet, about double the sales in Lincoln, but in Haverhill for that year the sales were 203,360 thousand cubic feet, considerably less than the Lincoln sales in 1912 (Adams' Exhibit "391," printed record 1616). The difficulty with this gas plant does not lie in the price of gas making materials nor in the cost of gas making labor. This is clearly demonstrated by an examination of a part of Mr. Lea's Exhibit "7-L-6," printed record 1352, showing the manufacturing department expenses of water gas. This table covers all expenses of manufacturing water gas for the years 1903-1912, inclusive, and we here reproduce the table:

## EXHIBIT "7-L-6." (PRINTED RECORD VOL. 4, P. 1356).

### MANUFACTURING DEPARTMENT EXPENSE—WATER GAS.

(Per M. Cu. Ft. Made.)

| Year ending December 31st | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Steam for generating water gas | $.0286 | $.0245 | $.0353 | $.0356 | $.0315 | $.0221 | $.0112 | $.0133 | $.0176 | $.0151 |
| Generator fuel | .1094 | .1055 | .1176 | .1212 | .1090 | .1037 | .1333 | .1155 | .1064 | .1100 |
| Enricher | .2755 | .2638 | .1622 | .1525 | .1551 | .1406 | .1109 | .1010 | .0914 | .1081 |
| Total water gas making material | .4135 | .3938 | .3151 | .3093 | .2956 | .2664 | .2554 | .2298 | .2154 | .2332 |
| Water gas tar residual account | .0118 | .0062 | .0019 | | .0069 | .0120 | .0119 | .0020 | .0165 | .0128 |
| Net cost water gas mfg. material | .4017 | .3876 | .3132 | .3093 | .2887 | .2544 | .2435 | .2178 | .1989 | .2204 |
| Gas making labor | .0182 | .0187 | .0199 | .0253 | .0281 | .0285 | .0204 | .0174 | .0159 | .0148 |
| Repairs to W. G. gen. apparatus | .0059 | .0123 | .0181 | .0201 | .0079 | .0071 | .0074 | .0036 | .0022 | .0056 |
| W. G. generating house expense | .0009 | .0002 | .0004 | .0006 | .0002 | .0007 | .0008 | .0005 | .0007 | .0015 |
| Total cost generating W. G. | .4267 | .4188 | .3516 | .3553 | .3249 | .2907 | .2721 | .2393 | .2177 | .2423 |
| Steam | .0097 | .0082 | .0045 | .0042 | .0066 | .0150 | .0225 | .0199 | .0137 | .0189 |
| Purifying W. G. labor, expense and rep. | .0007 | .0010 | .0015 | .0054 | .0060 | .0036 | .0019 | .0018 | .0005 | .0011 |
| Purifying W. G. materials | .0019 | .0023 | .0019 | .0019 | .0030 | .0031 | .0028 | .0025 | .0025 | .0024 |
| General works repairs, buildings | .0069 | .0013 | .0012 | .0028 | .0019 | .0007 | .0007 | .0010 | .0033 | .0009 |
| General apparatus repairs | .0123 | .0104 | .0068 | .0083 | .0075 | .0041 | .0047 | .0076 | .0210 | .0017 |
| Sundry labor | .0131 | .0088 | .0118 | .0129 | .0170 | .0129 | .0108 | .0134 | .0100 | .0129 |
| Works expense and supplies | .0078 | .0094 | .0138 | .0126 | .0125 | .0130 | .0108 | .0149 | .0149 | .0216 |
| General supervision | .0098 | .0144 | .0163 | .0161 | .0157 | .0146 | .0135 | .0143 | .0139 | .0138 |
| District holder station | | | | | | | | .0001 | .0064 | .0132 |
| Total cost purification and storage | .0622 | .0558 | .0578 | .0642 | .0702 | .0680 | .0677 | .0755 | .0862 | .0865 |
| Total cost water gas in holder | $.4889 | $.4746 | $.4095 | $.4195 | $.3951 | $.3577 | $.3398 | $.3148 | $.3039 | $.3288 |

The foregoing table of Mr. Lea, the company's expert, taken from the annual reports of the company, makes it clear that the unit cost of manufacturing gas and storing it in the holder has, on nearly every item, declined during the years covered. The cost of steam has declined per unit, notwithstanding it is sold by the electric department to the gas department, at a price arbitrarily fixed by the company. Generator fuel (coke) was a little higher per unit of gas in 1912 than in some of the previous years, but it was lower than in others. In 1903-4-7-8-11 coke was slightly lower than in 1912, while on the other hand, in 1905-6-9-10 it was substantially higher, but the cost of coal and the cost of steam combined did not equal the oil cost in the manufacture of water gas, as may be seen by a glance at the first three items in this table. The apparent increase in the net cost of generating water gas for 1912 over the two preceding years may be fully accounted for by Mr. Lea's correction of the residual account, (see p. 764) and Mr. Phillips' correction of the alleged coal shortage (see p. 761). Beginning in 1903, the cost of oil per cubic foot of gas gradually declined from $.2755 in 1903 to $.1081 in 1912, so that this company has not been embarrassed by the increase in the price of oil so as to render that element in manufacturing gas an obstacle to the reduction of rates. The three elements just considered, steam, coke and oil, constitute all the gas making material. Mr. Lea gives us his figures on the total of gas making materials per thousand cubic feet of gas so that by combining all these elements, the unit cost of making gas, so far as the materials are concerned, has materially declined from 1903 to 1912, as follows:

Total gas making material per thousand cubic feet for:

| | | | |
|---|---|---|---|
| 1903..... | $.4125 | 1908..... | $.2664 |
| 1904..... | .3938 | 1909..... | .2554 |
| 1905..... | .3151 | 1910..... | .2298 |
| 1906..... | .3093 | 1911..... | .2154 |
| 1907..... | .2956 | 1912..... | .2332 |

These are Mr. Lea's figures from the company's own reports, and they show that the total material expense for making a thousand cubic feet of gas in 1907 was $.2956, with a gradual and almost uniform decline down to 1912, when it was $.2332, a drop of over six cents on the material expense alone of making a thousand cubic feet of gas. And we call attention to the fact that this law suit involved a controversy over 20 cents per thousand cubic feet of gas, and the company has saved enough since the ordinance was passed on the material cost of making a thousand cubic feet of gas alone to compensate for substantially one-third of the difference between the old rate and the new.

And if we compare 1912 to 1903 we find that the cost of the material for making water gas in 1903 was $.4017, as against $.2204 in 1912, a saving of $.1813 on the material alone per thousand cubic feet of gas, substantially enough to compensate for the difference in the rate now in force and the one that ought to be put into effect.

We have prepared from the annual gas reports of the company (line 1101, opposite 1716 printed record), the following table showing that the increased output of gas has reduced the quantity of coke used per thousand cubic feet of gas sold and also the coke per thousand cubic feet. We have reduced the quantity to pounds per thousand cubic feet of gas sold and also coke sold to cents per thousand cubic feet of gas sold, for the years 1906 to 1912, inclusive:

| Year | Per M. Cu. Ft. Gas Sold Pounds Coke Used | Per M. Cu. Ft. Gas Sold Cents Coke Cost |
|---|---|---|
| 1906 | 34.2 | $.1212 |
| 1907 | 30.00 | .1090 |
| 1908 | 33.8 | .1037 |
| 1909 | 41.8 | .1333 |
| 1910 | 41.8 | .1155 |
| 1911 | 29.6 | .1064 |
| 1912 | 27.6 | .1100 |

The above table discloses that with the increased output of gas sold regardless of whether coke went up or down, the unit cost of coke per thousand cubic feet of gas sold gradually and substantially declined.

And we have also prepared from the same account (line 1102) shown in the annual reports of the company, 1906 to 1912, inclusive, a similar table as to the oil used in enriching water gas:

| Year | cu. ft. Gas Sold Gal. Oil. Per M. | cu. ft. Gas Sold Gal. Oil Per M. Price | cu. ft. Gas Sold Cost Per M. Cents Oil |
|---|---|---|---|
| 1906 | 2.81 | $.0408 | $.1525 |
| 1907 | 2.76 | .0420 | .1551 |
| 1908 | 3.11 | .0307 | .1406 |
| 1909 | 3.58 | .0302 | .1109 |
| 1910 | 3.95 | .0276 | .1010 |
| 1911 | 3.63 | .0270 | .0914 |
| 1912 | 3.63 | .0327 | .1081 |

The above table shows that the quantity of oil per thousand cubic feet of gas sold increased somewhat in 1908 and subsequent years over 1906 and 1907, but this increase was probably due to the fact that the city council passed an ordinance raising the standard of gas which required more oil,

and the enforcement of such standard resulted in an increased quantity of oil per thousand cubic feet of gas sold. This table discloses, however, that the actual price of oil per gallon has declined during these years. For example, it was $.0408 per gallon in 1906 and $.0327 in 1912. And, notwithstanding the increased quantity of oil used per unit of gas, the reduction in the price of oil used per unit of gas, and the increased output of gas resulted in a substantial decrease in the oil cost per thousand cubic feet of gas during these years. For example, the oil per thousand cubic feet of gas sold in 1906 was $.1525, whereas in 1912 it had declined to $.1081, a reduction in the unit cost of oil, or a gain in oil alone per thousand cubic feet of gas of about 5 cents.

Now it was the contention at both trials, and no doubt will be the contention now, that it would be unfair to compare gas rates in Lincoln with gas rates in eastern cities, because of Lincoln's unfavorable location relative to gas making supplies. Mr. Lea's table, above referred to, demonstrates that that claim is without foundation, but on the contrary, that the unit cost of making gas, so far as the materials are concerned, has been going down until the company has saved from gas making materials alone between 1903 and 1912, practically enough to enable it to sell gas at one dollar now and make as much profit as it would have made in 1903 at $1.20. The fact is, as we have already said, Lincoln is as favorably located, as far as materials are concerned, as almost any town of its size in the country, and it certainly compares favorably with Cedar Rapids and Des Moines, Ia., where gas consumers are getting gas at 90 cents per thousand cubic feet, and with Haverhill and Fall River, Massachusetts, where the rate is 85 cents and 80 cents per thousand cubic feet of gas, respectively.

But how is it with labor in Lincoln? This same table of Mr. Lea's (Exhibit "7-L-6," p. 1356 P. R., ante p. 121) shows the labor cost per thousand cubic feet of gas, for the years dealt with as follows:

Total cost of labor per thousand cubic feet:

| | | |
|---|---|---|
| 1903.....$.0182 | 1907.....$.0281 | 1911.....$.0159 |
| 1904..... .0187 | 1908..... .0285 | 1912..... .0148 |
| 1905..... .0199 | 1909..... .0204 | |
| 1906..... .0253 | 1910..... .0174 | |

It will be seen that while the general trend of the gas unit labor cost in 1903 to 1909 inclusive was slightly upward, from that time to, and including 1912, the tendency has been substantially lower, so that, whereas, the gas unit labor cost for 1903 was $.0182, for 1912 it was $.0148, and the difficulty is not in the labor cost per unit.

Now, when you have the gas making materials and the gas making labor accounted for, and some small items of incidental expense in connection with the manufacture of gas, you have covered the total expense of the manufacture of gas, and this brings us now to Mr. Lea's total expense for generating water gas including both the labor and materials. He shows the totals for the years covered as follows:

| | | |
|---|---|---|
| 1903.....$.4267 | 1907.....$.2887 | 1911.....$.1989 |
| 1904..... .4188 | 1908..... .2544 | 1912..... .2204 |
| 1905..... .3516 | 1909..... .2435 | |
| 1906..... .3553 | 1910..... .2178 | |

Thus it will be seen that while the total expense of manufacturing the gas was a little higher per unit of gas in 1912, that in the two preceding years it was still substantially lower than in any of the other years and shows that, whereas, the total expense of manufacturing gas, including all labor and materials, in 1907 was, per thousand cubic feet of gas, $.2956, in 1912 it was $.2332, or a saving in the total

expense of manufacturing gas from the time this ordinance was passed down to the end of 1912 of $.0624, or substantially one-third of the difference between the rate involved in this suit and the old rate. If we compare the total unit cost of manufacturing gas in 1903 with the same total in 1912, we get the following result: In 1903 $.4267, in 1912 $.2423, or a saving of $.1844, or substantially the amount in controversy in this suit, on the cost of manufacturing gas alone.

In this same exhibit of Mr. Lea's (Exhibit "7-L-6") we find the total cost of water gas in the holder per thousand cubic feet of gas made for the years 1903 to 1912 to be as follows:

| | | |
|---|---|---|
| 1903.....$.4889 | 1907.....$.3951 | 1911.....$.3039 |
| 1904..... .4746 | 1908..... .3577 | 1912..... .3288 |
| 1905..... .4095 | 1909..... .3398 | |
| 1906..... .4195 | 1910..... .3148 | |

Thus it will be seen that the total cost of manufacturing gas and putting it in the holder ready for sale to consumers has substantially decreased between the years 1903 and 1912 per thousand cubic feet of gas. In 1907 the total cost of gas in the holder was $.3951 and in 1912 it was $.3288, or a saving per thousand cubic feet of $.0663 on the cost of gas in the holder, or practically one-third of the difference in the rates here involved. If we compare the total unit cost in 1912 with the total unit cost in 1903 we get the following result: In 1903 the total cost of gas in the holder per thousand cubic feet was $.4889, and in 1912 it was $.3288, or a saving of $.1601, or over 80 per cent of the twenty cents difference in the rates involved in this suit.

If there was anything in the contention that Lincoln is unfavorably situated for the economical manufacture of gas this would certainly manifest itself in the manufacturing

department, because, if the location unfavorably affected anything, it would be the gas making material and labor. Having shown, therefore, that the cost of gas in the holder, as shown by the company's own reports, has gone down per thousand cubic feet to a very substantial degree (over 80 per cent of the difference in the rate involved here) between 1903 and 1912, what is there left of the contention of the company that it is handicapped by Lincoln's unfavorable location? Certainly no point can be made that it costs more to distribute the gas in Lincoln than it does elsewhere so far as the mere cost of distribution is concerned. Of course, it will be argued that Lincoln is a scattered town, and that it has not the same number of consumers per mile of mains as many of the eastern cities where the population is more compact (a point which we shall discuss later), but aside from that, the cost of distribution cannot be substantially different in Lincoln from what it would be elsewhere. It was remarked, during the progress of the trial, that it costs more to read the meters here than in many other cities because the meters are farther apart and require a greater mileage of travel for the meter readers, but that certainly is a very trifling matter not worthy of consideration here, and would hardly have any appreciable effect in the cost of distributing the gas. And in this connection we call attention to Alton D. Adams' Exhibit "362," (P. R. 1595) giving a list of towns showing the sales per mile of main, and it will there appear that Lincoln is third in the list. So we contend that the trouble with this company is not in Lincoln's unfavorable location, because the location is not unfavorable. It is not in the cost of manufacturing and purifying gas and storing it in the holder, because it is shown by the company itself that the unit cost of gas in the holder has gradually tended downward and that there has been a substantial reduction in the unit cost of gas in the holder between 1903 and 1912, and also, between 1907 and 1912.

In that part of Mr. Lea's Exhibit "7-L-6" which deals with distribution, he gives us the total distribution expense, but we do not discover anything in these totals for the years 1903 to 1912, inclusive, indicating any serious handicap in the unit cost of distribution. For some reason not clear to us the cost of distribution has slightly increased between the years 1903 to 1912, but the increase has been very slight and we call attention to the fact that the years showing the greatest increase were the critical years during which this rate matter has been acute. These totals are as follows:

| | |
|---|---|
| 1903.....$.0893 | 1908.....$.0812 |
| 1904..... .0927 | 1909..... .0761 |
| 1905..... .1097 | 1910..... .0876 |
| 1906..... .1278 | 1911..... .0835 |
| 1907..... .1002 | 1912..... .1001 |

The distribution department expense for 1906 was $.1278, and for 1912 was $.1001 per thousand cubic feet, a substantial decline between those years. In 1907 the distribution expense per gas unit was slightly above that of 1912. So the difficulty, if there is any, has not come either from the unit cost of manufacturing or distributing gas. Where, then, does the trouble lie? And this brings us to the items of general expense incident to the operation of this plant, where we claim the principal part of the padding has been done. Now, one would naturally think that if there is any portion of the expense of operating a gas plant which would decline per unit of gas with an increasing output, it would be found to be more pronounced in the department having to do with the management of the company, than elsewhere. In other words, while we know that the increase in the output does decrease the total cost of gas in the holder, we would expect a very great decrease in the unit cost, especially when we come to consider the managing department of the company. The increase in the output of gas does not require more

than one president of the company, one vice-president, and one board of directors, and requires very little increase in the clerical department. The office rent and legal expense ought not to increase materially. And, therefore, in any well managed gas company, operated honestly and economically, and not controlled and operated by a non-resident plunder-bund for the purpose of absorbing the revenues in excessive salaries and other forms of individual profit, we should expect, and would undoubtedly find, substantial decline in the unit cost of gas in what is called by this company its executive department, and in the items of general expense. But what is the situation here?

We here direct attention to Mr. Lea's Exhibit "7-L-14," (p. 1356 R. R.) prepared from the annual reports of the company, being a table showing the cost of the executive department general expense per thousand cubic feet of gas sold for 1903 to 1912, inclusive.

EXECUTIVE DEPARTMENT—GENERAL EXPENSE—PER THOUSAND CUBIC FEET SOLD.

| Year ending December 31 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|---|---|---|---|
| Executive salaries | .0353 | .0176 | .0170 | .0182 | .0179 | .0256 | .0299 | .0467 | .0416 | .0380 |
| General clerical salaries | .0091 | .0052 | .0034 | .0032 | .0022 | .0026 | .0037 | .0038 | .0047 | .0053 |
| General office expense | .0050 | .0038 | .0023 | .0022 | .0027 | .0034 | .0048 | .0046 | .0053 | .0050 |
| Incidental expense | .0213 | .0136 | .0113 | .0139 | .0096 | .0137 | .0182 | .0137 | .0227 | .0204 |
| Rent of executive offices | .0031 | .0033 | .0025 | .0032 | .0037 | .0037 | .0054 | .0071 | .0069 | .0074 |
| Legal expense | .0074 | .0071 | .0045 | .0049 | .0120 | .0092 | .0091 | .0281 | .0364 | .0339 |
| Total above items | .0812 | .0506 | .0410 | .0456 | .0481 | .0582 | .0711 | .1040 | .1176 | .1099 |
| Promoting new business | .0567 | .1396 | .1118 | .0874 | .0747 | .0596 | .0686 | .0769 | .0835 | .0840 |
| Taxes | .0371 | .0180 | .0147 | .0436 | .0395 | .0380 | .0391 | .0397 | .0466 | .0651 |
| Total general expense | .1750 | .2082 | .1665 | .1766 | .1623 | .1558 | .1788 | .2206 | .2477 | .2590 |

Take the item of executive salaries, for the years 1905 to 1912, inclusive. This item entered into the cost of each thousand feet of gas as follows:

| | | | |
|---|---|---|---|
| 1905..... | $.0169 | 1909..... | $.0299 |
| 1906..... | .0182 | 1910..... | .0467 |
| 1907..... | .0179 | 1911..... | .0416 |
| 1908..... | .0256 | 1912..... | .0380 |

Thus it will be seen that executive salaries have gone up per thousand cubic feet of gas instead of going down, as we should naturally expect, and this item alone, between the years 1905 to 1912, has doubled per unit of gas. And let us make the comparison with the year 1907—the year when the dollar gas rate was to go into effect. Executive salaries in 1907 per each thousand cubic feet of gas were $.0179, whereas in 1912, notwithstanding the claim of the company that it was hard up and was being harassed by the public and could not afford to reduce the price of gas, executive salaries went cheerfully up, so that in that year it was $.0380 per thousand cubic feet of gas, or more than double what it was in 1907.

Again we wish to remind the court that this law suit involves but 20 cents per thousand cubic feet, and we are speaking here with reference to cents per thousand cubic feet of gas when we deal with these items of general expense. In other words, if we can point out where this company can save, and ought to save, in its operating expenses 20 cents per thousand cubic feet of gas sold, we ought to win this suit, wholly regardless of which line of testimony may be accepted as to the value of the property.

We wish to call attention here to line 1503 in the annual reports, "incidental expenses." (Ex. 26 to 30 inc., p. 1716 P. R.). Now the incidental expenses of this company ought

not to increase per unit of gas with the increasing output. In fact, it ought to substantially decrease, yet the item of "incidental expense" entered into the unit cost of gas between 1905 and 1912 as follows:

| | | | |
|---|---|---|---|
| 1905..... | $.0114 | 1909..... | $.0182 |
| 1906..... | .0139 | 1910..... | .0137 |
| 1907..... | .0096 | 1911..... | .0227 |
| 1908..... | .0137 | 1912..... | .0204 |

So that the item in 1912 entered into each thousand cubic feet of gas about double what it was in 1905, not in dollars, *but in cents per thousand cubic feet of gas sold.*

At line 1505 of said annual reports is shown the unit cost of legal expense, that is, the number of cents entering into each thousand cubic feet of gas, which represents the legal expense of the company. This item for the years 1905 to 1912, inclusive, runs thus:

| | | | |
|---|---|---|---|
| 1905..... | $.0045 | 1909..... | $.0091 |
| 1906..... | .0049 | 1910..... | .0289 |
| 1907..... | .0120 | 1911..... | .0364 |
| 1908..... | .0092 | 1912..... | .0339 |

This shows an increase in the "legal expenses" entering into each thousand cubic feet of gas in 1912 over 1905 of $.0294, or more than seven times what it was in 1905.

Line 1507 of said annual reports shows the item of "promoting new business." The actual annual expense of this item has somewhat increased during these years, but the unit cost has declined slightly. We contend now, and we shall take the matter up more extensively later, that this item should be largely eliminated from the operating expenses for the reason that this company has a monopoly in the gas business and there is no necessity for spending substantially $20,000 per year to advertise and promote the sale of a commodity that cannot be purchased elsewhere.

The item of "taxes" per unit has increased during these years and this we should expect as actual taxes have increased greatly. The company was not paying enough taxes to start with, and it is but right that its taxes should increase, and, besides, the taxes of everyone else during the same years upon a given piece of property have very substantially increased.

Line 1509 of said annual reports shows the total "general expense" entering into each thousand cubic feet of gas. The item of taxes should be eliminated in order that the full effect of this table should appear because the taxes are not under the control of the company and they are a substantial item and have increased per unit during these years sufficiently to break the full force of this table, but notwithstanding that fact and including the taxes with these totals, we see that between the years 1905 and 1912 the total general expense of the company per thousand cubic feet of gas has almost doubled, and if the item of taxes were eliminated, this item of general expense, as it entered into each thousand cubic feet of gas, would be shown to be more than double in 1912 what it was in 1905, whereas the contrary ought to be the normal situation. The total general expenses, including the taxes for these years per thousand cubic feet of gas are as follows:

| | | | |
|---|---|---|---|
| 1905..... | $.1673 | 1909..... | $.1788 |
| 1906..... | .1766 | 1910..... | .2206 |
| 1907..... | .1623 | 1911..... | .2477 |
| 1098..... | .1558 | 1912..... | .2590 |

By turning to Exhibit "272," p. 1475, vol. 4 of the printed record, it will be seen that the gas sold by the Company in 1905 was 143,690 cubic feet. The report of the Company for 1912 (Exhibit "30," p. 1716, printed record) shows the sales to 234,386 M cubic feet. The increase of sales of 1912 over

1905 was 90,695 M cubic feet, or about 63 per cent, and yet, instead of these general expenses going down per unit, as ought to have been the case, they have increased per unit about 55 per cent over 1905. In other words, the output has increased about 63 per cent, and this general expense, instead of going down, has increased over 1905 about 55 per cent, per unit.

Mr. Adams prepared a table from the sworn returns to the Massachusetts gas commission of a number of towns in Massachusetts, fairly comparable with Lincoln, for the purpose of making comparison between the unit cost per thousand cubic feet of gas of all expenses of these companies except gas making material and labor, repairs, renewals and taxes, with the same expenses of the Lincoln company. In order that the comparison might be fair, and include as nearly as possible, the exact items of expense upon which the comparison is made, he eliminated from his table all such items as would be likely to be affected by locality (see his explanation, p. 992, vol. 3, printed record). After eliminating all of gas making materials and labor, and all repairs, renewals and taxes from the Massachusetts plants referred to in this table, he reduced the remaining expenses to cents per thousand cubic feet of gas sold in order to enable us to make comparisons with the same expense in the Lincoln company per thousand cubic feet of gas sold, after eliminating the same items here (see Exhibit "281," p. 1481, vol. 4, printed record). The table referred to is Adams' Exhibit "349," p. 1595, vol. 5, printed record, and is as follows:

(Exhibit "349," p. 1595, vol. 5, printed record)

ALL EXPENSES EXCEPT MATERIALS AND LABOR MAKING GAS, REPAIRS, RENEWALS AND TAXES FOR PLANTS SELLING 100 TO 300 MILLION FEET OF GAS ANNUALLY PER SWORN RETURNS TO THE MASSACHUSETTS GAS COMMISSIONERS.

CENTS PER THOUSAND FEET GAS SOLD.

| City | Year | M. Feet Gas Sold | Total Above Expense |
|---|---|---|---|
| Haverhill | 1902 | 123,887 | 10.64 |
| Tauton | 1912 | 216,482 | 14.11 |
| Tauton | 1913 | 136,492 | 13.17 |
| Haverhill | 1903 | 153,068 | 10.36 |
| Haverhill | 1904 | 160,863 | 9.08 |
| Haverhill | 1905 | 165,483 | 10.08 |
| Haverhill | 1906 | 170,759 | 10.44 |
| Charlestown | 1904 | 179,798 | 12.16 |
| Charlestown | 1903 | 181,733 | 12.28 |
| Haverhill | 1907 | 182,359 | 12.27 |
| Charlestown | 1905 | 182,705 | 12.10 |
| Lynn | 1901 | 197,189 | 9.13 |
| Charlestown | 1907 | 210,863 | 11.90 |
| Lynn | 1902 | 224,514 | 8.76 |
| Charlestown | 1908 | 228,126 | 11.92 |
| Charlestown | 1909 | 230,580 | 12.77 |
| Lawrence | 1903 | 236,808 | 12.02 |
| Charlestown | 1910 | 238,229 | 11.40 |
| Charlestown | 1911 | 255,288 | 11.28 |
| Charlestown | 1912 | 266,869 | 10.25 |
| Cambridge | 1912 | 276,284 | 11.83 |
| Lynn | 1903 | 282,578 | 8.37 |

In order to contrast the expenses set out in cents per thousand cubic feet of gas sold as shown in the foregoing table for said Massachusetts companies we here print Adams' Exhibit "303," p. 1473, vol. 4, being a table for the Lincoln company showing the thousand feet of gas sold in each year from 1903 to 1912, inclusive, the salaries and office expenses for each year in cents per thousand cubic feet sold, distribution and general expenses per thousand cubic feet sold, and, in the last column the total of said expenses in cents per thou-

sand cubic feet sold in each year, said last column corresponding to the last column in the preceding table for the Massachusetts companies:

Lincoln Gas & Electric Light Co.

ALL EXPENSES EXCEPT MATERIALS AND LABOR MAKING GAS, REPAIRS, RENEWALS AND TAXES

IN CENTS PER THOUSAND FEET OF GAS SOLD.

(Adams' Exhibit "303," bot. p. 1494, vol. 5, printed record)

| Year | M. Feet Gas Sold | Salaries and Office Expense | Distribution and Gen. Expense | Total Above Expense |
|---|---|---|---|---|
| 1903 | 98,343 | 15.89 | 6.13 | 22.02 |
| 1904 | 117,429 | 22.20 | 4.83 | 27.03 |
| 1905 | 143,690 | 18.83 | 4.26 | 23.10 |
| 1906 | 153,663 | 17.00 | 4.42 | 21.41 |
| 1907 | 179,366 | 15.94 | 4.64 | 20.58 |
| 1908 | 195,391 | 15.48 | 5.02 | 20.51 |
| 1909 | 204,284 | 16.72 | 6.21 | 22.93 |
| 1910 | 210,169 | 19.81 | 8.23 | 28.04 |
| 1911 | 227,268 | 20.12 | 10.55 | 30.66 |
| 1912 | 234,386 | 19.85 | 11.27 | 31.12 |

Mr. Adams' Exhibits "350" and "351" (p. 1596, vol. 5, printed record) deal with the town of Cambridge, Massachusetts, showing the salaries and office expense and the distribution and general expense, excluding gas making labor and material, repairs, renewals and taxes. The last column shows in cents per thousand cubic feet of gas sold the extent to which these general expenses enter into the cost of gas sold in Cambridge, and it will be seen that the percentage from 1900 to 1912, runs from eleven to twelve cents per thousand. Excluding the same items from the general expense of the Lincoln plant the remaining general expense in 1912 per thousand cubic feet of gas sold was 31.12 cents (see Mr. Adams' Exhibits "290," p. 1490, vol. 4, and "303," p. 1494, vol. 5).

Mr. Adams' Exhibits "352" and "353" (p. 1597, vol. 5) deal with the gas plant at Charlestown, Massachusetts, in the same manner and it will be seen that the general expense per thousand cubic feet of gas in 1900 was 21.91 cents and that it ran down to 10.25 cents in 1912, as against 31.12 cents here.

Mr. Adams' Exhibits "354" and "355" (p. 1598, vol. 5) deal with the gas plant at Lawrence, Massachusetts, in the same manner and show that in 1900 the general expense of that company included in Mr. Adams' statement, was 22.56 cents and that it declined gradually and was 12.10 cents in 1912, as against 31.12 cents here.

Mr. Adams' Exhibits "356" and "357" (p. 1599, vol. 5) treat in a similar manner the operations of the gas plant at Lynn, Massachusetts, and it will be seen that while there was a slight increase per thousand, the unit cost of these general expenses per thousand feet of gas was only 9.90 cents in 1912, as against 31.12 cents here.

Mr. Adams' Exhibits "358" and "359" (p. 1600, vol. 5) deal in a similar manner with the Taunton gas plant, and show that the unit cost of these general expenses per thousand cubic feet of gas sold in 1900 was 17.01 cents, and in 1913 it was 13.17 cents, as against 31.12 cents here.

Mr. Adams' Exhibits "360" and "361" (p. 1601, vol. 5) deal in a similar manner with the gas plant at Haverhill, Massachusetts, showing the cost per thousand cubic feet of these general expenses, and that it was 12.27 cents in 1912, as against 31.12 cents here.

When these Massachusetts tables were produced and testified to by Mr. Adams, the ompany's expert and counsel fully appreciated their significance and they made a desperate assault upon Mr. Adams and his Massachusetts data, and

Mr. Lea went all the way to Massachusetts and spent considerable time, and caused an adjournment of this case for the purpose of investigating the Massachusetts records and procuring the means of discrediting the testimony of Mr. Adams, and his Massachusetts tables. And Mr. Lea seems to have returned imbued with the idea that he had the necessary means of completely discrediting Mr. Adams, and he took the stand for the purpose of doing so. And he undertook to satisfy the master that Mr. Adams, in making up these Massachusetts tables, had excluded other substantial items of operating expense, than those expressly excluded by his headings, and that therefore his tables did not reflect the exact situation. Mr. Lea, therefore, undertook to correct Mr. Adams' tables, and produced some corrected tables of is own, concerning these Massachusetts companies. The cross-examination of Mr. Lea, by Mr. Adams, however, (beginning on p. 493, vol. 2, printed record), clearly demonstrated that Mr. Lea either did not know what he was talking about, and did not understand the Massachusetts records at all, or else he was deliberately trying to mislead the court, because it turned out that the items which he claimed Mr. Adams had improperly excluded, were not operating expenses at all, and were not so reported to the Massachusetts commission, nor so treated by that commission. And Mr. Wettling, a director of the Gas Company, and one of its expert witnesses, who for a number of years has been the expert accountant of the Nebraska Railway Commission, and ought to have a sufficient understanding of accounting to be able to put a correct interpretation upon the Massachusetts reports and records referred to, fell into similar error, and his cross-examination by Mr. Adams (p. 804, vol. 3, printed record) clearly demonstrated that he had been misled by Mr. Lea. So that the net result of the attempt to discredit the testimony of Mr. Adams in this instance, as in every other instance, came to naught and only tended to strengthen his position. We wish to impress upon the mind

of the court, the great value of these Massachusetts tables in relation to the matter now under consideration. It must be remembered that if there is any item in these general expenses that would be influenced at all by locality, those items have been excluded by Mr. Adams from the operations of both companies in making these comparisons. It therefore does not weaken the force of these tables, that we are out in the middle-west, and that these tables deal with Massachusetts companies, because the matters involved in the tables are not affected by location at all. Salaries of officers, clerical help, etc., would be about the same in Massachusetts as here. In fact, the executive salaries of this Lincoln company, practically all go to New York City, and the salaries of the local managers, and all, are undoubtedly fixed by the New York office, so that these salaries are, in every true sense, eastern salaries, and the reason for going to Massachusetts for these statistics is, that that is about the only place to go where such statistics, of any value, extending over a sufficient number of years to have anything like persuasive force, can be found.

Mr. Adams' Exhibit "368" (p. 1608, vol. 5) is a similar table relative to the Gas Company of Worcester, Massachusetts, covering the years 1895 to 1913, inclusive. It will be seen that the general expenses of that company which are compared with the same expenses of the Lincoln company, were in 1895, 16.24 cents per thousand cubic feet of gas sold, and, as the output increased, this expense per gas unit declined until in 1913, it was 8.24 cents per thousand cubic feet of gas sold as against 31.12 cents here. These Massachusetts tables in every instance show that, where the general expense was not already very low per gas unit, as the gas output increased the amount of the general expense per unit decreased. And why should not this be the result? Is it not what we would naturally expect? We have already shown that in the manufacturing department as well as in the dis-

tribution department the expense per gas unit has decreased with the increased sales. Now if the unit cost of making, purifying and distributing the gas is favorably affected by the increased output, what reason can be assigned for the opposite tendency in these general expenses which pertain principally to the management of the Company, and where we would naturally expect the unit cost to decrease far more than in the other branches of the business? To demonstrate that the results here complained of are not normal and are not to be attributed to locality we call attention to certain electrical tables, introduced by us, for the purpose of showing, and which do show, that in the electrical department of this Company these same general expenses declined during the same years as the output increased per unit of electric current.

These tables are taken directly from the electrical reports of the Company and represent that portion of these general expenses which are by the Company apportioned to the electrical department. There is no chance for quibbling nor claiming that we are not comparing the same items as are shown in the gas tables because they are the identical items there shown without the omission of anything. They do not even exclude taxes or any of the other items excluded by Mr. Adams from both sides of the comparison when he compared the Massachusetts companies with the Lincoln company. These electrical tables are made for the purpose of comparing one department of the Company where there is no attempt to regulate rates with the other department where rates are sought to be regulated and they are taken from the Company's own showing as to both departments. These electrical tables are indicated as follows:

Exhibit "379" (p. 1620, vol. 5) gives the expenses in the electrical department for each of the years of 1903 to 1912 inclusive, reducing the cost of reading meters in the electrical department to the unit cost per meter. It shows the number

of meters and the number of consumers in the electrical department for each year. It shows that the cost of reading meters in the electrical department has gradually decreased per meter as the output increased.

Exhibit "398" (p. 1621, vol. 5) shows the cost of generating steam in the electrical department taking the various items and the amounts of each, this expense is reduced to cents per K. W. hour for each of the years 1903 to 1912 inclusive. It shows that the unit cost of steam has declined as the output increased, varying somewhat with the different years.

Exhibit "401" (p. 1626, vol. 5) contains two tables, the upper one showing the gross earnings, the operating expenses and the net earnings for the electrical department for the years 1903 to 1912 inclusive. The lower table shows the collection expense of the electrical departments for the same years. Exhibits "399" (p. 1623) and "400" (p. 1624) are the tables dealing with the general expense of the electrical department and are the ones to which we desire to call especial attention at this point. We here set them out in full:

ELECTRICAL DEPARTMENT—GENERAL EXPENSE.

(Exhibit "399")

| Line | Item | 1903 | 1904 | 1905 | 1906 | 1907 |
|---|---|---|---|---|---|---|
| 3224 | Ex. salaries | $ 2,623.42 | $ 2,005.07 | $ 2,447.21 | $ 2,808.88 | $ 3,168.64 |
| 3225 | Clerical | 792.95 | 562.91 | 474.72 | 400.00 | 493.74 |
| 3226 | Gen. off. exp. | 400.24 | 376.43 | 241.29 | 238.74 | 438.39 |
| 3227 | Rent ex. off. | 261.47 | 331.42 | 332.99 | 466.99 | 539.14 |
| 3228 | Legal exp. | 985.90 | 1,356.09 | 956.04 | 840.12 | 1,141.92 |
| 3229 | Incidental | 2,324.25 | 1,831.00 | 1,502.86 | 2,181.29 | 1,743.92 |
| 3232 | Taxes | 1,825.90 | 1,056.00 | 1,056.00 | 3,345.24 | 3,542.52 |
| 3231 | Pro. new bus. | 1,107.94 | 3,201.83 | 5,191.04 | 9,016.23 | 11,157.50 |
| | Total | $10,322.07 | $10,720.75 | $12,202.15 | $19,300.47 | $22,325.77 |

| Line | Item | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| 3224 | Ex. salaries | $ 2,015.94 | $ 1,536.66 | $ 2,459.89 | $ 2,367.73 | $ 2,229.33 |
| 3225 | Clerical | 207.00 | 187.00 | 201.10 | 266.70 | 303.70 |
| 3226 | Gen. off. exp. | 339.79 | 275.33 | 269.08 | 320.00 | 329.90 |
| 3227 | Rent ex. off. | 301.59 | 331.96 | 412.23 | 392.23 | 434.42 |
| 3228 | Legal exp. | 795.70 | 766.45 | 999.88 | 1,080.76 | 1,223.13 |
| 3229 | Incidental | 1,203.45 | 1,005.63 | 742.93 | 1,389.18 | 1,134.02 |
| 3232 | Taxes | 3,714.36 | 3,993.00 | 4,167.50 | 5,280.00 | 7,200.00 |
| 3231 | Pro. new bus. | 7,930.04 | 12,165.09 | 7,350.88 | 6,637.30 | 3,877.33 |
| | Total | $16,507.87 | $20,261.12 | $16,603.99 | $17,734.20 | $16,731.85 |

Exhibit "400" embraces the same items of general electrical expense as those in the preceding table reduced to cents per K. W. hour and is as follows:

ELECTRIC DEPARTMENT—GENERAL EXPENSE PER K. W. HOUR CAPACITY.

(Exhibit "400")

| Line | Items | 1903 | 1904 | 1905 | 1906 | 1907 |
|---|---|---|---|---|---|---|
| 3224 | Ex. salaries | .8692 | .4849 | .4216 | .3476 | .3161 |
| 3225 | Clerical | | .1511 | .0562 | .0463 | .0372 |
| 3226 | Gen. off. exp. | | .0255 | .0281 | .0232 | .0186 |
| 3227 | Rent ex. off. | | .0511 | .0562 | .0502 | .0372 |
| 3228 | Legal exp | .1943 | .1222 | .1124 | .0908 | .0558 |
| 3229 | Incidental | .7706 | .4660 | .3519 | .4213 | .2717 |
| 3231 | Prom. new bus. | .3671 | .8160 | 1.2150 | 1.7415 | 1.7280 |
| 3232 | Taxes | .9080 | .4050 | .3710 | .9530 | .7313 |
| | Total | 3.1094 | 2.4218 | 2.6124 | 3.6745 | 3.1959 |

| Line | Items | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| 3224 | Ex. salaries | .1985 | .1811 | .1462 | .1336 | .1117 |
| 3225 | Clerical | .0355 | .0577 | .0316 | .0410 | .0425 |
| 3226 | Gen. off. exp. | .0177 | .0212 | .0140 | .0180 | .0167 |
| 3227 | Rent ex. off. | .0355 | .0424 | .0214 | .0186 | .0182 |
| 3228 | Legal exp. | .0556 | .0904 | .0594 | .0610 | .0620 |
| 3229 | Incidental | .1777 | .1590 | .0442 | .0784 | .0575 |
| 3231 | Prom. new bus. | 1.1713 | 2.1510 | .6554 | .5618 | .2948 |
| 3232 | Taxes | .6635 | .9414 | .4955 | .5960 | 1.0948 |
| | Total | 2.3553 | 3.6442 | 1.4685 | 1.5084 | 1.6980 |

Comparison should here be made between the last table above copied (Exhibit "400") and Mr. Lea's Exhibit "7-L-14," previously herein set out (on p. 131), wherein Mr. Lea has reduced these same items of expense as shown in the gas report to cents per thousand cubic feet of gas sold. And this comparison will disclose that, whereas, the total executive department, general expense, for the gas department has increased per thousand cubic feet sold from $.1750 in 1903, to $.2590 in 1912, in the electrical department the total of these same expenses per K. W. hour capacity have declined from $.31094 in 1903 to $.1698 in 1912. And we must remember, also, that the taxes are included in both tables and these have enormously increased during these years and constitutes perhaps the largest single item in these tables, and have been divided on the ratio of one-third to electricity and

two-thirds to gas, whereas, the other expenses, since May, 1908, have been divided on the ratio of 20 per cent to electricity and 80 per cent to gas. It is therefore to be remembered that these tables do not show the vast difference in the opposite trend of these general expenses in these two departments respectively which would be shown if the item of taxes were excluded. Let us take some of the single items in these two tables (Mr. Lea's Exhibit "7-L-14" and our Exhibit "400") and make a comparison, always remembering that in each instance, the item has been reduced to cents per unit.

EXECUTIVE SALARIES PER THOUSAND CUBIC FEET OF GAS SOLD AND PER K. W. HOUR CAPACITY.

| Year | Gas Sold Year | Expense Gas Department | Gen. Expense Electric | Expense Department |
|---|---|---|---|---|
| | 1903 | $.0353 | $.8692 | |
| | 1904 | .0176 | .4849 | |
| | 1905 | .0170 | .4216 | |
| | 1906 | .0182 | .3476 | |
| | 1907 | .0179 | .3161 | |
| | 1908 | .0256 | .1985 | |
| | 1909 | .0299 | .1811 | |
| | 1910 | .0467 | .1462 | |
| | 1911 | .0416 | .1336 | |
| | 1912 | .0380 | .1117 | |

Take the item of rent of executive offices as another illustration. Exhibit "400" does not give the unit cost of this item in the electric department for 1903, so we shall compare 1904 with 1912. Of course, we know that the actual office rent in dollars has very greatly increased from 1904 to 1912, but how did it affect the unit cost of gas and electricity as reflected in the Company's books? It will be seen at a glance that this item per unit of gas has been gradually going up, but per unit of electricity it has been gradually going down. For instance:

*Rent of Executive Offices—*

| | 1904 | 1912 | |
|---|---|---|---|
| Gas per M. cu. ft..... | $.0033 | $.0074 | increase of over 100% |
| Electricity per K. W. hour ..... | .0511 | .0182 | decrease of 64% |

*General Office Expense—*

| | 1903 | 1912 |
|---|---|---|
| Gas per M. cu. ft..... | $.0050 | $.0050 |
| Electricity per K. W. hour ..... | .0255 | .0167 |

*Legal Expense—*

| | 1903 | 1912 |
|---|---|---|
| Gas per M. cu. ft..... | $.0014 | $.0339 |
| Electricity per K. W. hour ..... | .1903 | .1620 |

*Incidental Expense—*

| | 1903 | 1912 |
|---|---|---|
| Gas per M. cu. ft..... | $.0213 | $.0204 |
| Electricity per K. W. hour ..... | .7706 | .0575 |

*Promoting New Business—*

| | 1903 | 1912 |
|---|---|---|
| Gas per M. cu. ft..... | $.0567 | $.0840 |
| Electricity per K. W. hour ..... | .3671 | .2948 |

So it will be seen that the normal trend for these general expenses is downward per unit as the output increases in the electrical department, just as Mr. Adams says it ought to be,and just as his Massachusetts tables show it to be in the gas plants of Massachusetts. In this gas plant, however, we have the peculiar situation of the unit cost of these general expenses increasing enormously from year to year in the gas department, in spite of the great increase in the gas sales, and in spite of the fact that the identical items of expense have been going down per unit in the electrical department, where the rate was not being regulated, and where normal tendencies have been permitted to take their course.

Can anyone inspect these tables and read the testimony of Mr. Phillips, the secretary of the Company (see pp. 768-9)

without being driven to the conclusion that since this rate ordinance was passed there has been a deliberate attempt upon the part of the management of this Company, not only to abnormally and unnecessarily increase these general expenses which are common to both departments, but also to make the apportionment between the two departments upon such a basis as will throw the great bulk of them into the gas department where they will do the most good in assisting the Company to strike down this rate?

As we have already said, in grouping the expenses of this company, for the purpose of making comparison with a long list of Massachusetts companies, Mr. Adams eliminated all items of gas making labor, gas making material, repairs, renewals, and taxes in order to eliminate from both sides of the comparison all items which might be affected by locality. The grouping thus made of the expenses of this company include some items of expense in addition to those classified by the Company, as "executive department general expense." He allows in his estimate thirteen cents per thousand cubic feet of gas sold to cover all of the expenses included in the comparison, which he says is ample, and which we think will be seen to be liberal in the light of the cost of the same items to the Massachusetts companies in the table which is to follow. In 1912 this company reported an expense of 31.13 cents per thousand cubic feet of gas sold to cover these same items, or rather an analysis of the Company's report shows this fact. As against Mr. Adams' allowance of 13 cents per thousand, we have nothing but the deliberate effort of the Gas Company to swell these expenses in the gas department by increasing the list of executive salaries and legal expenses, adding additional and unnecessary officials to the salary list, squandering money in needless advertising and incidental expense, and then making an outrageously unfair division of the expenses between the gas and electric department, thereby running

these expenses up in the gas department to more than double what they should be, and more than 18 cents per thousand above what Mr. Adams says would be ample, the increase thus brought about being almost enough to make up the difference in the two gas rates involved in this suit. Many of the Massachusetts companies referred to in Mr. Adams' table handle these same general expenses for 10 cents, and less, per thousand cubic feet of gas sold.

And, what is more to the point, these Massachusetts companies are selling gas at one dollar and less, and paying dividends, as witness Mr. Adams' Exhibit "369" as follows:

GAS RATES AND DIVIDENDS OF MASSACHUSETTS PLANTS IN THE YEAR 1912.

(Exhibit "369," p. 1608, vol. 5, printed record)

| Plant | M. Feet Gas Sold | Price Per M. Feet | Dividend Paid | Cents Dividends Per M. Sold |
|---|---|---|---|---|
| Attleboro ..... | 57,326 | $1.00 | 12 | 12.14 |
| North Adams .... | 89,731 | 1.00 | 18 | 6.74* |
| Suburban ..... | 131,822 | .90 | 9 | 13.25* |
| Taunton ..... | 126,492 | 1.00 | 10 | 17.39 |
| Salem ..... | 168,313 | 1.00 | 9 | 26.71 |
| Haverhill ..... | 235,116 | .85 | (Rate suit pending) | |
| Charlestown ..... | 266,869 | .85 | 12.5 | 20.34* |
| East Boston ..... | 375,193 | .85 | 10 | 15.33 |
| Newton ..... | 416,353 | .90 | 11 | 14.80 |
| New Bedford .... | 472,545 | .80 | 12 | 16.03* |
| Lawrence ..... | 441,324 | .90 | 8 | 16.25* |
| Malden ..... | 580,820 | .90 | 7 | 19.09 |
| Fall River ..... | 550,734 | .80 | 12 | 15.03 |
| Lowell ..... | 593,971 | .85 | 12 | 20.20 |
| Springfield ..... | 693,023 | .85 | 12 | 19.70 |
| Lynn ..... | 743,042 | .75 | 16 | 12.29* |
| Cambridge ..... | 762,630 | .85 | 10 | 15.74 |
| Worcester ..... | 783,734 | .75 | 12 | 17.61 |

* Estimated.

We contend, therefore, that this company has not made a fair showing as to what would be its normal and necessary

operative expenses as the law requires it should; it has not made an honest effort to reduce its operating expenses, but, on the contrary, it has enormously increased them during the very time when such increase would best serve the Company in its efforts to defeat this new gas rate, and it has deliberately attempted to perpetrate a fraud, not only upon the public, but upon the court by changing its method of apportioning the general expenses as between the gas and electric departments. It is not incumbent upon us to show just what these expenses should be in dollars and cents, but we have shown that they should be much less than they are now. We have shown that many well-managed companies are operating their plants at a rate of one dollar and less, paying substantial dividends to the stockholders, and managing their business with an expense equal to only about one-third of what is paid here for these general items included in Mr. Adams' comparison.

We shall proceed now to point out some of the items of expense which are greatly excessive, and some of the items which are entirely improper and should be eliminated.

## SECOND.

## DEDUCTIONS WHICH SHOULD BE MADE FROM OPERATING EXPENSES.

### (a) EXCESSIVE ITEMS.

#### 1. EXPENSE OF NEW YORK OFFICE.

This gas plant has no more use for the New York office and the New York management than a wagon has with five wheels. Nor does this community need the services of the New York office, nor does the New York office in the least contribute to the gas service of this city. The testimony shows that Henry L. Doherty & Company operates 108 public service plants in different parts of the country. Henry L. Doherty & Co. is a partnership composed of Henry L. Doherty, C. T. Brown and

F. W. Frueauff (p. 782, vol. 3). Mr. Frueauff says that he and Mr. Doherty hold office in most of these 108 public service corporations (p. 778, vol. 3) and that he drew salaries from not over three or four and that he supposed his salaries from these companies would total $15,000 or $18,000 (p. 782, vol. 3). It will be observed that he is a little indefinite as to the number of companies of this character from which he draws a salary and as to the sum total of such salaries and it is safe to assume that since he could not remember definitely and did not pretend to be definite that he kept on the safe side in stating the amount. He could not remember how many companies are paying a salary to Mr. Doherty nor as to the sum total of such salaries. We neglected to ask him about the salaries drawn by Mr. Brown, the other member of the firm, but it is safe to assume that Mr. Brown is drawing substantial salaries from many of these companies. When we recollect that these salaries are dumped into the coffers of Henry L. Doherty & Co. from all parts of the country and that Henry L. Doherty & Co. charges to this company $300 per year for the services of a gentleman in their office and on their payroll as eastern secretary of this company, who is supposed to devote a portion of his time to the business of this gas plant, and that they are probably receiving a similar amount for the same purpose from all of these other public service corporations controlled by them, when we remember that an auditor is sent out at least once a year, and sometimes oftener, to audit the books of this company for the enlightenment of this New York office, which costs this company the traveling expenses of such auditor and two or three hundred dollars for his services, which charge is for the benefit of Doherty & Co., and is received by them; when we remember that Doherty & Co. is constantly drawing from the Lincoln company substantial items for paying bond interest and for other services in financing this company; when we remember that Henry L. Doherty & Co. acts as banker for this

local company at New York City, and has on deposit a substantial sum of money belonging to this company and seems to feel perfectly free to draw on this company for funds when they are needed in financing some of their other enterprises, we are not surprised that these gentlemen in New York City are fighting a reduction of the gas rate here. Their concern in the matter is not on account of a reduction of dividends to the stockholders, because by reason of the great over-issue of bonds and the enormous executive salaries no dividends have been paid to stockholders for many years and no dividends will ever be paid to stockholders under any rate until there is a reorganization of the Company and a readjustment of its capitalization so as to bear some relation to the value of its assets. These gentlemen are opposed to reduction of rates because it would probably require them to reduce the amount of money they are drawing from this community for the benefit of the New York office without any consideration in return.

Exhibit "384" (p. 2026, vol. 5) is a telegram from Henry L. Doherty & Company to B. C. Adams, manager of the local company, under date January 4, 1910, directing Mr. Adams as to whom to elect on the board of directors, and to the different offices of the Company, which gives an idea of the completeness of the New York control. This telegram is the one which resulted in putting Armstrong in as president, at a fat salary without displacing anyone else, and it also added Mr. Frueauff, as vice-president, with a large and comfortable salary, both salaries being in addition to a salary list already too large, and this in the face of the danger of this alleged confiscatory rate, and while this very suit was pending. The telegram was as follows:

(Exhibit "384")

"New York, Jan. 4, 1910.

"To B. C. Adams, c/o Gas Company, Lincoln, Nebraska:

"Elect Doherty chairman, Board of Directors, Armstrong President, Frueauff Vice-President. Reelect Burnham.

"HENRY L. DOHERTY & CO."

This company has a local manager who draws $3,600 a year. For a number of years Mr. B. C. Adams was the manager of the Company; he was a practical gas man, eminently capable of managing the plant and having an adequate knowledge of all its departments and business. Mr. Frueauff, president of the Company, testified that Mr. Adams was a competent gas engineer and a practical gas man and that he had the necessary skill and ability to manage this company and to perform all of the local duties of the president of the Company and chairman of the board of directors (p. 783, vol. 3). That being the case, what right has this company to impose upon the gas consumers of this city the additional burden incident to maintain this Wall Street office? Notice the testimony of Mr. Frueauff (p. 779, vol. 3), where he explains that Mr. Adams gets $3,600 as superintendent and manager, Mr. Doherty gets $3,000 and witness gets $2,400, making a total of $9,000 executive salaries.

But this $9,000 does not tell the whole story by any means. We have no criticism to make against the $3,600 paid to the local manager, nor the salary paid to the local secretary, although it seems to us that these salaries are amply large to cover all of the expense necessary to be incurred in the form of executive salaries and for the management of the Company. This would be much more than the city of Lincoln would pay for the management of the Company if this gas plant were being operated by the municipality. If the local manager and local secretary are competent to earn those

salaries, and are competent to manage this company, as everybody admits they are, then we most earnestly insist that the gas consumers of this community cannot be burdened with the unnecessary expense incurred in connection with this superfluous New York management.

And notwithstanding the fact that this company is paying its local attorney $3,000 a year as a regular salary, it is also paying a regular retainer of $600 a year to C. A. Frueauff, an attorney of New York City, a brother of the president of the Company, for some supposed service he is said to render. And, besides, we notice an occasional substantial item paid to him for special services rendered by him from time to time, as for instance, $2,500 was paid to him or is firm in connection with the first appeal of this dollar gas rate case to this court (see p. 729, vol. 3), notwithstanding the fact that the former trial was conducted by Mr. Halleck F. Rose and Mr. E. C. Strode and these two gentlemen performed all the services in connection with the preparation of the brief and the argument of the case before the supreme court so far as attorneys for the City have any knowledge. Notice some of the principal items of expense of maintaining the New York office for 1912:

| | |
|---|---|
| H. L. Doherty, salary as chairman of board of directors | $3,000.00 |
| F. W. Frueauff, as president | 2,400.00 |
| A. C. Frueauff, New York attorney | 600.00 |
| New York secretary | 300.00 |
| Auditing expense (about) | 300.00 |
| Total | $6,600.00 |

We also point out in Exhibit "323," the incidental expense account for 1912, the following items of expense incurred by reason of the New York office:

| | |
|---|---|
| February 29, expense Adams & Strode, N. Y. trip... | $ 250.00 |
| February 29, B. C. Adams, expense Mgr. meeting, N. Y. | 280.00 |
| March 30, H. L. Doherty & Co., expense Winan.... | 18.23 |
| April 16, B. C. Adams, expense to N. Y. | 48.50 |
| Aug. 27, H. L. Doherty & Co., contribution | 160.00 |
| Oct. 27, H. L. Doherty & Co., traveling expenses N. Y. | 80.00 |
| Dec. 31, Adams & Strode, trip to N. Y. | 575.00 |
| Total | $1,411.00 |

In addition to the above and foregoing items there are in the accounts of the company for almost every month numerous items for telegrams to and from New York, the amount of which would be difficult to arrive at, and various items paid to the New York office for transferring stock and paying the coupons of this Company.

The 1913 accounts show a still heavier burden resulting from the maintenance of the New York office. We call attention to Exhibit "321" (p. 1502, vol. 5), showing traveling expenses alone for 1913. It will be seen that these traveling expenses are heavy and are very largely trips to and from the New York office. We also call attention to the legal expense, Exhibit "324" (p. 1502, vol. 5) for 1913. We shall deal with this item more at length in a later portion of this brief but we call attention to the numerous items entering herein which go to the New York office:

Te initials C. A. F. refer to C. A. Frueauff, Att'y, of New York City, a brother of the president of the Company. It will be seen that he figures quite extensively in these items.

Even the domestic fuel and appliance account for 1912, Exhibit "326" (p. 1502, vol. 5) shows numerous items paid to H. L. Doherty & Co.

We have not attempted to go through all of these accounts and undertake to segregate the items of expense attributable to the New York office. It would be impossible for us to do so because these accounts contain a very large number of items some of which are insubstantial amounts and aggregating for each year a very substantial sum, and which are designated by the abbreviation "contg." which we understand means contingent. The burden being upon the company not only to show the amount of its operating expenses but to show that they are reasonable, necessary and legitimate, we assume that it was the company's duty not only to segregate these items, but to satisfy the court that they were necessary items of expense in the operation of this gas company.

2. INCIDENTAL EXPENSE.

The incidental expense account for 1912 was copied in full and is Exhibit "323" (p. 1502, vol. 5). It is a substantial item of expense amounting in 1912 to $4,790 or an average of $399.16 per month. A very large part of this account is made up of improper items having nothing whatever to do with the manufacture and sale of gas nor with the economical and legitimate management of the Company. This account contains, of course, many items which are legitimate and it contains some which are doubtful but a very large part of the account and especially the larger items of the account are not only improper as items of expense but disclose a reckless disregard of the rights of the public if indeed they do not disclose a deliberate purpose to control public sentiment in the Company's favor and incidentally to swell the operating expenses to aid in defeating this rate. For the years 1907 to 1911 inclusive, we have not copied this account in full but have picked out certain items for each of the years which we consider improper items of expense and these will

be found in Exhibit "23." We here give the total of this incidental expense account for the years 1907 to 1912 inclusive:

| | | | Cents Per M. Cu. Ft. Gas Sold |
|---|---|---|---|
| 1907..... | $1,723.38 | (p. 301, vol. 1, P. R.) | 1907..... .0096 |
| 1908..... | 2,679.18 | (Ex. "26") | 1908..... .0137 |
| 1909..... | 3,715.04 | (Ex. "27") | 1909..... .0182 |
| 1910..... | 2,878.22 | (Ex. "28") | 1910..... .0137 |
| 1911..... | 5,162.84 | (Ex. "29") | 1911..... .0227 |
| 1912..... | 4,775.01 | (Ex. "30") | 1912..... .0204 |

This account is not only a substantial one in the sum total of dollars, but reduced to cents per thousand cubic feet of gas, it represents a substantial portion of the twenty cents involved in this controversy. And it will be observed, as we have already pointed out, that the incidental expenses have wonderfully increased in the dollars represented and also in the cents per thousand cubic feet of gas, whereas they should have decidedly decreased when reduced to the unit cost of gas. This is the account which contains items of donations, cigar, candy and cafe bills, flower bills, bills for entertaining guests, bar bills for beer and cocktails, prize fights at the Beach, forty dollars a month to the manager to be spent in being a good fellow, no account to be rendered and no questions to be asked, and this in addition to his $3,600 salary. Since the manager seems to have paid all of the items incident to being a good fellow in the form of cafe bills, bar bills, cigar bills, candy and flower bills, we do not believe he spent this forty dollars at all, except by adding it to his salary and using it for his own purposes, unless he had other methods of being a good fellow which have not been made apparent. This account also discloses that the heads of departments of this company for years have been having weekly "feeds" at the Savoy Hotel, and other cafes, and charging the expense to the Gas Company. The total paid to the Savoy Hotel alone for cafe service in 1912 for these heads of departments was

$222.00. It will be seen also that at least two of the heads of departments joined the Country Club and had their Country Club dues paid by the Gas Company. As we understand it, it costs $60.00 to join the Country Club, and the annual dues thereafter are $40.00. The custom has been also, for a number of years, to donate to the Commercial Club $200.00 per year and also to pay the annual dues of several of the heads of departments and charge all these to the incidental expense account of the Gas Company. Numerous donations appear in this account from year to year, donations to the Charity Organization, the Salvation Army, Wesleyan University, Havelock Commercial Club, the German Day Parade, etc., etc. The cigar bill for 1912 was $27.00. Also included in this account are various items of expense incident to handling the company's notes and paying the company's coupons. Certainly the gas consumers of this city cannot be burdened with items of interest paid on this Company's bonds and notes nor with any expense incurred in New York in connection with paying the interest nor handling the notes. In this incidental expense account also appear numerous items charged as "rebates." Running these down we discovered that many of these rebates could not be explained. The vouchers contained nothing save the amount charged to this account by this rebate slip and certain mysterious initials. Mr. Honeywell, the manager of the Company at the time that some of these rebate slips were made, and in whose handwriting they appear, could not, for the life of him, remember anything about them nor give us any information as to what the initials meant. All such items should be eliminated from the operating expenses of the Company as the burden put upon the Company is to show that the expenses were legitimate. The Company has not only failed to show that these rebate items were legitimate, but on the contrary, the City was able to show that some of them, at least, were mere gratuities given to some favored and influential

individuals, in the form of free gas, running back through a series of years. For instance, we call attention to Exhibit "328" (p. 1502, vol. 5) being an account designated "rebates and allowances" for the year 1913, also Exhibit "329" (p. 1502, vol. 5) showing rebates to T. H. Pratt, and also to Exhibit "271" (p. 2007, vol. 5) prepared by Mr. Thomas, covering these rebates and allowances from 1907 to 1912 inclusive, and Mr. Thomas' testimony relative thereto (p. 1257, vol. 4).

It will be seen that these rebates to these few favored individuals for said years amounted in the aggregate to $3,408. And there are numerous other incidental expenses wholly unexplained but which were conceded in the record not to be properly chargeable to operating expenses to the extent of $800.

3. LEGAL EXPENSE.

This item of legal expense is one that has been growing enormously in recent years and of course, the growth is due largely, if not wholly, to this litigation over the gas rate. The following tabulation shows the legal expense for the years 1905 to 1913 inclusive, both in dollars and in cents per thousand cubic feet of gas:

| Amount | | Cents Per M. Cu. Ft. Gas Sold | |
|---|---|---|---|
| 1906..... | $ 757.43 | 1906..... | .0032 |
| 1907..... | 2,160.31 | 1907..... | .0120 |
| 1908..... | 1,796.32 | 1908..... | .0092 |
| 1909..... | 1,858.52 | 1909..... | .0091 |
| 1910..... | 5,911.70 | 1910..... | .0281 |
| 1911..... | 8,279.48 | 1911..... | .0364 |
| 1912..... | 7,954.73 | 1912..... | .0339 |

For the year 1906 the legal expenses of this Company were $757.43 and that was large enough. There is no reason why the normal legal expenses of this company should be great.

Aside from this present litigation over the rate, the Gas Company has very little legal business. And we believe any competent attorney would be willing to handle the business of this Company, aside from this litigation, and aside from any extraordinary litigation that might arise from personal injury suits, for $50.00 per month. There is nothing in this record to show that this Company has any other litigation pending nor that it has ever had much litigation aside from litigation with the public over taxes, franchises and rates. If this Company would abolish the New York office and get rid of that amount of expense, and free itself from the influence of the coterie of Wall Street high-financiers who seem to have the idea that the way to manage a public service plant is to ignore the rights of the public, and render the minimum of service at maximum expense, it would have practically no litigation at all, and would not need the services of an attorney except upon rare occasions and then mostly for consultation. We think the Company never paid over $50.00 a month for legal services, prior to 1906. Certainly there is nothing about the increased output of gas, or the increased number of consumers which would add any considerable amount to the work of an attorney, nor to the normal legal expense of the Company. We therefore contend, and we think the items contained in the legal expense account clearly show, that the increase which has taken place in the legal expense of the company has been due almost wholly to the pendency of this present litigation. Certainly no one will contend that a public service company can attack an established rate as confiscatory and incur large expense in its attempt to strike down the rate, and use this expense as one of the elements to enable it to show that the rate is confiscatory. And it has been held that the expense of litigation to set aside an established rate cannot be considered in determining the question whether the rate will yield a fair return or not.

The following quotation from the opinion in *San Diego Water Company* v. *City of San Diego*, (Cal.) 62 A. S. R. 261, 275, is not only in point as to the duty of the Company to show all items of expense to be proper, but it is especially in point on the exclusion of the expenses of this present litigation:

> "Whether all of the items complained of are proper or improper cannot be determined upon this record, but some of them are not shown to be proper. It will be the duty of the court on a re-trial to allow no item of expenditure which is not satisfactorily shown to be an actual and proper charge in the actual conduct of the business of supplying water; and, when legal or other general expenses are claimed, they must be shown to have had a proper relation to that business. Of course, the items of expense in the present action should be disregarded."

4. SPECIAL APPRAISAL EXPENSE AND EXPENSE OF DOLLAR GAS CASE.

Exhibit "327" (p. 1502, vol. 5) is a special account established in January, 1913, in which is entered various items of expense incident to the appraisal of this property for the purpose of this suit and various other expenses relating to this trial, amounting for the year to $10,444.78. We need not argue at length the impropriety of including this expense as an operating expense for the purpose of testing the validity of this gas rate. As we have already argued in connection with the increased legal expense resulting from this present suit, this special appraisement and all other expense resulting from this suit, or in any manner connected with it, cannot be included as a part of the expense to cut down the revenues for the purpose of testing the validity of the rate. It must not be forgotten, however, that in all of Mr. Lea's calculations as well as those of the master as to the net return yielded under the old rate as well as under the new, these items of expense have been included by him.

### 5. SUNDRY EXPENSE.

In the 1913 classification there is an account denominated sundry expense, which bears a very close similarity to the incidental expense account for the previous years which we have already discussed. It is set out in full in Adams' Exhibit "330" (p. 1502, vol. 5). It will not do to say that all of this account is to be eliminated but we will say that a very large part of it should be eliminated. It is not clear to us to what extent these items were charged to operation, but at all events the items are interesting when considered in connection with the gas business. The entries for the month of January aggregate $275 and we do not find a single item there that is a legitimate operating expense for this company. The aggregate $207.91 of the items for February we think should be entirely excluded as there is no item there shown which clearly appears as a legitimate operating expense. Certainly the item of $18.00 with the Banks Law Publishing Co. for law books for E. C. Strode was not proper nor the item of $169.23 for J. A. Bogg's note. But we will not occupy space in a further discussion of these items. We ask the court to look them over and see how many of them look like legitimate items of operating expense in the gas business.

### 6. TRAVELING EXPENSE.

Exhibit "321" (p. 1502, vol. 5) is the traveling expense account of 1913 and shows a total spent for traveling alone in that year of $742.25.

These gentlemen are doing far too much traveling at the expense of the Lincoln gas consumers. There is no reason why the gas consumers should be burdened with the expense of these junketing trips, and this item should be excluded from the operating expenses, not only for 1913, but for all years preceding. It will be seen that for the years previous

to 1913, these traveling expenses were run into the "incidental expense account," and that 1913 was not an exceptional year for traveling expenses.

7. PROMOTING NEW BUSINESS.

Since this Company has a monopoly of the gas business in Lincoln, one would naturally think that the expense of promoting new business would be very small. Everybody knows what gas is used for. Gas has been used in this country for about a hundred years. The public needs very little education as to the use of gas. Yet this Company for a number of years has been spending an enormous sum annually to promote new business. Exhibit "326" (p. 1502, vol. 5) is the new business account for 1912 and it shows that the Company spent in that year for promoting new business $19,696.64. We have already had occasion to refer to this expense in connection with the matter of "going value." We have pointed out that for ten or twelve years this Company has had a new business department and has been spending large sums of money to promote new business and now that the new business has been promoted to its present proportions Mr. Lea seeks to capitalize the business thus built up to the extent of $225,000 as an asset upon which the Company is entitled to earn dividends. We contend that insofar as it is proper to spend the revenue of the Company to build up the business and charge the same to operating expense that this is the sum total of the burden which the public should be called upon to bear in connection with the matter of building up the business and to include the business thus built up and charged to the expense of operating as an asset of the Company upon which it is entitled to earn a return is nothing but duplication. Mr. Whitten in his work on valuation of public service corporations (Sec. 641), says:

> "Some estimators, while allowing in the valuation for a capitalization for the cost of promoting business, nevertheless treat the current expenditures for this purpose

> as an operative expense in estimating future income requirements for rate purposes. Of course this is wrong, for this item cannot be charged both to operation and to capital."

If, therefore, the court shall conclude that "going value" is a proper element to include among the assets of the Company for rate purposes it seems to us that it necessarily follows that all of this item for the promotion of new business should be eliminated from the operating expenses to avoid duplication.

And whether eliminated or not it certainly requires no extensive argument to show that approximately $20,000 is too much to spend in the single year of 1912 for promoting new business in a gas plant that has absolutely no competition in the sale of that commodity. It is ridiculous to claim that any such expense is either necessary or reasonable. If anything is allowed for the item of promoting new business it should be a modest sum and it was for the Company to show just what that sum should be and it has failed to do so.

This record shows that the total amount spent by this company to promote new business alone for the years 1903 to 1913, inclusive, amounts in the aggregate to $155,610.93, as the following table will show:

NEW BUSINESS EXPENSE.

| | |
|---|---|
| 1903 (Adams' Ex. "281," bot. p. 1481)... | $ 5,578.97 |
| 1904 (Adams' Ex. "282," bot. p. 1482)... | 16,400.65 |
| 1905 (Adams' Exhibit "283," p. 1484)... | 15,919.73 |
| 1906 (Adams' Exhibit "284," p. 1484)... | 13,432.41 |
| 1907 (Adams' Exhibit "285," p. 1485)... | 13,394.04 |
| 1908 (Adams' Exhibit "286," p. 1486)... | 11,634.96 |
| 1909 (Adams' Exhibit "287," p. 1487)... | 14,019.36 |
| 1910 (Adams' Exhibit "288," p. 1488)... | 16,152.75 |
| 1911 (Adams' Exhibit "289," p. 1489)... | 18,985.52 |
| 1912 (Adams' Exhibit "290," p. 1490)... | 19,692.64 |
| 1913 (Plaintiff's Exhibit "424," p. 2062). | 10,399.90 |
| Total ..... | $155,610.93 |

We not only contend that this expense is almost wholly unnecessary in the case of a monopoly of a commodity so well known, and so long used as gas, but we also contend that if any new business at all has been brought to the Company as a result of this expenditure, *it is insignificant as compared to the result which would have been obtained by saving the money and reducing the price of gas correspondingly.* A simple announcement, each year, that the Company had reduced gas to the extent which would be represented by this new business expense, would have done far more to bring new consumers to the Company, and to encourage old ones to consume more gas, than a policy of exacting exorbitant rates from gas consumers and spending it in subsidizing newspapers in the form of advertising, donating large sums to commercial clubs and other institutions, spending large sums in divers forms of entertainment, and donating to bankers, city officials and prominent business men free gas and electricity at the expense of other consumers, and running these donations into the operating expense as so much money paid out, could possibly do. And what is more to the point, a reduction of the rate, even though it brought about reasonable economy, cut down the advertising bills, cut out the junketing trips for the heads of the departments, and put an end to the cigar bills, cafe bills and other forms of extravagance, would have inured to the benefit of the gas consumers from whom this company draws all of its money, and would have created a proper, healthy relation between the company and the consumers, which would end this litigation and wipe out practically all of its legal expense.

In order that it may be seen how this money is spent we direct attention to Exhibit "326." (P. 1502). It will be seen that a very large amount of the money is spent for advertising in the various newspapers and publications in the city and by electric signs and window display. A very

large part of the money, and perhaps the largest part, is used in connection with demonstrating appliances, such as gas stoves and electrical appliances, and it must not be overlooked that the total money spent to promote new business is to promote the electric business as well as the gas business, and also to promote the sales of gas appliances and electric appliances. The electrical department has strong competition, but the gas department has none. There is some reason for spending money to promote and build up the electrical business where competition exists, but there is little excuse for spending much money in promoting the gas business where there is no competition. *Yet this company apportions this new business expense 80 per cent to the gas department and 20 per cent to the electrical department.* We have here, then, not only a sum of money spent for the promotion of new business which is enormously excessive, but it includes the sale of gas and electrical appliances, which do not belong to a public service business, but is a purely private business in competition with various dealers of the city who handle the same articles, and it includes the electrical department as well as the gas department, and yet 80 per cent of the entire expense is entered in the operating expenses of the gas department.

### 8. OFFICE RENT.

This company, during the pendency of this suit, and in spite of the fact that this "confiscatory rate" was staring it in the face, entered into a lease for an elaborate office at the corner of Fourteenth and O streets at a rental of $450 per month. In order that the court may see how poverty-stricken this corporation is, and what a scrupulous regard it has for the conservation of its revenues, we have caused two photographs to be taken, one of the interior and one of the exterior, of this magnificent office. Exhibit "336" (p. 1590, vol. 5) is the exterior view of a part of this office only.

The entire ground floor being too long for the capacity of the camera, the photographer was only able to take that portion of this side of the building devoted to displaying gas and electrical appliances, which may be seen in the windows. The elaborate and magnificent offices, occupied by the heads of departments and clerical force of this corporation, are still farther to the rear of the building. They are very luxurious in their furnishings, the cost of which is reflected in Mr. Lea's inventory where the details are given (Exhibit "7-I," p. 1320, vol. 4), showing a total valuation of the office furniture and fixtures alone of $13,031, two-thirds of which, or $8,606, is apportioned to the gas department.

Exhibit "335" (p. 1590, vol. 5) is an interior view of the main office only, showing the display room with its beautiful chandeliers, electric fans, upholstered settees, marble wainscoting, palms, etc., etc. We regret that the magnificent quarters of the heads of departments (by which term we mean the same gentlemen whose Country Club dues and Commercial Club dues, cafe and cigar bills are entered in the operating expenses of the Gas Company) cannot be shown in this photograph. They are farther to the rear and this enables the occupants to transact so much of the business as is transacted by them away from the noise and turmoil of O street and away from the vulgar crowd.

We call attention at this point to the enormous increase in the value of the office furniture alone resulting from the opening up of this magnificent new office. Let us quote the testimony of the manager, B. C. Adams (p. 1294, vol. 4):

Q. Mr. Adams, the item of office furniture is carried on your books and inventory at what valuation?

A. $12,391.21.

Q. And the same item is carried on the books at a valuation of what in 1901?

A. Well, it wouldn't be the same item. The same heading was carried at $240.

Q. In other words, you had your office furniture valued November 30, 1901, and entered on your books at a valuation of $240?

A. Yes, sir.

Q. Whereas you have it now $12,391.21?

A. Yes, sir.

Perhaps the logical place to discuss the matter of office furniture was in connection with the works equipment where it is classified by Mr. Lea. But since the enormous increase in the office furniture was made necessary by the establishment of the new office, we beg leave to discuss the item briefly at this point in connection with our criticism of the item of office rent. If this gas business could be conducted up to 1901 with an investment of $240 in office furniture, we are entirely unable to understand why the consumers of gas and electricity should be called upon now to pay a return upon an investment for office furniture alone of $12,391.21. No such investment is necessary, and the photograph of the interior of the office to which attention has been called will show that this office is far more elaborate than can be justified, especially when the expense is to be used to assist in striking down a gas rate.

Is there any justification for this company paying $450 office rent to conduct a business which has no competition and which could be conducted with just as much convenience to the public and with more profit to the company on a side street and at a rental of from $100 to $150 per month? We call attention to the testimony of George Monagan (beginning on page 572, vol. 2), as to rents on some of the side streets in the city of Lincoln as follows:

No. 934 P street, $100 per month; No. 938 P street, $75 per month; No. 1200 P street, $90 per month; No. 1204 P street, $80 per month; corner room same building, $90 per month; Brownell block, 135 So. Eleventh street, north room, $135 per month; south room $150 per month. North room occupied by a piano store, south room by a cafe; both rooms with full basement and each with as much or more space as the main floor of the Gas office. No. 143 So. Eleventh street, occupied by Stamm's dry goods store, with full basement, $125 per month; floor space larger than floor space at Gas office.

Now, there isn't any reason why this company should expend for rent to exceed $150 per month, and this testimony of Mr. Monagan shows that $150 would be ample to procure an adequate and sufficient office room to transact the gas business. Mr. B. C. Adams, the manager, undertook to justify this office rent. He claims that this office is necessary for the convenience of the public in the matter of paying gas bills, and registering kicks, but the location of the present office is not as convenient for the public as many of the buildings referred to in Mr. Monagan's evidence. All of the buildings referred to by Mr. Monagan are more nearly in the center of the business district of Lincoln than the present gas office. It is notorious that O street rentals are all out of proportion to the rentals on the side streets. Merchants and others engaged in business having strong competition are willing to submit to the exorbitant rentals for the privilege of being located upon O street, the principal business street of the city, but for a business like the gas business, free from competition, a location on any of the side streets would answer every purpose and would reduce the rent to not over $150 per month. We therefore contend that the item of office rent should be reduced to not to exceed $150 per month.

(b) IMPROPER ITEMS.

1. LOSS ON APPLIANCES.

Again we call attention to the fact that one of the reasons assigned by Mr. Adams, the manager, for the necessity of having this office on O street is that it was necessary for the purpose of making a proper display of gas and electric appliances. As to this point we wish to say that the sale of gas and electric appliances is no part of a public service business and the public has no power to regulate the prices or any control whatever over that branch of business. It is purely a private business, coming directly in competition with other dealers in the city handling the same kind of appliances. The public should not, therefore, be directly or indirectly burdened by this appliance business, either in the form of an increased rental so as to display appliances, nor by reason of any loss sustained in the sale of appliances.

We call attention to the fact that the annual report of the gas department for 1912 shows a loss on appliances alone of $7,301.93, and this loss, of course, is a part of the operating expense in the gas department (see B. C. Adams' testimony, p. 1294, vol. 4), as follows:

Q. Isn't it a fact that your annual report ending December 31, 1912, shows a total loss on gas appliances alone of $7,301.93, or thereabouts?

A. I don't remember; I could tell by looking at the report.

Q. What do you recognize from this report? (Handing paper to witness.)

A. Referring to the copy of the report handed me, are the totals for advertising and newspaper space, exhibition, salaries, wages and miscellaneous expenses, and then adding the cost of appliances sold to the appliance expenses and from that getting the total cost of the appliances, and then deducting the amount received from appliances, I find for the year represented in this sheet $7,301.92.

Q. And that is a loss that is reflected in the operating expenses of this company for that year, is it not?
A. Yes, sir.

Now, we submit that this is a pretty piece of business management. The logic runs thus: This expensive office is made necessary in order that the company may have a display window on an O street corner in which to display appliances in order that it may lose over seven thousand dollars in one year as a net result. If these people like this appliance business and wish to continue to dabble in it, then they ought to be required to pay the extra rent made necessary by that business and the gas consumers ought to be relieved, not only from the excessive rent, but from the entire loss sustained in the appliance business. This item of $7,301.93 should therefore be eliminated.

The following quotation from *San Diego Water Co.* v. *City of San Diego*, 62 A. S. R. 261, 275, is in point on the proposition that all expenses not actually incurred in supplying gas should be excluded:

> "Whether all of the items complained of are proper or improper cannot be determined upon this record, but some of them are not shown to be proper. It will be the duty of the court on a re-trial to allow no item of expenditure which is not satisfactorily shown to be an actual and proper charge *in the actual conduct of the business of supplying water;* and when legal or other general expenses are claimed, they must be shown to have had a proper relation to *that business.*"

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2. EAST LINCOLN DISTRICT HOLDER AND SUBURBAN SERVICE.

We contend that if it had not been for the installation of the gas service at University Place and Havelock the East Lincoln district holder would never have been erected. A. D. Adams makes it quite clear in his testimony that the erection of the district holder and the extension of the mains to Havelock and University Place were coincident in point

of time, and were really a part of the same piece of construction. He also shows that there is no justification, and no economy, in establishing a district holder away from the plant for the benefit of the Lincoln service, and that it is not the modern method of overcoming pressure difficulties. He shows that if the district holder had been established for the purpose of correcting difficulties in the pressure in the city of Lincoln, there was as much or more necessity for it in southeast Lincoln than in East Lincoln, and he calls attention to the main maps of the company in support of his testimony (see p. 2546).

We wish to call attention to Exhibit "389" (bot. p. 228-29, vol. 5) a copy of a letter written by the manager of this company to the New York office to the effect that it would not be wise to attempt to install gas stoves in Havelock until the completion of the East Lincoln holder, because the pressure there would be inadequate without the holder (see also Wettling's testimony p. 4199). So we contend that the East Lincoln holder, even though it may serve some purpose in assisting the pressure in that locality, was erected primarily on account of the University Place and Havelock service, and would not have been erected but for such suburban service; and as we have already said, the total investment in the East Lincoln holder, and the buildings and equipment there located, should be eliminated from the inventory of property to be considered here and the total expense incident to the maintenance of the East Lincoln holder should also be eliminated. The annual report of the company shows a charge to operating expense for maintaining this district station, $3,425.13 for the year 1912, and the testimony of the company's witnesses concedes that this East Lincoln holder is connected up with the Havelock and University Place service, and at least a part of its purpose is to furnish pressure for those suburbs, and without this holder the suburban pressure would be

inadequate. Since it admitted that this East Lincoln holder is used at least jointly between the East Lincoln service and the suburban service, the burden was upon the company to show what, if any, part of the investment should be included in the Lincoln inventory, and what, if any, part of the expense of maintaining and operating this district holder station should be included in the operating expenses of the Lincoln service, and since the company has not furnished the means of making the proper apportionment, the whole matter should be disregarded and eliminated from consideration here.

And we think it will not be seriously controverted that the expense of the Havelock and University Place service should be excluded entirely as well as all of the receipts from that service, but merely to exclude the operating expense which the company has seen fit to assign to the suburban service does not do full justice to the Lincoln service. The suburban service should carry its share of the general expenses of the company, including its share of the manufacturing and distribution cost, as well as all of the general expenses incident to the maintenance of the office and the payment of executive salaries, and it should also bear its share of plant investment.

### 3. OCCUPATION TAXES.

We referred to and discussed the occupation taxes in several places in preceding portions of this brief. It is one of the items which the master included and which we contended should be excluded from the operating expenses in arriving at net revenues for the purposes of this case. We wish to make it clear that at the time this suit was begun there was in existence an ordinance in the city of Lincoln seeking to impose upon complainant an occupation tax of 2½ per cent of its gross receipts. Complainant had never

complied with this ordinance and has never paid anything under said ordinance. On the contrary it attacked said ordinance as invalid and discriminatory in its bill in this suit. The city, shortly thereafter, attempting to collect the occupation taxes under said ordinance by suit in the state courts. Judge W. H. Munger of the United States District Court, before whom this present suit was tried the first time, held said occupation tax ordinance void. The city council then on ..... 19...., enacted another occupation tax ordinance eliminating the discriminatory feature and seeking to collect from those selling both gas and electricity an occupation tax of 3 per cent of gross receipts. The complainant refused to comply with this new ordinance and did not pay and has never paid anything under it. The master held the 1907 occupation tax ordinance valid and allowed the amount of the occupation tax called for by it as a part of the operating expense of that year. The second occupation tax was not put in issue in the bill in this suit and the master allowed the amount called for by it as a part of the operating expeness in his deductions as to the rate of return for 1912, notwithstanding the company had never paid it and was defending against its collection in a suit in the state courts wherein the city was attempting to enforce it. Judge Morris, who heard the exceptions to the master's report, held the original occupation tax ordinance void.

Since the judgment in the instant case on the master's findings, the Nebraska Supreme Court held the first mentioned occupation tax ordinance void, and sustained a plea in abatement as to the second occupation tax ordinance suspending its enforcement until the termination of the instant suit in the federal courts.

See, *City of Lincoln* v. *Lincoln Gas & Electric Light Co.*, 100 Neb. 182 and 188.

As we have already said, since the complainant never paid anything under the first mentioned ordinance and since the same has finally been held void by the state supreme court, there can be no longer any claim that it was a part of the company's operating expenses at the time the gas rate ordinance was to go into effect nor at any other time.

As to the second occupation tax ordinance it is our contention that the company cannot resist payment and at the same time claim the amount of the occupation tax as a part of the operating expenses.

### 15. Lea's Figures as Compared With Construction Account.

Before closing this brief we wish to call attention to the striking difference between the testimony of Mr. Lea, as to the additions made to the gas plant in the several years 1907 to 1912, inclusive, and the actual record of the company as shown in its constructive account. Now, the records of this company ought to mean something, especially entries made since the last trial of this case. We are not now going back into the "dark ages" of this company, and there can be no excuse for claiming that the construction account does not contain all of the items of construction added to this plant since 1906 and the actual cost of construction. The following table tells its own story. Not only have we the construction account to compare with Mr. Lea's figures, but Mr. B. C. Adams, the former manager of the company, testified at page 1842 to the items of construction added to the plant in 1912, and his figures agree exactly with the construction account for that year. The table is as follows:

| Year | Per Lea (Ex. 7-P) | Company Const. Acct. (Ex. 163) | Excess Lea Over Const. Acct. |
|---|---|---|---|
| 1907 | $127,638.00 | $ 16,017.70 | |
| 1908 | 50,805.00 | 73,638.84 | |
| 1909 | 115,184.00 | 23,031.93 | |
| 1910 | 70,462.00 | 50,248.06 | |
| 1911 | 74,289.00 | 20,333.10 | |
| 1912 | 41,470.00 | 27,167.70 | |
| | $479,948.00 | $210,437.33 | $269,510.67 |

Mr. Lea's additions during said years, of course, includes $113,664 for going value, and other intangibles, but deducting these intangibles from Mr. Lea's "total added" we have $366,294, as the amount which Mr. Lea estimates was added during said years to the physical property without any engineering, overhead, or other intangible elements, as against the actual figures shown by the company's construction account of $210,437, or an excess of Lea's imagination over the company's books of $155,858.

Now, what excuse can there be for this? If Mr. Lea is a gas expert, as no doubt he is, then he had the means of going to the construction account of the company and ascertaining exactly what the company had added to its plant during each of said years. No one claims that these records have not been accurately kept, and an inspection of them for said years will satisfy the court that they are kept with scrupulous regard to details and that nothing has been omitted. Again we ask, what may we expect of a gentleman who comes here to estimate the value of a gas plant, and who expects a court to give credence to his testimony, and yet who is willing to put into this record an estimate of actual additions made to this physical property so enor-

mously in excess of what the company itself claims, especially when he had the ready means of determining the correct amount?

Wholly disregarding Mr. Lea's inflated estimate, and taking the company's records for it just as they are, we find that there has been added to this plant, since the last trial, by way of extensions, a very large sum. We are therefore now testing this rate ordinance, which was to go into effect in December, 1906, not by the property which the company had then, but by what it claims to have now. It was, therefore, to a very large extent, within the power of this company to endanger, if not to defeat, the rate by arbitrary additions to its plant while the rate suit was pending, and doubtless these large additions to the plant may be accounted for in this way. The plant has been extended, especially in the matter of holder capacity, far beyond present needs, and with a view to large future growth. In considering the validity of this rate, the court should remember the temptation placed before this company to add enormously to the value of its property and to build far beyond present necessity, in order to get the benefit of the increased value thus added in testing this rate. Careful consideration should therefore be given not only to the present value of the property, but also as to the actual necessity of these extensions. If the company has built beyond present necessities, this rate should not be endangered thereby, but the rate should be put into effect and tested out during a sufficient length of time to allow these new additions of the company to reach their full earning capacity and to permit the business of the company to overtake the extensions.

See *Spring Valley Water Co.* v. *San Francisco*, 165 Fed. 667.

The East Lincoln holder should be charged to the suburban service, for which it was primarily constructed, and this

should include all of the expense of maintaining that holder. In this connection we again call attention to Exhibit "389," being a letter from the manager of this company to the New York office, in which reference is made to the Havelock service and the East Lincoln holder. This letter contains the following language:

> "Our revenue in University Place for the first full month we have had, was $102. Things are going rather slowly out there at present, due to the dry condition of the surrounding country, so I am told. I feel, however, that since our first month's bills have been distributed, we will have pressure brought to bear on prospective customers by those already using gas. We have discontinued the acetylene plant at Havelock and are now furnishing gas from our University Place mains. The Havelock consumers are using the gas for illuminating purposes only and the revenue from them is very small. We do not feel that it would be wise to attempt the installation of gas stoves until our holder in East Lincoln is erected."

Attention is also called to the testimony of Mr. Wettling, where he admits that the East Lincoln holder is necessary to the suburban service (see page 807, vol. 3).

Even if it be true that this holder aids the East Lincoln service, still the value of such aid is so doubtful that it is difficult to measure it. It seems to us that a fair way to dispose of the East Lincoln holder is to assign it, together with all of its expenses, to the suburban service, in consideration of the use of the manufacturing plant and the mains which carry the gas to the city limits, and in consideration of the fact that all of the general expense of the company is charged to the Lincoln service. According to the 1912 report the suburban sales were 3.2 per cent of the total sales. The present value of the works equipment of this plant for 1912, according to Mr. Lea, was $196,759, and the value of the real estate of the plant, according

to Mr. Lea, was $42,867; 3.2 per cent of all of this property at the plant, as valued by Mr. Lea, would be $7,667. In addition to that, the mains from the plant to the connection with the Havelock line should be compensated for, and the Havelock service should be charged with at least 3.2 per cent of all of the expenses of the company. It certainly seems to us that these would be sufficient to more than compensate for the little value added to the East Lincoln service, by the use of the East Lincoln holder.

### 16. Offers of Company to Install $1 Rate.

Wholly aside from expert valuation, theories and deductions, we wish to call attention to the fact that this company, on several occasions, offered to install the $1.00 rate in consideration of certain concessions on the part of the city. At the time the rate ordinance was being considered complainant proposed to the city council to install a sliding rate which would go down first, to $1.15, and then decrease five cents per year until it reached the $1.00 rate in 1911. In 1910 it proposed that if 75% of the gas consumers would waive their claims in writing, for all overcharges collected during the pendency of this suit, the $1.00 rate would be installed at once. In the fall of 1912 complainant offered to install the $1.00 rate and pay the city $20,000 of the disputed occupation taxes, and to pay the overcharges involved in this suit up to December, 1910, from which time the $1.00 rate was to be considered as having gone into effect, and that the $1.00 rate was to remain in force until January 1, 1914, when it was to drop to 95 cents, said last proposition being made as an offer looking to the settlement of this suit, the offer was rejected by the voters of the city. Now is it reasonable to suppose that the company either for or without a consideration would agree to install the $1.00 rate and even to reduce it to 95 cents if it considered either rate

confiscatory? The fact that the company offered to install the $1.00 rate implies that it was well aware that it could do so without confiscating its property. During the campaign for the proposed compromise of 1912 the company in its attempt to influence the voters to accept the offer advertised extensively in the local papers. One of its favorite productions was a cut with lines thereon indicating how much better off the public would have been had the previous offers of the company to install the $1.00 rate been accepted because, as this cut shows the public would have been enjoying the $1.00 rate from and after 1911. (See exhibit 334, page 2026, vol. 5).

**17. As to the Contention That the Gas Business Is Hazardous.**

Certain testimony was introduced by complainant as to the rates of return expected of business institutions in this locality. All of these witnesses admitted on cross-examination that their estimates were not influenced by locality at all and that the rates of return to which they testified as being fair were applicable anywhere. They practically all admitted that interest rates were little, if any, higher here than elsewhere, and no higher at all than at any other point in the middle west. None of these witnesses had had any experience in the gas business and their testimony had no application to a business having a monopoly upon a stand ard and necessary commodity such as gas.

We introduced in this case exhibit "17" (page 1706, vol "5"), and exhibit "18" (page 1708, vol. "5"), to which we direct the court's attention. These are circulars gotten out by Henry L. Doherty & Company, the operators of the Lincoln plant. Exhibit ',17" is a chart which shows graphically, not only the rapid and constant increase of both gross earnings and net earnings of gas and electric properties, but also shows how free such properties are from the hazards of fluc-

tuation. This chart shows what these people really think of gas properties as investments when they are not in a suit attempting to defeat rate regulation. The reading matter in exhibit "17" explains how the chart is made up, and then adds:

> "The resulting curves shown above prove that the gross and net earnings from the gas and electric business increased the most rapidly and that they are practically unaffected in their rate of increase even by such panic conditions as those of 1907 and 1908."

Erhibit "18" is a circular gotten out by Henry L. Doherty & Company with special reference to the securities of the Cities Service Company, one of the numerous companies controlled by Henry L. Doherty Company. The circular contains the following matter relative to the subject now under discussion:

> "Gas and electric properties have many strong points in their favor, tending to establish stability of earning power and safety of their securities. Their business is the selling of a public necessity. In good times or bad times their product is in demand. Luxuries may be foregone in times of financial stress, travel may be curtailed, and in many ways the public's expense may be reduced, but light and heat are a necessity of every day life and are among the last things to be affected by general conditions in business. In the present day of continual development of new adaptations and uses for gas and electricity, as well as the steady increase in the population of our American cities, there are many opportunities for expansion and growth of well managed and aggressive gas and electric companies."

As indicating what Henry L. Doherty & Company consider an attractive rate of return in a business having all of the advantages described in the foregoing quotation we quote further from said Exhibit 18:

> "Dividends are paid monthly at the rate of 6% per annum on preferred stock and 4% per annum on common stock."

And the properties which said circular tells us were owned and operated by the City Service Company, (the Doherty holding company described in the exhibit) from which said dividends were derived are the Denver gas and electric plant, the gas plant at Spokane, the electric plant at Joplin, Mo., and the Brush Electric Company at Galveston, Tex., all western concerns where rates of interest are higher than at Lincoln, with the possible exception of the Joplin property, where the prevailing interest rates are about the same.

Certainly these people can have no just criticism of the master's finding that in such a business 6% is a fair return since they themselves consider it sufficiently attractive to be held out to the public as an inducement to purchase their preferred stock, whereas 4% is good enough for one entering into the venture as a common stockholder.

### 18. Rate of Return.

In the preceding subdivision we referred to the fact that the master found that 6% was a reasonable rate of return at Lincoln for a business of this character, and that Henry L. Doherty & Company, the operators of this plant, also consider that rate and even 4% attractive in the case of other western plants. We shall now make a few final deductions as to the actual rate which this company would earn under the $1.00 rate. We have already shown that had the master eliminated the occupation tax from the operating expenses for 1907, his net rate of return for that year at the $1.00 rate would have been a little over 6.1% without any other alteration in his figures, this being upon the actual sales of that year and allowing nothing for the probable increase of sales under a reduced rate. We have shown, also, that complainant has been relieved of the occupation tax of that year by a decision of the Nebraska Supreme Court, and that it must therefore be eliminated. We have also pointed out that

the master found that, on the actual sales made in 1912, the company would have realized a net income at the $1.00 rate of 6.9%, whereas, if he had eliminated the occupation tax for that year the rate would have been 8% without making any other changes in the master's figures. For the intervening years he made no findings as to return but referred to Mr. Lea's figures as indicating that, for those years, the return would have been substantially higher, and he is borne out in this by Mr. Lea's Exhibit "7-P," (page 1358, vol. 4 of the printed record), where Mr. Lea estimates the "Corrected Net Earnings, Gas Department in % of Then Present Value" for said several years at the $1.20 rate as follows:

| 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|
| 7.029 | 9.247 | 9.464 | 8.437 | 8.029 | 6.698 |

And in Lea's Exhibit 105 (p. 1364, vol. 4) he shows that at the $1.00 rate the return would have been, as the master states, from 50% to 100% higher for the intervening years than for either 1907 or 1912.

Since said 2xhibit 7-P is the basis for Mr. Lea's calculations of net return under the $1 rate we desire to point out wherein we think his so-called "Corrected Net Return" should be still further corrected:

### 18. Rate of Return.

### ANALYSIS OF EXHIBIT "7P."

In Exhibit "105" (p. 1364, vol. 4) Mr. Lea has shown the net return for the years 1907 to 1912, inclusive, to the complainant from its gas department, based upon the present value of its gas property as found by him, with gas at $1.00 per thousand cubic feet. Mr. Lea's values are found under the heading "The Then Present Value of Entire Property," at the foot of each column in Exhibit "7-P," for the re-

spective years. It will be seen by an examination of Exhibit "7-P" that he has deducted from the receipts of each year all the money received from gas sales outside of Lincoln. He then credits to the operating expenses the output cost of gas sold outside of Lincoln. He then adds to the operating expenses a charge for a correction in the residual account, and then adds his full allowance for depreciation to the operating expenses. The total, after doing this, he calls "Corrected Operating Expenses Gas Department," which he deducts from the corrected gross earnings and arrives at the total "Corrected Net Earnings Gas Department." These net earnings he carries into the first figure in each column shown in Exhibit "105," and from which he deducts one-sixth (1/6) of the gross earnings in order to reduce the net income to the $1.00 basis. Using this method, Mr. Lea finds the net return to be at the $1.00 rate for the respective years:

| | |
|---|---|
| 1907 | 2.136% |
| 1908 | 4.211% |
| 1909 | 4.742% |
| 1910 | 3.761% |
| 1911 | 3.220% |
| 1912 | 1.925% |

Exhibit "7-P" is subject to the following criticisms:

The item "Gross Earnings Gas Department as Reported" does not include the non-operating revenues as disclosed by Exhibit "153." While these revenues for the years 1907 to 1910, inclusive, are small, ranging from $56.00 to $115.00 per year, the situation is different as to 1911, when these revenues amounted to $4,653.88.

The next item in Exhibit "7-P," "Deduct Receipts from Gas Sales Outside of Lincoln," is unfair in that the total property values at the foot of the various columns include all of the property outside of the city of Lincoln. We should

either exclude this property or include the revenues. It was claimed in the oral argument before the master that these properties were excluded by Mr. Lea in his corrected figures in Exhibit "425." However, upon analysis we are unconvinced that this has been done. The same is true of the item "Deduct Output Expense Gas Sold Outside of Lincoln," where Mr. Lea has ostensibly deducted the proportionate cost of manufacturing the gas sold outside of the city limits. The fact that the total operating expenses for 1912 show a cost of 74.92 cents per thousand cubic feet on all gas made, and the amount deducted from the total operating expenses on account of gas sold outside of Lincoln is but 26.43 cents per thousand cubic feet of gas, indicates another case of Mr. Lea's unfairness. (See Exhibit "7-L," p. 1358, vol. 4, Apportionment Operating Expenses 1912.) This same method was used for the other years.

His next item, "Add for Depreciation," is the total depreciation allowance. Since the various witnesses for the company have repeatedly testified that certain replacements which have taken care of depreciation were charged into operating expenses, fairness requires credits against this item for such allowance so charged into operating expenses. (See Phillips' testimony, page 1203, vol. 4.)

This exhibit is subject to the further criticism that the expenses common to both the gas and electric departments have been divided on the basis of 80 per cent to gas and 20 per cent to the electric department on the supposed basis of the relative number of consumers. Reference to Exhibit "101" (p. 1849, vol. 5) discloses that at no time during the history of this litigation has the percentage of gas consumers ever been as high as 80 per cent, and for the year 1912 it was as low as 73 per cent. Besides, the total number, as carried through the years 1907, 1908, 1909, 1910 and 1912, as will be seen where this exhibit discloses eighty consumers

less in 1912 than 1911, although the annual reports show a gain for each of these years over the year previous. It will be seen that the relative percentage during these years, 1907 to 1911, inclusive, was excessive in the gas department. Under this division these expenses were wrongfully loaded upon the gas department to the extent of at least 7 per cent of their total amount, which excess in dollars for the various years is as follows:

| | |
|---|---|
| 1909 | $1,225.56 |
| 1910 | 816.09 |
| 1911 | 1,452.26 |
| 1912 | 3,300.35 |

In the handling of the percentage figures by Mr. Lea, he has included in the total amount of property on which the net return is figured all additions to the plant made during the years in which the net returns were earned. This is unfair for the reason that these improvements and additions do not serve the public for the entire period, and as a matter of fact are seldom put into complete operation much before the end of the year and allowance for interest during construction is also charged by him into the capital account. This is one of Mr. Lea's many methods of taking advantage of the law of squaring numbers. Also in his total on which he has computed his net return he has included the sum of $127,834.00 for paving over mains, which must be eliminated. In addition to this amount for paving over mains there is the further sum of $16,898.00 that should be deducted for paving over service pipes, for which the gas company did not pay one cent. Paving over mains will be found in Exhibit "7-J" under the heading "Distribution System—Street Mains, Net Construction Cost of Tearing up and Replacing Pavement" $110,202, to which we have added 16 per cent for engineering, giving $127,834.00, which, as we understand it, has been carried into the present value totals undepreciated.

Paving over services will be found in Exhibit "7-J" (p. 1258, vol. 4) under the heading "Distribution System—Services, Net Construction Cost of Tearing up and Replacing Pavement" $14,567.00, to which he added 16 per cent for engineering, etc., and carried the resultant figure into the present value total undepreciated.

In the operating expenses is included the following sums for the respective years mentioned for the items of "promoting new business:"

1907 $13,394.04 (see p. 301, vol. 1, P. R., line 4 from bot.)
1908 $11,634.96 (see Exhibit "26," P. R., line 1507).
1909 $14,019.36 (see Exhibit "27," P. R., line 1507).
1910 $16,152.75 (see Exhibit "28," P. R., line 1507).
1911 $18,985.52 (see Exhibit "29," P. R., line 1507).
1912 $19,692.64 (see Exhibit "30," P. R., line 1507).

This company has a monopoly upon an absolute necessity. No one can buy gas except from it, and any money spent in promoting new business is a total waste. The money thus spent should be reflected in rate reduction.

***

Certainly this item should be eliminated from the operating expenses. The operating expenses, as shown by Mr. Lea, include all of the expenses of this litigation, which are not properly chargeable to operating expenses in ascertaining the net return as previously pointed out. These expenses amount to approximately the following cents per M. C. F. of gas sold for the respective years:

| Year | Cts. Per M. Cu. Ft. Gas Sold |
|---|---|
| 1907 | 0.71 |
| 1908 | 0.43 |
| 1909 | 0.42 |
| 1910 | 2.32 |
| 1911 | 3.15 |
| 1912 | 2.90 |

being the excess over light expense of the last normal year, to-wit: 1906. (See table, page 187 ante.)

There should also be deducted the excess paid for executive salaries, in cents per M. C. F. gas sold as follows:

| Year | Cts. Per M. Cu. Ft. Gas Sold |
|---|---|
| 1908 | 0.77 |
| 1909 | 1.20 |
| 1910 | 2.88 |
| 1911 | 2.37 |
| 1912 | 2.01 |

We have corrected Exhibit "7-P" to show the net earnings of complainant, on Mr. Lea's valuation, with the following result:

## EXHIBIT "7-P" (op. p. 1358, vol. 4)—CORRECTED.

| Year Ending December 31st | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
|---|---|---|---|---|---|---|
| Gross Earnings Gas Dept. as Reported | $215,776.20 | $234,347.51 | $245,124.74 | $251,942.37 | $274,292.95 | $282,162.11 |
| Deduct Receipts from Gas Sales Outside Lincoln | 888.00 | 1,554.58 | 1,249.18 | 2,984.66 | 6,270.98 | 8,986.18 |
| Corrected Gross Earnings of Gas. Dept. | 214,888.20 | 232,792.93 | 243,875.56 | 248,957.71 | 268,021.97 | 273,175.93 |
| Non-operating or Miscellaneous Revenues (Ex. 153) | 100.00 | 56.00 | 115.77 | 109.15 | 4,653.88 | |
| Actual Gross Earnings Gas. Dept. in Lincoln | 214,988.20 | 232,848.93 | 243,991.33 | 249,066.86 | 272,675.85 | 273,175.93 |
| Total operating Expenses as Reported | 141,924.37 | 137,090.35 | 134,709.24 | 143,670.45 | 158,374.11 | 175,573.49 |
| Deduct Output Cost Gas Sold Outside of Lincoln | 302.88 | 464.27 | 321.17 | 566.73 | 1,184.38 | 1,873.62 |
| Deduct for— | | | | | | |
| 1. Portion cost gas sold outside, not deducted by Lea | 282.60 | 444.58 | 364.97 | 685.58 | 2,327.43 | 3,437.46 |
| 2. Excess common expense charged gas dept. | | | 1,225.56 | 816.09 | 1,452.26 | 3,300.35 |
| 3. New business expense | 13,394.04 | 11,634.96 | 14,019.36 | 16,152.75 | 18,985.52 | 19,692.64 |
| 4. Excessive legal expense | 1,250.38 | 815.20 | 752.00 | 4,659.72 | 3,955.66 | 5,896.09 |
| 5. Excessive executive salaries | | 1,370.32 | 2,136.08 | 5,749.75 | 4,920.13 | 3,814.04 |
| 6. Excessive incidental expense | | 795.79 | 1,562.94 | 782.16 | 2,722.29 | 2,050.00 |
| 7. Shortage gas making coal | | | | | | 100.00 |
| Total to deduct | 15,229.90 | 15,525.12 | 20,382.08 | 29,412.78 | 35,547.67 | 40,164.20 |
| Leaving | 126,684.47 | 121,586.25 | 114,326.16 | 114,257.67 | 122,826.43 | 135,409.29 |
| Add for correction Gas Coal Shortage | | | 100.00 | | | |
| Add for proper adjustment Residuals | 807.38 | 877.31 | 914.14 | 940.26 | 1,004.47 | 1,027.38 |
| Corrected Operating Expenses | 127,501.85 | 122,442.56 | 115,340.30 | 115,197.93 | 123,830.90 | 136,436.67 |
| Corrected Net Earnings Gas Department | 87,386.35 | 110,406.37 | 128,651.03 | 133,868.93 | 148,844.95 | 136,739.26 |
| % Net Return on Lea's Present Value | 10.5 | 12.6 | 13.2 | 13.02 | 13.6 | 12 |

On the basis of Mr. Lea's present valuation for January 1, 1913, as corrected by him, (Ex. 426, page 2063, vol. 4), viz, $1,090,913, after deducting therefrom the sum of $144,732, included by him for paving over mains and service pipes which were laid before the city paved the streets, then deducting from his total receipts one-sixth of the amount to reduce to the $1.00 basis, and eliminating $7,050 occupation tax which he included in his operating expenses his net return on his own valuation thus modified, and at the $1.00 rate would be 6.53%. And we must remember, too, that Mr. Lea's present value includes $225,000 as a separate item of going value, some property outside of Lincoln, all of the value of the East Lincoln holder, (used primarily to furnish pressure for the suburbs), and a working capital several times larger than any ever used by the company, and also over $30,000 of service pipes paid for by gas consumers and which the master eliminated.

**FINAL DEDUCTIONS AS TO NET RETURNS.**

**1. With operating expenses reduced to the normal of other companies.**

Mr. Adams, in Exhibit "342," (top p. 1592, vol. 5) shows in cents per thousand cubic feet of gas sold what the salaries, office, distribution and general expenses of the complainant should properly be for the years 1905 to 1912, inclusive, beginning with 15 cents for 1905 and ending with 12 cents in 1912. He substantiates his estimate with Exhibit "349," (p. 1595, vol. 5) which shows what twenty-four different plants in Massachusetts, six of them having an output within the range of the output of the complainant, during the period from 1905 to 1912, paid for these expenses. He has also shown, in Exhibits "283" to "290," inclusive, that these items have cost the complainant all the way from 23.10 cents in 1905 to 31.12 cents in 1912 per thousand cubic feet of gas sold.

In Exhibits "283" to "290," inclusive, (p. 1483 to 1490, vol. 4) Mr. Adams has set out all of the expenses except the materials and labor, making gas, repairs, renewals and taxes actually incurred by the complainant. The items included in these exhibits correspond with the items covered in Exhibit "349." Included in Exhibits "283" to "290" are the items, Promoting New Business, Executive Salaries, Legal Expenses and Incidental Expenses, the history of which during the last six years is very enlightening, and is set out below in cents per thousand cubic feet of gas sold:

| | | Ex. 101 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Ex. C | P. R. | Ex. 26 | Ex. 27 | Ex. 28 | Ex. 29 | Ex. 30 |
| | Line | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 |
| Prom. new bus. | 1507 | .0874 | .0747 | .0596 | .0686 | .0769 | .0835 | .0840 |
| Executive sal. | 1500 | .0182 | .0179 | .0256 | .0299 | .0467 | .0416 | .0380 |
| Legal expense | 1505 | .0049 | .0120 | .0092 | .0091 | .0281 | .0364 | .0339 |
| Incidental exp. | 1503 | .0139 | .0096 | .0137 | .0182 | .0137 | .0227 | .0204 |

It will be seen by a comparison of the column for the year 1906 with the column for the year 1907 in the above table that these items of expense show the normal course under the circumstances, the only increase being in legal expenses, which was due to this litigation, which commenced on or about the 1st of January, 1907. The abnormal increase commences with the year 1908 and continues throughout the years 1909 to 1912, inclusive. The increase of the legal expenses in the year 1912 over 1906 is almost 600 per cent. The increase in executive salaries from the last normal year, 1907, to 1912 was 2.39 cents per thousand cubic feet of gas sold, or almost 150 per cent. The other two items, should be eliminated entirely for the reasons heretofore given. The elimination of these two items, the excess in executive salaries, and legal expenses above pointed out calls for the reduction in the complainant's operating expenses of 9.14 cents per thousand cubic feet for the year 1907, 8.17 cents for the year 1908, 10.30 cents for 1909, 14.26 cents for 1910, 16.14 cents for 1911, and 15.35 cents for 1912.

In addition to these amounts there should be deducted from the operating expenses the expenses of the district holder station, and for furnishing pressure to the suburbs, which, for the year 1911, was .64 of 1 cent per thousand cubic feet of gas sold. Also for the year 1912 there was charged into the operating expenses $800 for a shortage in the coal stock appearing after the discontinuance of the manufacture of coal gas. This expense was properly chargeable to the manufacture of coal gas during the last year or so that the company was manufacturing coal gas, and was included in its operating expenses for the year when purchased, and then if these general expenses covered by Mr. Adams in his Exhibits "283" to "290," inclusive, are divided or apportioned between the gas and electric departments, upon the basis of the number of consumers in each department, there is still a further reduction to be made in the amount apportioned to the gas department for the reason that, as shown in Exhibit "101," the percentage of gas consumers in 1912 is 73, and the percentage of electric consumers is 27, while the division of these expenses has been made since some time in 1908 upon the basis of 80 per cent to gas and 20 per cent to the electric department. This would affect the items of general expense included in Mr. Adams' Exhibits "283" to "290," inclusive, to the extent of 8 3/4 per cent for 1912 and varying percentages back to 1908. After computing this through the various years mentioned, we find that the net amount of expense chargeable for the items covered by Mr. Adams' exhibits "283" to "290," inclusive, should be as set out in the first column below, which we will compare with Mr. Adams' figures as set out in the second column, as follows:

| | Company's Corrected Expense | | Adams' Estimate |
|---|---|---|---|
| 1907 | 11.32 | 1907 | 13.50 |
| 1908 | 12.04 | 1908 | 13.00 |
| 1909 | 10.93 | 1909 | 12.5 |
| 1910 | 13.44 | 1910 | 12.5 |
| 1911 | 13.34 | 1911 | 12. |
| 1912 | 13.08 | 1912 | 12. |

Extended into dollars, we have:

| | Company's Corrected Expense | | Adams' Estimate |
|---|---|---|---|
| 1907 | $20,294 | 1907 | $24,214 |
| 1908 | 23,525 | 1908 | 25,400 |
| 1909 | 24,514 | 1909 | 25,535 |
| 1910 | 28,246 | 1910 | 26,271 |
| 1911 | 30,317 | 1911 | 27,272 |
| 1912 | 30,657 | 1912 | 28,126 |

The excess of the complainant's expenditures over the above amounts for these items is as follows:

| | Company's Corrected Expense | | Adams' Estimate |
|---|---|---|---|
| 1907 | $16,618 | 1907 | $12,698 |
| 1908 | 16,541 | 1908 | 14,666 |
| 1909 | 23,323 | 1909 | 21,302 |
| 1910 | 30,689 | 1910 | 32,665 |
| 1911 | 38,373 | 1911 | 42,418 |
| 1912 | 42,287 | 1912 | 44,818 |

Deducting this from the reported operating expenses for the years 1907 to 1912, we have as the corrected operating expenses for:

| | |
|---|---|
| 1907 | $129,226 |
| 1908 | 122,434 |
| 1909 | 113,406 |
| 1910 | 111,005 |
| 1911 | 115,956 |
| 1912 | 130,755 |

To which must be added the allowances made by Mr. Adams for depreciation, renewals and repairs ( Exhibit "430½," p. 1632, vol. 5), less what the complainant expended for that purpose (Exhibit "309," bot. p. 1496, vol. 5), which gives as the proper total amount to be deducted from the gross earnings, to show the net revenue:

| | |
|---|---|
| 1907 | $132,448 |
| 1908 | 131,104 |
| 1909 | 122,687 |
| 1910 | 119,199 |
| 1911 | 121,512 |
| 1912 | 140,139 |

Deducting the above amounts from the gross receipts reported from the sales of gas within the city of Lincoln, corrected for the difference between $1.20 per thousand and $1.00 per thousand, we get the following net revenue for the respective years:

| | |
|---|---|
| 1907 | $ 46,567.00 |
| 1908 | 62,610.00 |
| 1909 | 80,332.00 |
| 1910 | 87,725.00 |
| 1911 | 102,056.00 |
| 1912 | 87,159.00 |

On Mr. Lea's corrected valuation, as of January 1, 1913, $1,090,913 (Exhibit "425-A"), the above net income for 1912 ($87,159), would be at the rate of 8 per cent. On Mr. Lea's valuation with all paving ($124,769) eliminated, the return would be 9.2 per cent. On Mr. Lea's valuation with all paving and going concern eliminated, the return would be 11.7 per cent. On Mr. Lea's valuation with all paving, going concern and all property outside the city limits eliminated, the return would be 12.3 per cent. On Mr. Lea's valuation with all paving, all property outside the city limits, the East Lincoln holder, and going concern eliminated, the rate would be 12.8 per cent.

On Mr. Adams' valuation as of January 1, 1907, $299,915, the net income for that year of $46,567, would be a return at the rate of 15.5 per cent. On Mr. Adams' valuation as of January 1, 1913, $435,745, the net income for that year, $87,159, would be a return of 20 per cent. On Mr. Adams' valuation as of January 1, 1907, with deductions of useless and unused property, and also eliminating paving over mains, the net income for that year would be 17 per cent. On Mr. Adams' valuation as of January 1, 1913, same items of property eliminated, the net income for that year would be 23.2 per cent.

**2. By Eliminating a Few of the Larger Items of Expense.**

As we have pointed out, the Company lost on the sale of gas appliances in 1912 the sum $7,301.93 and charged this loss into its operating expense for that year.

There was charged into the operating expenses for the same year $19,692.64 for promoting new business. The master allowed $12,000 of this to stand.

There was also included in the operating expenses for that year $7,954.73 for legal expense. The legal expense for the year 1906 before this present suit was started was $757.43. The increase has been wholly chargeable to this rate litigation. The legal expense for 1912 was therefore excessive by $7,000 for the purposes of testing this rate.

In order to have a display window on a prominent corner for displaying its gas and electric appliances, complainant pays $450 per month in rent, instead of using an office just as serviceable for the gas business on a side street at from $100 to $150 per month. The rent is therefore excessive to the extent of $3,600 per year.

The executive salaries paid to the New York office are wholly unnecessary. The master eliminated part of them. They should all go out. The above mentioned items should all be deducted from the operating expenses allowed by the master for 1912, viz:

| | |
|---|---|
| Loss on appliances | $ 7,301.93 |
| Amount of new business expense allowed | 12,000.00 |
| Excess legal expense due to this suit | 7,000.00 |
| Excess office rent | 3,600.00 |
| President's salary, allowed by master | 2,400.00 |
| Salary of New York secretary | 300.00 |
| Total | $32,601.93 |

After allowing all of the above items as a part of the operating expenses for 1912, the master found that the net income for 1912 at the $1.00 rate would have been $46,658, or 6.9 per cent on the then present value of the property of complainant, including $40,000 of going value, and without taking into account probable increased sales under the new rate.

If we eliminate the above items from the operating expenses and allow all the rest of the master's figures to stand the net return would be $79,259, or over 11.7 per cent on his then present valuation.

## CONCLUSIONS.

This complainant is not being oppressed by the city of Lincoln. Prior to the passage of the rate ordinance here attacked, the Company sold gas at such prices as it saw fit to charge. It has always had a monopoly of the gas business in the city of Lincoln. Lincoln is now, and for the last twenty years has been, one of the most prosperous cities of its size in the west. We doubt if there can be found a city of its size in the United States where there is less poverty and

more genuine prosperity. The city is more prosperous and is growing more rapidly now than at any time in its past history. It is a city of comfortable modern homes and the citizens spend their money freely for all that tends to contribute to their comfort. No one would think of building a home in Lincoln without installing gas service if within reach of the gas mains. Practically all cooking is done with gas. At the time this ordinance was passed, gas was selling in western cities of the size of Lincoln and less, at from ninety cents to one dollar per M. cubic feet (see table, page 1602, vol. 5). And in cities farther east where gas consumption was practically the same as in Lincoln and where the cost of making and distributing gas was substantially the same, patrons were getting gas from seventy-five cents to one dollar per M. cubic feet (see table, page 1603, vol. 5). This city felt that it was entitled to get its gas at terms as favorable as those prevailing in other cities similarly situated as to location, population and gas consumption, and we think the evidence contained in the record in this case clearly demonstrates that they were not only right but that they were and are entitled to a still further reduction of the rate.

We submit that the judgment, dismissing the bill in this case, should be affirmed.

Respectfully submitted,

C. PETRUS PETERSON, and
WILLIAM M. MORNING,

*Attorneys for Defendants.*

## ADDENDUM.

*Comparison of Master's Valuation of Physical Properties with Valuation of the Same Properties by the Company's Expert Witness, Mr. Lea.*

| | | |
|---|---|---|
| The master's total valuation Jan. 1, 1913, as per his report | | $676,565 |
| Deduct: | | |
| Working capital | $60,000 | |
| Going value | 40,000 | |
| | | 100,000 |
| Master's valuation of physical property | | $576,565 |
| Mr. Lea's valuation Jan. 1, 1913 (Appellant's Brief, p. 108) | | 1,090,913 |
| Deduct: | | |
| Working capital (Appellant's Brief, p. 219) | $72,037 | |
| Going value (Appellant's Brief, p. 19) | 225,000 | |
| Paving over mains (Appellant's Brief, p. 17) | 142,291 | |
| Services paid for by consumers (Master's report) | 30,484 | |
| Organization, legal expense, etc., included by Mr. Lea over and above allowance for overhead expense (Appellant's Brief, p. 30) (Discussion of elements entering Printed Record, p. 417) | 33,000 | |
| | | $502,812 |
| Lea's valuation of physical property | | 588,101 |
| Master's valuation | | 576,565 |
| Total difference between Master and Lea | | $11,536 |

This comparison shows an actual difference in valuation of less than 2 per cent. In these figures inhere all the elements going to form the valuation, net construction cost, reproduction cost, depreciation, and present condition. So far as valuation is concerned it is of small consequence what the intermediate steps were in forming the conclusion, the conclusion only can influence the result of this litigation.

OCT 5 1917
JAMES D. MAHER
CLERK

-13-

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1917.

No. [redacted]52

LINCOLN GAS & ELECTRIC LIGHT COMPANY,
Appellant,

vs.

THE CITY OF LINCOLN ET AL., Appellees.

SUPPLEMENTAL BRIEF OF APPELLEES.

C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Appellees.*

# SUPREME COURT OF THE UNITED STATES.

**OCTOBER TERM, 1917.**

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# No. 300.

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LINCOLN GAS & ELECTRIC LIGHT COMPANY,
APPELLANT,

*vs.*

THE CITY OF LINCOLN ET AL., APPELLEES.

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## SUPPLEMENTAL BRIEF OF APPELLEES.

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*To the Honorable Justices of the Supreme Court of the United States:*

By reason of the fact that brief of appellant was filed out of time it was impossible to include in appellee's brief a reply to some of the arguments therein set forth. In order to have such reply before the court in the form of a brief, this supplemental brief is presented:

1. *The Complaint About the Master's 1907 Valuation.*

When Judge Sullivan, as special master, went over the record before him, he found all valuations presented by the appellant to be as of January 1, 1913. By theoretical proc-

esses the company's expert witness, Mr. Lea, with 1913 as a starting point, but without a separate valuation for 1907, sought to establish the value of the property as of the earlier date. Mr. Lea's valuation for 1913, being the depreciated value for that year, was $1,090,913, and his 1907 valuation on the same basis was $784,682, a difference in values between the two dates of $306,231. The master found a difference in value of $240,000, or $66,231 less than Mr. Lea's figures. While the master is $66,231 below Mr. Lea, complaint is made that the master's figure is too high.

Counsel contend that Judge Sullivan has fallen into a serious mathematical error. It is apparently the contention that the master was presented with a problem in arithmetic and that he has not followed the rules of arithmetic in its solution. It had not occurred to us that this appeal was for the purpose of grading Judge Sullivan on his mathematics, though we should not fear the result if that were the purpose, but we assume that the question on the appeal is the correctness of the result rather than the class-room inquiry as to mathematical formula.

Ingenious as the argument first appears, that the master has deducted the value of the additions to the plant made between 1907 and 1913, thereby leaving the 1913 value of the properties found in 1907 as the 1907 values of such properties, the argument fails when measured by the language of the report. The fallacy of the argument consist in indulging the unwarranted presumption that the master, for purposes of the inquiry, divided all properties of the company into two classes, properties found in 1913, which were in existence in 1907, and properties found in 1913, which were not in existence in 1907, and that the combined value of the two classes was $676,565, and the properties of the latter class $240,000. That this is not in accord with the facts, clearly appears from the master's report (Printed Record, p. 52).

> "If the value of plaintiff's property, tangible and intangible, on January 1, 1913, was $676,565, as I

> have found it to be, its value January 1, 1907, may be readily ascertained by eliminating all *values* added to the plant between these dates. The construction account shows the original cost of all such additions to the physical property to be $210,437. An estimate given by Mr. Lea increases this amount to $371,294; and by an addition of $108,664 for going value, working capital, organization and legal expenses, he further increases it to $479,958. According to Mr. Adams' estimate, the tangible property was worth $135,830 less January 1, 1907, than on January 1, 1913. Just what the actual increase of structural cost was is not entirely clear, but from a full consideration of the evidence, I find that all *values* tangible and intangible added to the plant between January 1, 1907, and January 1, 1913, were worth, at the latter date, $240,000. Deducting this amount from $676,565, the value of January 1, 1913, leaves $436,656 representing the investment upon which the company was entitled on January 1, 1907, to receive a fair return."

The master clearly, sharply, and unerringly distinguishes between additions to the physical property and "added values." Throughout the record it is conceded that the company has not kept a separate replacement account, but all replacements have been charged to an account known as repairs and maintenance. (See Printed Record, pp. 756 and 1293, testimony Mr. Phillips.) It is also clear from the record that another account, known as the construction account, was kept, into which went all items representing new construction, or such cost of a replacement item as the cost of the unit put in exceeded the cost of the unit replaced. The master allowed a depreciation reserve in 1907 of $10,000 per annum and in 1913 of $12,000 per annum. It is not contended that this depreciation reserve has been set aside, or that it was on hand at the time of the hearing, but on the contrary, it appears that it had been spent to keep the plant in proper condition and to conserve at par the value of the plant.

Appellant's argument proceeds on the premise: "The company's property, beginning 1907, is depreciating at the rate of $10,000 per year." The conclusion drawn is: "The company's 1907 property in 1913 is therefore worth $60,000 less than in 1907." This appears plausible until it is remembered that each year the company has collected just those $10,000 and spent them to keep the property worth the same in 1913 as in 1907. This is a standing and unvarying "value." Anything added beyond that is "added values," as used in the report of Judge Sullivan; not added property, but "added values." It is entirely proper, and does not constitute even a mathematical error and still less an error in result, to deduct such added values from the 1913 depreciated valuation to determine the 1907 value. Doing so is just another way of saying that the plant was worth in 1913 $240,000 more than it was worth in 1907.

2. *Appellant's Argument on Going-Value.*

Appellant has in its brief (pages 70 *et seq.*) taken a position on going-value which is fallacious for two reasons:

(1.) It is assumed that the master found a going-value of $140,000 and eliminated therefrom $100,000. This is in direct conflict with the express language found in the master's report, where the master states: "The record shows that between 1906 and 1913 the company paid out of its earnings and charged to operating expenses about $100,000 for the promotion of new business. In view of this fact, I conclude that an allowance of $40,000 for going-value is sufficient."

The argument that this $100,000 found by the master to have been expended for the promotion of new business and charged to operating expense forms a part of going-value, is the most direct and admitted capitalization of surplus earnings which could very well be conceived. That this is appreciated by counsel for appellant appears very clearly

from the statement of the argument. So manifest is the position taken that appellant asks for a reversal of the recent case of Des Moines Gas Company *vs.* Des Moines, 238 U. S., 153 (Appellant's Brief, p. 85). Counsel agrees that there is no evidence in the record of any early losses which should be taken into account in fixing going-value, but it is contended very frankly that, in the absence of any such expenditure in the early history for that purpose and in the face of the record that in recent years all expense for doing the things which, when paid for out of capital as distinguished from earnings, makes going-value, have been charged to operating expense, whatever cost can be assumed for a theoretical plant as being necessary for the obtaining of business shall be capitalized. It is submitted that this argument is unsound in theory and in direct conflict with the decisions of this court. It is more than probable that if at the time the master filed his report the Des Moines case had been decided, he would have eliminated entirely the element of going-value as a separate item, which appellees in the original brief have argued should have been done. Whatever may be said as to that proposition, it certainly is contrary to the record to contend that the master found the valuation for going-value of $140,000.

(2.) Appellant's position is also fallacious because of the assumption that the master, by the expression used by him to the effect that it was not clear whether this element of plant value had been paid for out of excess earnings or out of capital, has assumed that there were in fact excess earnings in the past. It is not necessary for the master to have assumed anything with reference to the past. Going-value does not rest on any assumption. The burden is on the utility to show affirmatively that there has been invested in going-value a portion of its capital as distinguished from earnings. The item of going-value if properly allowable for purposes of rate regulation under any circumstances can be allowable only when the owners of the utility can show:

(1.) That capital as distinguished from earnings was expended to obtain business, and (2) that the capital so expended has not been amortized or replaced by excessive earnings. In other words, there is no presumption in favor of going-value and if allowed it must rest on affirmative proof.

### 3. *Effect of Omitting from Calculations in the Report of the Master the Occupation Tax.*

One thing has taken place since the report of the master and since the decision by the lower court which is of such importance as to require specific comment, namely, a final adjudication by the Supreme Court of the State of Nebraska holding the occupation tax ordinance affecting the 1907, 1908, and 1909 earnings of the company as invalid and unenforcible (City of Lincoln *vs.* Lincoln Gas & Electric Light Company, 100 Nebraska, 182).

We had anticipated that appellant would frankly admit this fact, and therefore have not set out the results in detail in the original brief.

The earnings of the company in 1907 are not in dispute. With gas selling at $1 per M, the occupation tax taken into consideration by the master in computing the net earnings for the company of that year amounted to $4,466. With this allowed as a proper operating expense the master found, without any allowance for increased output had the new rate been put into effect, a return of 5.12 per cent. With this rate of return the sum of $4,463 would be the return on a capital investment of $87,224, or $27,000 more than counsel claim the master erred in arriving at his 1907 valuation. On the valuation found for that year, namely, $426,565, it would increase the percentage of return from 5.12 per cent to 6.14 per cent.

The Supreme Court also reversed the Nebraska District Court on overruling a plea in abatement in an action involv-

ing a subsequent occupation tax ordinance passed December 13, 1909, and remanded the case to the district court to abide the result of the present case in this court. Deducting the amount allowed by the master for occupation tax in 1913, namely, $8,195, would increase the percentage of return on the valuation found for that year from 6.9 per cent to 8.1 per cent. At 6 per cent the amount involved in the occupation tax for 1913 would be a return on a capital investment of $136,583.

These items should be considered, and as to the years 1907, 1908, and 1909 the amount should clearly be eliminated, all questions having been set at rest definitely and conclusively for all time by the Nebraska Supreme Court. Appellees contend, as in the original brief set forth, that the same should be done with the 1913 occupation tax allowance, inasmuch as the payment has not been made, in fact, and the company has resisted its payment in court and the Supreme Court of the State of Nebraska has declined to permit its collection by judgment.

### 4. *The Sloan & Huddle Appraisement.*

In the course of the trial before the master an item was discovered showing the expenditure of at least the sum of $2,650, in favor of an engineering firm of Madison, Wis. (Printed Rec., pp. 1261-2). Repeated requests were made by the city for the production of the report made by the engineers to the company, for the purpose of ascertaining what their findings were. In spite of the most persistent endeavor on the part of the appellees to obtain the report, or to elicit from witnesses the result and findings, the company declined to give the master the benefit of the appraisement made. Commenting on this matter in the report, the master said:

> "Whether this conduct constituted technically a suppression of evidence, I do not determine, for I have not grounded any presumption or inference

upon it. It has, however, emphasized the need of exercising more than ordinary care to see, where the validity of a law or ordinance depends upon disputed questions of fact, that the dispute be not resolved against a legislation where there is any reasonable doubt about what the truth is."

After the master's report had been filed and after exceptions had been filed thereto, the appellant, through its counsel, filed in the United States District Court, District of Nebraska, Lincoln Division, in this case, an application for an order authorizing and permitting the taking of testimony with respect to the services of Sloan & Huddle and the report submitted by them. This application is set forth on pages 75 and 76 of the printed record, and is as follows:

"*Application of Plaintiff for an Order Permitting Taking of Further Testimony.*

"Filed in United States District Court, District of Nebraska, Lincoln Division, June 14, 1915.

"The Lincoln Gas & Electric Light Company moves the court for an order authorizing and permitting the taking of further testimony in the above-entitled case with respect to the services of Sloan, Huddle, etc., Company, the scope of the employment and services rendered, and report, if any, submitted by said Sloan, Huddle, etc., Company, of Madison, Wisconsin, referred to in the special master's report herein, and submit in support of this motion and application copy of letter written by Halleck F. Rose under date of August 7, 1914, to Mr. Huddle of the above-named firm and the answer thereto from Mr. Huddle of the above firm; the testimony in view of the master's finding is material and could not have been anticipated by complainant from the state of the record.

"LINCOLN GAS & ELECTRIC
LIGHT COMPANY,
"By E. C. STRODE,
"HALLECK F. ROSE,
"*Its Attorneys.*

"Copy.

"AUGUST 7, 1914.

"Mr. Huddle, c/o Engineering Department Wisconsin Railway Commission, Madison, Wis.

"DEAR SIR: You will recall that I met you at Lincoln in the Gas Company's office in connection with the Lincoln Gas & Electric Light Company's preparation for its gas rate suit. In considering with you propriety of calling you as a witness in this rate suit, the question arose as to the embarrassment and disadvantage to which you would be subjected as an expert witness in handling such matters as the cost of developing business, or 'going-value,' overhead allowances, annual depreciation apart from general repairs, and maintenance and the like, upon which the Wisconsin Commission, in whose services you are, had made numerous rulings. You were frank to say that in these matters it would be quite embarrassing to yourself and possibly to the Commission which you served, to express an independent judgment in an important court proceeding that should be variant from the conclusions reached by your commission. In these circumstances we conclude that the proprieties were against calling you at all, although your inventory valuations of the physical properties of the company were understood to be not only just and fair, but altogether satisfactory to the Lincoln Company. The company called Mr. H. L. Lea as a witness on value and has submitted its case. I have never had access to any report of detailed valuations of the company's physical properties made by you, and in the trial no consideration was given to your valuations because they were not qualified by your personal testimony.

"At the argument it was insinuated by the city's attorney that your valuations, in so far as you made any, were unfavorable to the position of the company and favorable to the city, and the fact that the company failed to produce any report from you, should count against it. As counsel for the Lincoln Company, I would greatly appreciate it if — your

data acquired in your Lincoln examination you will state to me, in a letter, the aggregate sum which you found to be the reproductive value of the Lincoln Gas & Electric Light Company's physical properties in use in its gas department, and also what you found to be the present depreciated value of the same properties, stating at the same time that these valuations excluded any allowance for 'going-value' or cost of a perpetual franchise.

"It is my impression that there was no radical difference between you and Mr. Lea on the valuations of the company's physical properties, and if we conclude it is proper to do so, we would like leave to hand your letter in reply to this, to the special master, in order to prevent any suspicion on his part that your failure to testify in the case was due to low valuation of the company's properties, as insinuated, without foundation, by the city's attorney.

"I should appreciate your prompt reply very greatly.

"Very respectfully,

"(Signed) HALLECK F. ROSE.

"Copy.

"Sloan, Huddle, Festel & Freeman, Consulting Engineers, Madison, Wis., Washing Bldg.; Indianapolis, Ind., Hume Mansur Bldg.

"MADISON, August 14, 1914.

"Messrs. Stout, Rose & Wells, 524 National Bank Building, Omaha, Nebraska.

"GENTLEMEN: In accordance with your request we hand you herewith figures showing the cost new and cost less depreciation which we found for the value of the gas property of the Lincoln Gas & Electric Light Company in our appraisal of January, 1913:

| | Cost new. | Depreciated value. |
|---|---|---|
| 1. Land | 14,360 | 14,360 |
| 2. Buildings | 32,856 | 25,164 |
| 3. Plant equipment | 90,239 | 69,779 |
| 4. Holders | 91,578 | 78,678 |
| 5. Mains | 191,648 | 165,559 |
| 6. Services | 56,224 | 39,919 |
| 7. Meters and governors | 79,757 | 69,616 |
| 8. General equipment | 14,858 | 12,668 |
| Total, items 1-8 | 571,520 | 475,743 |
| 9. Engineering, superintendence interest during construction, etc. 15% | 85,728 | 71,361 |
| Total, items 1-9 | 657,248 | 547,104 |
| 10. Working capital, material and supplies | 17,645 | 16,873 |
| Other than material and supplies | 37,354 | 37,354 |
| Total, items 1-10 | 712,248 | 601,331 |
| 11. Repaving | 159,851 | 129,171 |
| Total, items 1-11 | 872,099 | 730,502 |
| 12. Land held but not used | 4,100 | 3,980 |
| Grand total | $876,199 | $734,482 |

"You will note that the figures above include no allowance for going value, good will or franchise value.

"Trusting that this is the information you desire, we are,

"Very truly yours,

"SLOAN, HUDDLE, FEUSTEL & FREEMAN,

"(Signed) Per W. F. HUDDLE."

"R. L. F. M."

In view of the fact that counsel for the company state that the inventory valuations of the physical properties of the company as found by this firm of engineers were "not only just and fair, but altogether satisfactory to the Lincoln Company," it is a matter of interest to compare the valuations made by them with the valuations fixed by the master. The master includes all the physical properties under four items, as follows:

| | |
|---|---|
| Real estate | $16,250.00 |
| Buildings | 29,381.00 |
| Work equipment | 179,310.00 |
| Distribution system | 351,624.00 |
| Physical plant plus 12½% overhead | $576,565.00 |

Sloan & Huddle set up their valuation as follows:

| | |
|---|---|
| Real estate | $14,360.00 |
| Buildings | 25,164.00 |
| Plant equipment | 69,779.00 |
| Holders | 78,678.00 |
| Mains | 165,559.00 |
| Services | 39,919.00 |
| Meters and governors | 69,616.00 |
| General equipment | 12,668.00 |
| Physical plant net | $475,743.00 |
| Overhead 15% | 71,361.00 |
| Physical plant plus 15% overhead | $547,104.00 |
| Deducting 2½% overhead | 11,893.00 |
| Physical plant plus 12½% overhead | $535,211.00 |
| Adding item "land held but not used" | 3,980.00 |
| Physical plant, Sloan & Huddle | $539,191.00 |

It will be seen that not only is the Sloan and Huddle valuation corroborative of the master's findings, but it is undisputed evidence that the master has been more than fair in his findings to the company.

In order to make an absolute comparison between the two valuations there should be deducted from the Sloan & Huddle valuation the item disallowed by the master for services paid for by consumers in the sum of $30,484. Deducting this from the total found by Sloan & Huddle, namely, $539,-191, leaves the findings of Sloan & Huddle of the total physical property, plus 12½% overhead at $508,707, or $67,858 less than the valuation placed upon the same physical properties with the same overhead by the master.

This item was before his honor, Judge Page Morris, when he overruled the exceptions to the master's report.

### 5. *Rate of Return.*

On the subject of rate of return, appellant, in its brief, at page 44, says:

> "We submit that the finding of the master that a return of 6% would not be confiscatory, is absolutely without justification."

History is a better guide than prophesy where history is available. A large portion of the assets of the company had to be recapitalized on or before August 1, 1917. Under the laws of the State of Nebraska, of recent years, the State Railway Commission has jurisdiction over questions relating to the issuance of stocks and bonds by public utilities. Accordingly, on April 26, 1916, the company, appellant herein, applied for leave to issue and sell $733,400 of its bonds to run to December 1, 1941, at 5 per cent. An order was issued authorizing the sale of these bonds on a basis to net to the company not less than 86 cents on the dollar of the par value and accrued interest. This is at an interest rate of 5.8 per cent. To this is to be added an amortization fund to repay

the par value in 1941, making the capital cost almost exactly 6 per cent per annum. This order of the Railway Commission is to be found in the official 9th Annual Report of the Nebraska State Railway Commission at page 317.

In view of the fact that appellant has cited decisions of the Nebraska State Railway Commission to support its argument for a higher rate, this decision is cited as authority to support the master. It seems evident that the best authority on which to determine what capital requires by way of return in the business in which appellant is engaged is the actual rate paid for capital by the appellant. All of the capital is either in the bond issue authorized by the order cited, or a portion of the same bond issue sold prior to that order drawing 5 per cent interest. What is the use of speculating on hypotheses when facts are available? The question of cost of capital has been settled until the year 1941.

6. *Application of Average Net Revenues for the Years* 1907 *to* 1912, *Inclusive, to an Average of Master's Valuation.*

In commenting on the years intervening between 1907 and 1912, the master in his report says:

> "I do not go into the accounts for the years between 1907 and 1912, as the calculations made by Mr. Lea show beyond question that the net income was for each of these years from 50 per cent to 100 per cent greater than in 1907."

It is apparent that any of these years possess as much evidential value to determine whether the ordinance is or is not confiscatory as the years specifically dealt with. In other words, the record tests the ordinance by the severest test possible by picking out the two lean years and ignoring four fat years. To show the result of this severe test, we submit the following computation:

The gross receipts for the six years as reported by the company amount to $1,481,768. The gross expense for the same years, including all the excessive items pointed out by the master, is $886,615. The receipts stated are on the sale of gas at 1.20 per M cubic feet. Applying the rate fixed by the ordinance reduces the gross receipts by one-sixth and leaves $1,234,807. Deducting the gross expense of $886,615 leaves a net receipt of $348,192. During the first three years the occupation tax question has been eliminated. Assuming, for the sake of argument, that it should be deducted for the three remaining years we find that it amounts to $19,755 on the returns based on the dollar rate. The master allowed a depreciation reserve in 1907 of $10,000 and in 1913 of $12,000. Averaging the depreciation reserve at $11,000 a year the total is $66,000. Deducting this depreciation reserve and occupation tax there is left a net return of $262,437 for six years, or an average annual net return of $43,739. The valuation found by the master in 1913 is $376,565 and in 1907 $436,565. The average valuation is $556,565. Applying the average net return to the average valuation leaves an average rate of return of 7.85% during the entire six years without any allowance for increased output by the reduced rate and without deduction of any improper items of expense either eliminated or criticised by the master. We submit that a legislative rate which over a period of six years averages a rate of return of 7.85% is not only not confiscatory but is a liberal rate. Had the ordinance been complied with, with resulting increased output, and the large expense of this litigation, all of which is now included in the computation saved, the rate of return would beyond question have far exceeded 8%.

### 7. *The Cry of Bankruptcy.*

Much ado is made over the distress in which the appellant company will find itself if this decision is sustained by this court. It is suggested that an affirmance of the decree of the lower court will leave the company with little or nothing. That same question was before the Nebraska Railway Commission when the question of authorization of a new bond issue was presented and in the same order cited herein the Nebraska Railway Commission finds from evidence adduced by the company that the company had accumulated, and on March 31, 1916, had a surplus in the amount of $703,-555.39, which, according to the testimony, as stated by the Commission, was "surplus earnings over and above the payment of operating expenses, taxes, and interest on fixed charges, which surplus earnings have been accumulated from the operation of the company since 1901." This is such a shock absorber that it is submitted that the distress complained of will never become a reality.

Respectfully submitted,

C. PETRUS PETERSON,
W. M. MORNING,
*Attorneys for Appellees.*

# LINCOLN GAS & ELECTRIC LIGHT COMPANY *v.* CITY OF LINCOLN ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE DISTRICT OF NEBRASKA.

No. 52. Argued October 5, 8, 1917.—Decided June 2, 1919.

A gas company, pending a suit to declare a rate ordinance confiscatory, put the rate in effect as a test, under a stipulation that such action should not be construed as an acceptance of or compliance with the ordinance or be "shown in evidence or presented to the court in the above entitled cause, or used in any way by either party to influence the action of the court in the disposition of the case." *Held*, that this in effect relieved the defendant from obligation to observe the

effect of the reduced rate or prepare to meet inferences drawn from it, and hence afforded a reason why a petition for leave to file a bill of review in the District Court, based on the test, should not be granted by this court. P. 261.

Further grounds for refusing such leave are found in the delay of the plaintiff in instituting the test and in the fact that the results relied on were offset by an error committed in the plaintiff's favor. P. 262.

The District Court, having acquired jurisdiction through a bill presenting a substantial controversy under the Federal Constitution, has power to dispose of an issue fairly within the pleadings, without passing on its federal aspect, by application of the constitution of the State. P. 263.

In a suit challenging the constitutionality of ordinances fixing gas rates and laying an occupation tax, where the District Court upheld the rates but declared the tax void, and, after an appeal in which the tax ruling was not assigned as error or referred to by this court in its opinion or mandate, the rate, on a further trial, was again sustained and the bill dismissed by a final decree, without further mention of the tax, *held*, that the earlier adjudication was to be taken as a part of the final decree, establishing beyond collateral attack in this court or elsewhere that the tax was void; but that the decree might properly be modified to reiterate such earlier adjudication. *Id.*

In a rate case, involving questions, and much evidence, concerning plant valuation, methods of estimating and applying depreciation charges, working capital, going concern value, rate of return, etc., this court is not called upon to recite the substance of such evidence or review the master's findings made after proper investigation. P. 266.

Eight per cent. being the lowest rate generally sought and obtained upon capital invested in banking, merchandising and other business in the vicinity, and 7 per cent. the legal rate in the State, the court cannot approve a finding that no rate yielding as much as 6 per cent. could be deemed confiscatory in the case of the complaining gas company; nor is the finding justified upon the ground that the company had such a monopoly and guaranty of profits as would permit of such restriction. P. 267.

In the absence of any finding or clear evidence that past earnings, invested in a gas company's business, were excessive, a finding restricting the "going value" on the theory that they were, is erroneous. *Id.*

In such a suit, occupation taxes which have been conclusively adjudged void and have not been paid should not be allowed as operating expenses. P. 267.

Having regard for the entire period under investigation, and in the presence of many doubtful items, this court can not hold the rate ordinance in question void, in the absence of an actual and timely test of its practical operation. *Id.*

The decree dismissing the bill without qualification is so modified as to be expressly without prejudice to the commencement of a new suit, in which complainant may show if it can, as a result of its practical test since May 1, 1915, or upon evidence of values, costs of operation and rates of return upon capital as they stand when such suit is brought and are likely to continue, that the rate in question is confiscatory under the new conditions. P. 268.

The court notices judicially that, principally owing to the war, costs of labor and supplies have advanced greatly since the ordinance was adopted, and largely since the case was last heard in the court below, and that annual returns upon capital and enterprise the world over have materially increased, so that what would have been a proper return for capital in gas plants and other public utilities a few years ago furnishes no safe criterion for the present or the future. *Id.*

Modified and affirmed.

THE case is stated in the opinion.

*Mr. Robert Burns* and *Mr. Edmund C. Strode*, with whom *Mr. Charles A. Frueauff* and *Mr. Dewey C. Bailey, Jr.*, were on the briefs, for appellant.

*Mr. W. M. Morning* and *Mr. C. Petrus Peterson* for appellees.

MR. JUSTICE PITNEY delivered the opinion of the court.

This is an appeal from the final decree of the district court dismissing the bill of complaint in a suit brought by the Lincoln Gas and Electric Light Company, a Nebraska corporation, against the City of Lincoln and

its officials praying for an injunction to restrain enforcement of an ordinance of the city adopted November 19, 1906, which had the effect of reducing complainant's charges for gas from $1.20 to $1 per 1,000 cubic feet, and an ordinance adopted December 10, 1906, assessing an annual occupation tax upon gas companies in the city.

The action was instituted in December, 1906, without previous test of the $1 rate, in the then Circuit Court of the United States for the District of Nebraska. Besides grounds not pressed, the rate ordinance was attacked upon the ground that its enforcement would deprive complainant of its property without due process of law, in contravention of the Fourteenth Amendment. The tax ordinance was attacked upon grounds of state law, and also upon the ground that it was violative of the "due process" and "equal protection" clauses of the Fourteenth Amendment. Upon final hearing the court, by decree entered April 6, 1909, dismissed the bill as to the rate ordinance, without prejudice to the commencement of a new action; but decreed that the ordinance levying an occupation tax violated the constitution of Nebraska and was for this reason illegal, and granted a permanent injunction against its enforcement. 182 Fed. Rep. 926.

Upon appeal by complainant to this court it was found that there was a great mass of conflicting evidence relating to the value of complainant's plant, the cost of operation, and the gross and net income; that the case had not been referred to a master, nor had specific findings of fact been made by the court below, but only general conclusions which were found not to be sufficient in view of errors assigned which opened up substantially the entire case. For this reason the decree was reversed and the cause remanded to the district court with directions to refer it to a master with leave to both parties to take additional evidence. A temporary injunction

which had been granted in the court below and continued in force until final decree and afterwards pending the appeal, under a bond conditioned to account for overcharges if the rate ordinance should be sustained, was by the decree of reversal continued in force until final decree in the court below, upon condition that a new bond with sureties were given to account for overcharges to consumers since the original restraining order, in the event the ordinance should be sustained. 223 U. S. 349.

Upon the going down of the mandate, the district court referred the case (July, 1912) to a master, to take the proofs and report his findings of fact and of law. After a full hearing he made an elaborate report (September, 1914) to which complainant filed about 125 exceptions, with a motion to recommit the case to the master for additional findings, which motion was denied. The master found the rate ordinance was not confiscatory, and (differing from the former decision of the circuit court) held that the occupation tax ordinance was valid, and included the tax as an operating expense. Upon the hearing of the exceptions the report of the master was confirmed by the district court, and the bill dismissed as to the rate ordinance, by decree entered September 23, 1915; the judge filing a memorandum to the effect that he did not agree with the master as to the validity of the occupation tax ordinance, but deemed it unnecessary to pass upon this in the decree, since the result reached by the master would only be strengthened by adjudging the tax invalid, while if the judge should agree with the master upon that question he still would confirm the report. In other words, assuming the occupation tax ordinance to be valid, the addition of this tax to the annual outgoes of complainant would still leave the $1 rate compensatory.

Complainant brings the case to this court by appeal, with about 120 assignments of error, one of which is that

the district court erred in not decreeing that the occupation tax ordinance was in violation of the Fourteenth Amendment in that it amounted to a denial of the equal protection of the laws.

Pending the hearing upon the master's report, and on or about May 1, 1915, complainant, notwithstanding the injunction *pendente lite*, put into effect a net rate of $1 per thousand feet for gas, and has maintained it since.

Upon the strength of this test, and before the argument of this the second appeal, complainant presented to us a petition for leave to file a bill of review in the court below upon the ground that, according to the master's findings, complainant, in the year 1907, earned so small a return that the rate ordinance would have been confiscatory upon the valuation as found by him, but for this additional finding: "All human experience has shown that increased consumption follows quickly a reduction in the price of commodities, and the evidence in this case satisfactorily shows that gas is no exception to the rule."

The petition averred that the experience of complainant in an actual test of the reduced rate during a considerable period since May 1, 1915, showed that the view of the master was erroneous, and in fact under actual operating conditions there was no increase of consumption.

The application for leave to file a bill of review will be denied, for the following reasons:

First, because the $1 rate was put into effect pursuant to a written stipulation made between the parties in the cause to the effect that the action of the company in so doing should not be construed as an acceptance of or compliance with the ordinance in controversy, and should not be "shown in evidence or presented to the court in the above entitled cause, or used in any way by either party to influence the action of the court in the disposition of the case." Hence defendant was not called upon

to observe the effect of the reduced rate, or prepare to meet inferences drawn therefrom.

Secondly, because complainant might have made a practical test of the ordinance rate before bringing this suit for an injunction, and certainly ought to have resorted to the test long before it did so. As early as the month of January, 1909, this court, in two notable rate cases, indicated its view of the importance, in any but a very clear case, of subjecting prescribed rates to the test of practical experience before attacking them in the courts. *Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 16, 18; *Willcox* v. *Consolidated Gas Co.*, 212 U. S. 19, 54. When those decisions were announced this case was pending in the circuit court, and shortly thereafter it was decided adversely to complainant upon the question of the validity of the rate, the *Knoxville* and *Willcox Cases* being cited. 182 Fed. Rep. 926, 929. Then, if not before, complainant might have made a practical test of the sufficiency of the rate, instead of waiting six years longer before doing so. The litigation has been extremely tedious and burdensome to both sides, and it ought now to be brought to a conclusion upon the record as it stands.

And thirdly, the argument based upon the master's finding as to the return that complainant would have earned in the year 1907 under the prescribed rates is vitiated by the fact that he included as an operating expense $4,466, the amount of the estimated occupation tax, which was not paid and (as we shall see) has been conclusively adjudged in this suit to be unenforceable. Eliminating this would increase the net return for the year approximately one per cent. upon the investment.

Coming to the merits, we will deal first with the occupation tax ordinance. This is important not only because considerable sums of unpaid taxes have accumulated pending the litigation, but because of the effect of the tax, if sustained, upon the question of the adequacy of the rate.

The ordinance imposes an occupation tax upon all gas companies manufacturing and furnishing gas to the inhabitants of the City of Lincoln, equivalent to 2½ per cent. of their gross receipts derived from that business. It was attacked in the bill as being "partial, discriminatory, unreasonable and oppressive in this: It imposes upon your orator an onerous tax burden to which the business and occupations of other persons within said city are not subjected;" and the bill alleged among other things that the Lincoln Traction Company held a franchise for furnishing electricity to the public in said city, under which it was supplying light, heat, and power in competition with complainant's gas business, and that the city had not subjected this business of the traction company to any occupation tax; wherefore the ordinance "operates to deprive your orator of the equal protection of the laws, imposes a discriminatory burden upon your orator, . . . and deprives your orator of its franchise rights and privileges and of its properties without due process of law," thus being violative of the due process and equal protection provisions of the Fourteenth Amendment. The circuit court deemed that this raised the question of the invalidity of the ordinance under the uniformity provision of the state constitution, and held it was invalid as being in contravention thereof. 182 Fed. Rep. 926, 927, 929. The city requested a modification of the opinion and decree in this respect, on the ground that the invalidity of the ordinance under the state laws and constitution was not charged in the bill. This application was denied.

Neither the city nor any other defendant appealed from that part of the decree which adjudged the occupation tax ordinance void and granted an injunction against its enforcement. Complainant appealed only from that part which was adverse to it upon the question of the validity of the rate ordinance. None of its assignments

of error touched upon the tax ordinance; but in its brief in this court upon the first appeal complainant declared that its bill had assailed the tax ordinance only upon the ground that it was in violation of the equal protection clause of the Fourteenth Amendment; that the bill was drawn upon the theory that this ordinance, like the rate ordinance, could only be assailed in a court of the United States upon the ground "that it was violative of the Constitution of the United States"; apparently overlooking that, even without diversity of citizenship (and there was none), if the bill presented a substantial controversy under the Constitution of the United States, and the requisite amount was involved, the jurisdiction extended to the determination of all questions, including questions of state law, and irrespective of the disposition made of the federal questions. *Greene* v. *Louisville & Interurban R. R. Co.*, 244 U. S. 499, 508. It was said in the brief that the decree of the circuit court against the validity of the occupation tax ordinance was a nullity because the subject-matter was not cognizable in a court of the United States and the issue decided was not tendered by the bill. Upon the ground that the decree might constitute no bar to the collection of the occupation taxes, and the amount of these if collected would reduce complainant's returns and render the rate ordinance if sustained still more burdensome, appellant asked this court to pass upon the validity of the tax ordinance upon the federal grounds asserted in the bill.

Naturally this court ignored the suggestion, its jurisdiction over the question not having been invoked by an appeal, and so it happened that the occupation tax ordinance was not mentioned in the opinion or in the mandate.

There is nothing before us to show what decree, if any, was made by the district court upon the going down of the mandate, beyond a mere order of reference to the

master. The final decree made upon the confirmation of his report says nothing upon the subject of the occupation tax ordinance. Its language is "That the bill of complaint herein, so far as the same relates to the ordinance of the City of Lincoln establishing a rate of charges for gas in said city be, and the same is, hereby dismissed, and the restraining order heretofore granted against the enforcement of said ordinance is hereby dissolved." Upon this record, it is very clear that so much of the decree of the circuit court entered April 6, 1909, as held the occupation tax ordinance void and restrained its enforcement was untouched by the former appeal and unaffected by the subsequent proceedings. The decree now under review does not modify the effect of the former decree upon this subject; hence, the adjudication of the invalidity of the occupation tax ordinance and the award of an injunction to restrain its enforcement are to be taken as a part of the final decree in the cause. We deem it entirely clear, also, that the issue of the validity of that ordinance upon grounds of state law was fairly within the pleadings, and that this part of the decree is impregnable against collateral attack, in this court or elsewhere. This being so, the assignment that the district court erred in its decree of September 23, 1915, in not decreeing that the occupation tax ordinance was in violation of the Fourteenth Amendment because amounting to a denial of the equal protection of the laws, is groundless; there was no occasion for the court to make any decree to that effect, since the matter had been conclusively determined against the validity of this ordinance by the final decree of April 6, 1909, which remained in this respect unappealed from. In order to render the matter free from doubt the decree of September 23, 1915, will now be modified by embodying in it a reiteration of that part of the decree of April 6, 1909, which held the occupation tax ordinance void and restrained its enforcement.

Parenthetically, it may be stated that on March 16, 1908, the city council passed an ordinance imposing a like occupation tax upon corporations selling electricity for light or power purposes, but at the rate of only 2 per cent. of their gross receipts; that on December 13, 1909, both occupation taxes were repealed, and gas and electric companies alike were subjected thereafter to an occupation tax equal to 3 per cent. of their gross receipts; and that in July, 1916, the Supreme Court of Nebraska adjudged the occupation tax ordinance of December 10, 1906, to be invalid, following the decision of the circuit court in this case; and on the same day held that the enforcement against complainant of an occupation tax under the ordinance of December, 1909, must be stayed pending the final determination of the present case. *City of Lincoln* v. *Lincoln Gas & Electric Light Co.*, (two cases), 100 Nebraska, 182, 188.

The attack upon the rate ordinance brings under consideration questions of the valuation of the plant, the proper method of estimating and applying depreciation charges, questions of working capital, going concern value, the propriety of various items of operating expense, the rate of return that reasonably ought to be allowed upon capital invested in a plant and business of this character in Nebraska, and the other questions usual in such cases. The special master conducted a patient and elaborate investigation. An enormous mass of evidence was produced before him, and analyzed in his report. In abridged form, it occupies nearly 2,000 pages of printed transcript in this court, besides numerous tabular exhibits. It would be impossible, within reasonable limits, to recite the substance of the evidence or review the master's findings. We do not feel called upon to do this. *Knoxville* v. *Knoxville Water Co.*, 212 U. S. 1, 17. The findings are subjected to numerous and minute criticisms, and some of these seem to possess

force. We cannot approve the finding that no rate yielding as much as 6 per cent. upon the invested capital could be regarded as confiscatory, in view of the undisputed evidence, accepted by the master, that 8 per cent. was the lowest rate sought and generally obtained as a return upon capital invested in banking, merchandising, and other business in the vicinity; 7 per cent. being the "legal rate" of interest in Nebraska. Complainant had not such a monopoly nor were its profits "virtually guaranteed" in such a sense as to permit the public authorities to restrict it to a return of 6 per cent. upon its invested capital. It is not entirely clear, however, that the rate ordinance did so restrict it. Again, we question the propriety of the master's treatment of "going value," which he seems to have estimated at less than otherwise he would have placed it upon the theory that the company's business had been developed, at the expense of the public, in the expenditure of past earnings exceeding a fair return upon the capital invested, and this without any finding, or any clear evidence to which our attention has been called, that past earnings were excessive. On the other hand, the master erred in favor of complainant by allowing as operating expenses occupation taxes for the years 1907 to 1909, inclusive, these taxes not having been paid and the taxing ordinance applicable to that period having been held invalid by the decree of the circuit court entered April 6, 1909, and so held since his report by the state supreme court. And it is possible he erred in allowing occupation taxes for the year 1910 and subsequent years, since these were not in fact paid. As we have seen, the occupation tax erroneously allowed for the crucial year 1907 amounted to more than 1 per cent. upon the invested capital at the master's valuation. He also appears to have been unduly liberal to the company in the allowance for working capital, and in some other items of valuation, as well as in respect of some

expenditures allowed as operating expense. Without going into details, we content ourselves with announcing our general conclusion that, having regard to the entire period under investigation, we are unable to say that the master erred in holding that the ordinance was not shown to have been confiscatory in its effect. It is probable that in the years 1907 and 1912 the net return was close to the line, if not below it; but that in the other years examined it was at least 7 per cent.; and there are too many doubtful items for us to adjudge the ordinance void, in the absence of an actual and timely test.

The decree dismissed the bill, however, so far as it related to the rate ordinance, without reservation or qualification. Perhaps it would go without saying, but in our opinion the decree ought to be modified so as to permit complainant to make another application to the courts for relief against the operation of the ordinance hereafter, if it can show, as a result of its practical test of the dollar rate since May 1, 1915, or upon evidence respecting values, costs of operation, and the current rates of return upon capital as they stand at the time of bringing suit and are likely to continue thereafter, that the rate ordinance is confiscatory in its effect under the new conditions. It is a matter of common knowledge that, owing principally to the world war, the costs of labor and supplies of every kind have greatly advanced since the ordinance was adopted, and largely since this cause was last heard in the court below. And it is equally well known that annual returns upon capital and enterprise the world over have materially increased, so that what would have been a proper rate of return for capital invested in gas plants and similar public utilities a few years ago furnishes no safe criterion for the present or for the future.

The final decree of September 23, 1915, will be modified by embodying in it a reiteration of that part of the

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final decree of April 6, 1909, which held that the ordinance of the City of Lincoln, approved December 10, 1906, levying an occupation tax against complainant, was illegal and void because violative of the constitution of the State of Nebraska, and that the enforcement of the same as to complainant should be perpetually enjoined.

The decree of September 23, 1915, will be further modified so that the dismissal of the bill of complaint, in so far as it relates to the ordinance of the City of Lincoln approved November 19, 1906, establishing a rate of charges for gas in said city, shall be without prejudice to the commencement of a new action to restrain the enforcement of said ordinance hereafter, and

*Decree, as thus modified, affirmed with costs.*